

**NEXT GENERATION / NET GENERATION?**

**An investigation into children's ICT use  
and the impact on public libraries**

**A study submitted in partial fulfillment of the requirements for the degree of  
Master of Arts in Librarianship**

**at**

**THE UNIVERSITY OF SHEFFIELD**

**by**

**CAROLINE HARDING**

September 2000

## **Acknowledgements**

Grateful thanks go to Andrew Milroy and David Tuck for all their help in the initial stages of this dissertation: it would never have got off the ground without them. Many thanks too to all the parents, teachers and librarians who answered questionnaires and who agreed to be interviewed.

My thanks must also go to my tutor Richard Proctor for all his help and support throughout all the stages of this study.

Finally, thanks to Richard Gale and my family who provided constant encouragement and support during the dissertation and throughout this year.

Any misrepresentation is entirely my own fault and I apologise.

# Contents

<b>Acknowledgements</b>	ii
<b>Contents</b>	iii
<b>Abstract</b>	vii
<b>1.0 Introduction</b>	1
1.1 Background	1
1.1.1 ICT and the Information Society	1
1.1.2 Funding	2
1.1.3 Social Exclusion	2
1.2 Reasons for Research and Motivation	3
1.3 Aims and Objectives	5
1.4 Scope and Limitations	5
<b>2.0 Methodology</b>	7
2.1 Rationale	6
2.2 Methods	8
2.3 Preliminary Literature Search	9
2.4 Questionnaire design	9
2.4.1 Questionnaire Response	9
2.4.2 Questionnaire Critique	10
2.5 Telephone Interviews	11
2.6 Interviews	12
2.6.1 Interview Critique	13
2.7 Observations	13
2.8 Limitations	14
<b>3.0 Literature Review</b>	15
3.1 The Information Society	15

3.2 Plans for ICT	16
3.3 Children and ICT in Libraries	17
3.4 Social Exclusion	19
3.5 The Future - Book or Byte?	21
<b>4.0 Background and Community Profiles</b>	<b>23</b>
4.1 Sheffield and Yorkshire	23
4.2 St Patrick's	23
4.3 Ballifield	24
4.4 Brightside	24
4.5 Oughtibridge	25
<b>5.0 Children's use of computers and the Internet</b>	<b>26</b>
5.1 Introduction	26
5.2 Location	28
5.3 Motivation	29
5.4 Computer use	30
5.4.1 At school	30
5.4.2 At home	34
5.4.3 Elsewhere	36
5.5 Internet use	38
5.5.1 At school	38
5.5.2 At home	39
5.5.3 Elsewhere	40
5.6 Summary of conclusions	41

<b>6.0 The information rich and poor</b>	43
6.1 Introduction	43
6.2 Comparison of schools results	44
6.2.1 ICT use	44
6.2.2 Library use	48
6.3 Barriers to ICT use	50
6.3.1 Money	50
6.3.2 Other barriers	53
6.4 The ‘Gordon Brown Plan’	55
6.5 Children’s ICT skills	59
6.6 Summary of conclusions	62
<b>7.0 Comparison of children's computer use over the last five years</b>	64
7.1 Introduction	64
7.2 Growth of technology	65
7.3 Frequency of use	67
7.4 Summary of conclusions	71
<b>8.0 Perceptions of the public library service</b>	72
8.1 Introduction	72
8.2 Uses of public libraries	73
8.2.1 Most common reasons for going	74
8.2.2 Changes in the last five years	75
8.2.3 Expectations	75
8.2.4 Internet use in libraries	78
8.2.5 Improvements	79
8.3 Do schools encourage use of public libraries?	80
8.4 Opinions of the future	82
8.4.1 The purpose of libraries	82

8.4.2	The effects of libraries	83
8.4.3	The technological future?	84
8.4.4	Are libraries up to date?	85
8.5	Summary of conclusions	88
<b>9.0</b>	<b>Conclusions</b>	<b>89</b>
9.1	Significant issues identified	89
9.2	Evaluation of the research	90
9.3	Recommendations	91
9.4	Suggestions for future research	92
	<b>Bibliography</b>	<b>93</b>
<b>Appendix A</b>	<b>Schools Questionnaire</b>	<b>99</b>
<b>Appendix B</b>	<b>Interview schedules</b>	<b>104</b>

## **Abstract**

The announcement of the installation of the People's Network in public libraries has provoked a re-evaluation of the library's role in society. Children in particular are growing up in a world immersed in technology: many have home computers and also use them at school. Libraries need to consider the services they offer and whether these are appropriate for the Net generation. In particular, should libraries focus more on providing ICT access for the information poor? This study aimed to increase the knowledge about children's ICT abilities and their use of public libraries with a view to establishing the relationship between the two. It was hoped that this would aid future planning for all who work with children.

Several case study schools were selected within Sheffield and the opinions of parents, teachers and librarians were sought to examine the issue. Questionnaires, telephone interviews and face-to-face interviews were all used to elicit information. This was then examined in the light of the locations and situations of the various schools. The main issues covered included children's use of ICT; the differences between the results from the schools; changes in computer use and technology, and children's use of public libraries.

Results showed that children used computers mainly at home and for entertainment, but their keyboard skills were often lacking. Those children who were not familiar with computers did not use them enough to gain more experience. Initiatives to help people to get low cost computer access were welcomed, but seen as unnecessary by those with their own access. Public libraries were also found to have an overwhelming 'book' image and many people did not know about or had not considered ICT as a possible part of the service. Library ICT access at present appeared not to benefit children who needed to develop certain skills. Therefore recommendations are made for further publicity and to encourage teaching ICT in libraries.

# **1.0 Introduction**

## **1.1 Background**

### **1.1.1 ICT and the Information Society**

Information and Communications Technology (ICT) itself is a relatively recent phenomenon, certainly when compared to the longevity of the public library. The idea of combining the two is also a recent, but logical step: as libraries support information resources, so they endeavour to provide access to all available information.

The widespread use of computers is equally recent, indeed, the real explosion of computer use has only happened in the last few years. In 1997, there were 7 million adult Internet users, by 1998 this had increased by 48% to 10.6 million and is increasing even more today (NOP Research Group, 1999). Children today are growing up in a rapidly developing technological environment where the Internet is becoming a prime source of information. However, little is known regarding children's development in relation to the new technologies and it will be a long time before complete development from childhood to adulthood can be thoroughly assessed. Meanwhile, there is still value in making what assessments we can now, especially in regard to whether we are giving children enough ICT input and training. The Net Generation is a term coined to describe children's total immersion in ICT (Tapscott, 1998): Tapscott asserts that society will have to cater for this new generation and libraries in particular will have to face new challenges.

Public libraries cannot be complacent and a continual re-evaluation of purpose typifies professional organisations such as the Library Association. Part of this re-evaluation is the need to adapt to the Information Society: a term that has come to define the world we live in. Robins and Webster (1999) note the political connotations of social change, also stating that information itself now has a perceived value. However, they like Webster and Dempsey (1999), believe that the Information Society is more of a

rhetorical device than a hard fact. It is undeniable that access to information has become more important to us and therefore it is necessary to discover what role an information storehouse, i.e. a public library, will need to play.

### **1.1.2 Funding**

The government has recently announced funding for ICT provision in public libraries, prompted by the 'New Library: the people's network' report (LIC, 1997), alongside a scheme to rent out computers to people unable to afford their own (White, 1999). This implies that they place great importance on ICT, but prompts the question: does this go far enough? Will children automatically expect a higher level of ICT access in the public library, or will tomorrow's users have no need for a public information resource, as they will be able to gather all the information that they require from home Internet use. Schools too are placing a greater emphasis on ICT: for the first time this year, trainee teachers have had to demonstrate required ICT skills as part of their training. OFSTED inspections take great note of ICT in teaching, both as a subject in itself and its use in other subjects. However, Goldsbury (1999) notes generally negative attitudes towards ICT from teachers: if this is the case, then how good is the input that children receive and will public libraries need to fill the gaps?

Reduced library funding in recent years has left the service struggling to provide a basic monograph service, let alone take on ICT, for example: Sheffield Libraries do not even have a bookfund this year. However, money for the People's Network and New Opportunities Funding (NOF) is allowing libraries to develop and train their staff in ICT. Despite this, Sheffield still only boasts 4 libraries as yet with public computer access. It is within this environment that the issue of children's access must be considered.

### **1.1.3 Social Exclusion**

Social exclusion is also a hot issue at present: it has become a major concern for public libraries as well as the government and relevant research has recently been completed by the Library and Information Commission (LIC, 2000). Libraries were

originally established to serve the information poor and to improve access to useful material for them (Blanshard, 1998). It is possible that libraries can still do this by providing ICT for all. Blanshard (1998) asserts that libraries are seen as a safe environment within society and this makes them ideal for the purpose of serving the whole community. This study hopes to illuminate the issue of ICT in public libraries by examining the differing habits of children identified as information rich and information poor with regard to Internet and public library use. Specifically, it will compare the use and experience of the Internet that children from different socio-economic backgrounds have, particularly in the light that some schools are better equipped in ICT than others. This would give rise to the question whether children from poorer backgrounds who attend a well-equipped school are still considered to be information poor. The key is to examine if all children are gaining the skills and opportunities to utilise the Internet and if this is not the case, which children would need extra input. Perceptions of children's access to information as well as perceptions of their abilities with the technology will be sought in order to answer this question. Haywood (1995) notes that a new information network will need to be nation-wide or the current inequalities between regions will be enhanced. He goes on to encourage libraries to do all they can to bring the new technology to those from all economic backgrounds. Whether this can be done, is being done and how far this may become the primary purpose of libraries is what this investigation aims to establish.

## **1.2 Reasons for Research and Motivation**

At the root of this study is a desire to know how librarians' jobs will be changing in the future or even if they will still be in existence: an issue which has relevance to the whole library profession. Also of importance is the future of the library as a building: this research will try to draw some conclusions about the possible roles of a physical library in the technological age.

At present, the US is ahead of the UK in terms of ICT: a recent survey found that 70% of children from higher income families and 35% from lower income families

use the Internet regularly (National School Boards Foundation, 2000). However, in the UK, there are 11,000 new users every day with 12.69 million adult users in 1999 (NOP Research Group, 1999). The UK is not far behind and Ormes (1998) warns of a need for libraries to provide ICT, otherwise they will be seen as out of date and irrelevant. The 'information race' has led to a need to be connected and to know how to exploit ICT effectively if the UK is to compete economically on a global basis. Arguably, the UK cannot achieve this if the disadvantaged people in society have limited or no access. This issue can be considered on a national perspective too: if Sheffield is to keep up with the rest of the UK, it too must provide equally good access to all people. Investigating how Sheffield's children are served and in what ways they are already using ICT will hopefully demonstrate some areas that need improvement or will show how the current situation needs to be changed to meet the needs of users.

What needs investigation is whether children are acquiring the right information skills now to be able to exploit ICT. Calvert (1999) states that computers will only be integral to children's lives when they are easier to use, but children today are reputed to spend hours playing computer games. However, the purpose ICT is put to may also affect their skills. The prevalence of public library computer use amongst children also needs establishing in comparison to how many computers are available in Sheffield and also in comparison to where else computers are used. It is intended to examine the changing trends particularly amongst primary school children: Kulthau (1997) suggests that children of this age are more focused on general knowledge building whilst secondary pupils require more specific input to help them generate opinions. Kulthau also highlights the usual focus on the specific needs of these older children: this exposes a need to consider provision supporting the more developmental stage of primary age children.

At the heart of this is the consideration that children of today are the future adult users of public libraries. The experience that they gain now could shape a lifetime's habit. Therefore, we need to know if public libraries are providing a good enough

service and ICT provision and if this is what is likely to be required by the next generation, rather than or in addition to a traditional book service. However, it is difficult to predict future use, therefore the research would investigate past and current use amongst children, attempting to identify the changing trends. It would also focus on the actual use of and perceptions about public libraries.

### **1.3 Aims and Objectives**

The aim of this research is to inform the profession of the changes in the next generation's information abilities and needs within the Sheffield area. It is hoped that this would aid planning for the future of the public library service. It is also hoped that it will benefit educators in planning future education strategies. The question remaining is: to what extent is children's increasing familiarity with computers and the Internet a factor in determining their present and future use of public libraries? The dissertation aims to discover the relationship between computer use and children's expectations of a public library; to assess the importance of public library ICT provision to the Information Poor and to explore expectation about public libraries and how they should be developing.

The specific objectives to be covered are:

- To investigate where and for what purpose primary school children use the Internet.
- To identify differences in behaviour between children living in richer or poorer districts of the city.
- To investigate ways in which primary school children's use of public libraries has changed over the last five years and the relationship this has to increased computer use.

### **1.4 Scope and Limitations**

In considering children's use of the Internet, research has previously been undertaken focussing on the educational benefits (Neuman, 1997), information-seeking behaviour (Gross, 1999), and harmful material (Williams, 1999). However, no

consideration has been made of the implications of children's Internet use to the library's existence as we know it. Therefore this will be the focus of the dissertation.

This study will be limited to the South Yorkshire area, although most of the research is concentrated in and around Sheffield. It was also decided to investigate only primary age children (5 - 11) from state schools rather than including older children or those in private education.

## 2.0 Methodology

### 2.1 Rationale

This research aimed to consider a subject only made possible by recent technological developments. Due to its new nature, using grounded theory seemed most appropriate, as all opinions needed to be sought and the current state of affairs needed to be established before hypothesising could begin. Grounded theory is most suited to empirical research (Glaser and Strauss, 1967) and therefore it was the obvious choice with this particular investigation.

A qualitative approach was adopted, as people's perceptions of Internet use were being examined. As Makyut and Morehouse (1994) state: '*qualitative research looks to understanding a situation as it is constructed by the participants*' (p.18). In this study, adult's perceptions of children's behaviour were sought and it was hoped that children's own perceptions would be revealed through these. Therefore, a totally quantitative approach would not have been appropriate as it '*seeks objective explanation by statistical description and manipulation*' (Stone and Harris, 1984, p. 6). However, there was a small quantitative side to this study in identifying answers to the more descriptive questions and in obtaining an overview of the situation. This was not intended as a way to make the research more valid: qualitative data can be criticised for its lack of general application. Instead, it allowed for increased understanding of the subject by evaluating other aspects of the same issue (Mellon, 1990). This triangulation was meant to permit a more general picture to emerge, which could allow comparisons to be drawn with other areas.

A multiple case study approach was utilised to illuminate the issue, as the nature of case studies ensures that the phenomena can be studied more thoroughly than is possible through more general surveys. Yin (1994) advocates the use of case studies when investigating '*a contemporary phenomenon within some real-life context*' (p. 1) which is exactly what the research aimed to consider. Using more than one case study also ensured that schools could be picked that contained both information rich and poor

children. It also gave the possibility that the findings might be more applicable to other situations around the country. As Moore (1981) argues, case studies can be chosen so they will illuminate more general trends, however, the limited nature of this project was kept in mind before any generalisations were made. In addition, library users and non-users needed to be reached for a balanced view, therefore, contact through carefully selected schools seemed preferable.

## **2.2 Methods**

The original proposal was to select four primary schools from all of those found in Sheffield, two from poorer areas and two from more affluent areas. Of the former, one would have good ICT access and one would not (the same goes for the latter). This would have provided an interesting comparison. I made contact with David Tuck (the ICT Curriculum Advisor for Sheffield Schools) who suggested four suitable schools. However, of those suggested, three were just Infant schools and therefore the decision was made to contact the junior schools in the same area, so that consideration of all age groups could be undertaken. Due to the pressures of work, many schools were unable to help me, so further help was sought from Andrew Milroy, the Sheffield School Libraries Co-ordinator. He agreed to help me find some amenable schools and duly arranged four suitable ones who were willing to take part. These schools were:

- St Patrick's Roman Catholic Primary School
- Brightside Nursery and Infant School
- Ballifield Primary School
- Oughtibridge Primary School

As Brightside has no juniors, it was decided to conduct data collection there on a half scale. These schools did not exactly represent the original sample I had in mind, however, they were sufficiently different to allow useful comparison.

Data was gathered using interviews with two teachers from each school, except Brightside, where one was interviewed. A questionnaire was also sent to a sample of parent: those of Years 2 and 6 were selected as it was felt that this would give a broad

spectrum of data across the infant and junior age groups. In Brightside, only a selection of Year 2's parents received questionnaires. The questionnaires were followed up with telephone interviews with those who were amenable. In addition, some of the librarians in Sheffield who are involved with ICT services were interviewed, in particular, several who also have responsibilities in children's services. A member of staff at Grimethorpe Electronic Village Hall was also interviewed, as children are regularly taught with ICT there and therefore some interesting insights from their own experiences were provided.

### **2.3 Preliminary Literature Search**

An initial review of the literature established that children's use of computers is a popular subject, however, little research had been done on the exact use that is going on at present. New issues of journals were scanned for useful recent articles alongside previous dissertations on related topics. Thorough searches were also made on BIDS, INSPEC, LISA, the British Library catalogue and the Web. Relevant e-mail discussion lists such as lis-link and uk-schools were also followed for useful discussions.

### **2.4 Questionnaire design**

A semi-structured approach was taken in the questionnaire in order to ascertain both basic facts and more complex opinions. Moore (1987) advocates this approach as it enables the researcher to gather both types of information. In this way, in depth opinions of the parents were sought, as it was hoped that these might suggest possible future developments for the public library. According to Moore (1987), although questionnaires are cheap and flexible to use, they can also be superficial and by nature must be kept short if a high response rate is hoped for. In order to encourage a high response rate, the questionnaire contained a selection of closed questions and ones eliciting opinions on a Likert scale. A few open questions were also included in the hope of obtaining some opinions, but it was hoped that the parent's more in depth views would be noted through the telephone interviews. Instructions for completing the questionnaire were included throughout: this aimed to ensure that as many questions were answered as possible.

### 2.4.1 Questionnaire Response

In each school, different numbers of questionnaires were distributed according to how many children were in each class. The numbers sent out and returned are displayed in Fig. 1.

School	Distributed	Returned
St Patrick's	56	9
Brightside	35	11
Ballifield	70	22
Oughtibridge	66	22

**Fig. 1**

This resulted in an overall response rate of 28.2%. The response was perhaps a little disappointing as most teachers had encouraged the children to bring back the questionnaires. However, it was an extremely busy time of year for all concerned and one of the schools had undertaken to support several similar investigations. The questionnaire was also rather long which may have deterred a few people from responding. Meanwhile, another approach that may have aided the response level was the use of the schools to distribute the questionnaires. It was hoped that if the schools were displaying support of the project by distributing them, then parents might have felt more inclined to complete them. Therefore it was felt that this level of response was generally good in the circumstances and it provided enough data to analyse. The questionnaire is included in Appendix A.

### 2.4.2 Questionnaire Critique

In retrospect, it is possible to evaluate the questionnaire in terms of its success. It was perhaps overlong and this could have been remedied through a change of format or font.

Of those that were returned, it was clear that some had answered for older children as well as for those of primary age. However, they were few in number and

therefore it was decided to use the information supplied and differentiate where possible between the older and younger children. Problems were also encountered when parents were asked to specify one answer and gave two or three. Again, these were isolated cases, so it was decided to use all the data given.

In retrospect, it would have been better to ask if parents were connected to the Internet before certain questions as in the case of number nine (see Appendix A) where there were many people who did not respond. This mostly led to the conclusion that although the respondent had a computer, they did not have Internet access. Again, there were many respondents who answered questions not originally directed at them, such as number 14. However, the data was largely useful so it might have been better to direct these questions to everyone.

The name of the child who brought the questionnaire home was also requested in the hope that it could be linked into teacher's interviews, however, this idea did not work in practice and the related interview question was discarded after the second attempt.

Piloting of the questionnaire was omitted due to lack of time between arranging which schools to visit and actually going in with the questionnaires. They all had to be delivered before half term to ensure parents had enough time to fill them out. It would have been preferable to conduct a pilot and in a longer study, perhaps this could be done.

## **2.5 Telephone Interviews**

The method of using telephone interviews with parents was decided upon due to the convenience aspect for both the interviewees and myself. Although there are disadvantages in not being able to observe non-verbal communication, it was felt that due to time limits, another approach would not be preferable. Eleven parents offered to be interviewed, but as many of these were from the same school, the number actually interviewed was reduced to nine to give a more balanced response. As with the other

interviews, responses were noted down rather than recorded and typed up immediately to aid exact recording of what was said.

## 2.6 Interviews

Interviewing both teachers and librarians was intended to yield the more complex information concerning whether children are able to utilise technology fully. The semi-structured approach was intended to take advantage of the benefits rendered by both a structured and an open-ended approach. However, the open-ended aspect took precedence as it can be more useful when seeking '*opinions, explanations or descriptions of behaviour*' (Stone, 1984, p.12). Yin (1994) also advocates open-ended interviews for use in case studies: the interviewer is able to ask for solid facts as well as the opinions of the interviewee. The interviews also had some flexibility in their approach in order to cater for the interviewee in question. Indeed, it was necessary to add in or miss out certain questions depending on whether the interviewee had not given the information required or had given it as part of a previous answer. The interviews were also tailored slightly for each school's own situation, for example: Oughtibridge receives a mobile library service only and so question 12 about public libraries and computers (see Appendix B) was amended. It asked instead if they encouraged the children to travel to use computers in public libraries where appropriate.

The teachers who were interviewed were:

St Patrick's:	Steve Dent	(Year 6)
	Josie Gooding	(Year 2)
Brightside:	Molly Drabble	(Head Teacher)
Ballifield:	Clare Mould	(Year 6)
	Jean Byron	(Year 2)
Oughtibridge:	Ann Coxon	(Year 6)
	Rachel Kingston	(Year 2)

A member of staff from Grimethorpe EVH was also interviewed, as were two members of staff from Firth Park Library and one from Upperthorpe Library.

### **2.6.1 Interview Critique**

Although it was felt that the interviews were quite long, in practice, they varied in length and it might have been better to lengthen them slightly. However, in most cases all useful information possible had been gained anyway. Limitations were also placed on the interviews due to the time that people had available to give. The interview at Grimethorpe was overlong, considering that it was not a particular case study and it did last a great deal longer than expected.

Several closed questions were used in the interviews that could have benefited from restructuring the question or using prompts. Also, in view of the information rich/poor focus, it might have been better to ask more questions along this line, but as it is a sensitive issue, it was decided that information on this subject was better elicited using indirect methods.

## **2.7 Observations**

During the interviews with librarians, the possibility of observing children actually using the computers was raised. Both libraries concerned had school groups coming in to use the computers regularly and at Upperthorpe there was the chance to go in when a school group was there. This opportunity was taken twice and I was able to observe the same group of 9 children using CD-ROMs, Microsoft Publisher and the Internet. This opportunistic research proved extremely useful, however, given more time, it would have been preferable to make the school concerned one of the case study subjects in order to give the study more depth.

## 2.8 Limitations

Limitations identified during the study included:

- **Time.** Teachers especially are under a lot of pressure and as was discovered, they find it difficult to spare the time for research such as this. This was demonstrated in the problems encountered finding subject schools and in the length of time available for interviews.
- **Depth.** The length of the course limits the study: in depth study would only be possible over a longer period of time.
- **Sample.** Finding a representative sample for the case studies proved problematic and therefore a more opportunistic approach was taken to the data collection, although the sample used proved most satisfactory.
- **Relevance.** Due to time constraints in questionnaire construction, it was not possible to tailor the questionnaire to each school. However, respondents adapted the questions to their situations sufficiently to prevent this from becoming a major problem.
- **Piloting.** The questionnaire and interviews were not piloted due to time constraints so no last minute changes could be made before the data collection.

## 3.0 Literature Review

### 3.1 The Information Society

*'Information is the oxygen of the modern age'* Reagan, 1989 (quoted in Cochrane, 1997: 41)

The rhetoric of the information society is common today: we are constantly told that we are living in an age of new technology, where information has become the new currency. The past Conservative government had an Information Society Initiative in 1997 (DNH, 1997) and the concept is continued by the present Labour government. Indeed, their plans to make the People's Network a connection point for everyone reflect the importance they place on access to information, particularly electronic information.

If information and access to it is such an important issue, then this reflects on children and the exposure they receive. However, the literature does argue over whether we have actually reached the 'information age' yet or whether it is still to come. Reagan's quote above shows a belief that it is here, as does political opinion: a simple search of government websites yields thousands of hits including business and educational initiatives. Meanwhile, others such as Robins and Webster (1999) are cynical of a new term to describe existing practices, whilst Webster (1995) highlights the technological emphasis and the consequent difficulties of defining whether we are in the information society or not when technology changes so rapidly. There has obviously been a new emphasis on the importance of information and it seems set to continue. Perhaps the best opinion to take is that of Batt (1998), who argues that everyone is moving towards the information society, but it has not been achieved yet, certainly not whilst a large percentage of people are not using the new technologies. He further states that the concept has given the government a sense of direction in terms of information and education. This obviously affects children as they are the new generation and the direction that education takes will dictate their development. If they are taught more ICT skills, then they will naturally become more aware and able and therefore may go on to form the information age that is so talked about now.

### **3.2 Plans for ICT**

The government's plans for ICT networks were heralded by the 'New Library: the People's Network' report (LIC, 1997) which clearly likened access to information to a democratic right. This report stated that the library is the ideal access point to electronic information and further encouraged meeting children's needs with ICT. The later report 'Building the New Library Network' (LIC, 1998) went on to speak more practically about setting up the proposed national network of computers in libraries through the New Opportunities Funding (NOF). It also sets out the priorities of education, cultural enrichment and citizenship. LIC (1997) also placed great emphasis on children's education, suggesting that ICT in libraries could aid homework clubs, lifelong learning skills and local schools. Many schools are now connected through the National Grid for Learning (NGfL), however, it is arguably better to combine this with library ICT to give children the most exposure possible. It is noticeable that the concentration on children is a recent phenomenon: older government documents such as 'Investing in Children' (DNH, 1995) and 'Reading the Future' (DNH, 1997) only make vague suggestions about ICT in children's library services. The rapidity of this change in emphasis is reflected in the literature, which is also divided over the library's purpose. For example, Webster in Webster and Dempsey (1999) believes that money is better spent on reducing charges to the public than on new ICT, whilst Batt (1998) sees the networked society made possible through libraries as the best way to give equality of information access to all. It is also interesting to note that the DCMS (2000) state that developing ICT in public libraries should not harm the status of the book.

The DNH (1997) predicted that public libraries would play a central role in ICT in the future, however, the funding issue remains. The People's Network project has unleashed large sums of money to equip libraries and train librarians: the immediate future seems rosy, although a fast learning curve is required if librarians are to be successful mediators. The long-term view is more worrying: technology changes so fast that soon today's computers will be out of date. Who will provide the money to update the technology? Public libraries are stretched financially already without having to try to

find more. The situation is paralleled with the NGfL: Goldsbury (1999) mentions schools who spent their ICT budget elsewhere after the government promised money to set up the NGfL. The problem now is that the schools presume the government will continue to fund the scheme, though the government may not intend to do so. Hendry (2000) notes the irony that the People's Network, intended to bring ICT to those who cannot afford it, will be funded mainly by the lottery, in his view '*the biggest voluntary tax on working class people*' (p. 273).

Denham et al. (1997) state that children gain educationally and socially from ICT use and questions the need for library provision when so many schools and homes now have access. However, they continue to argue that libraries have a major role in providing free access to people who would otherwise not have any. The emphasis again falls on the socially excluded, an issue which will be discussed later on.

### **3.3 Children and ICT in Libraries**

The first thing noticeable about the literature on children and libraries is that ICT is rarely mentioned. The concentration seems to be on literacy and consequently the reading of books. For example, Blanshard (1997) has only a paragraph on ICT and Esson and Tyerman (1991) make no mention of it. The latter is perhaps a little old to consider ICT anyway, and the technology emphasis is recent: it is only works published in the last two years that make any consideration of it. Also worth noting is the gap in the literature concerning children of primary school age (5 - 11). What literature there is focuses on the educational aspects of libraries, many omitting computing as previously mentioned, and most research has focused around older children and teenagers. For example, the LIC's (1997) suggestions about homework clubs are in themselves geared towards older children requiring this kind of support. Kulthau (1997) too concentrates on the educational effect on older children.

Primary school children are perhaps excluded anyway simply because of their youth. Barriers to ICT use in public libraries are common, particularly within the

acceptable use policies formed by most libraries. However, the Sheffield Libraries policy only allows those under 16 to use the ICT with the consent of a parent or guardian. In Denham et al's (1997) study, they found a variety of policies, some allowing children access, whilst others restricted children's use by only allowing on adults or those aged over 12 and preventing their use of the Internet. The latter may be due to concerns over content, but it could be argued that if children will require ICT literacy skills in future, then it may be preferable to support them in learning these whilst they are still young and on a steep learning curve. For example, it is known that young children can learn new languages faster when younger, so why not the same for computer skills? Williams (1999) notes young children's preference for visual representations over plain text: this in itself suggests the possibilities for using computers more in primary education.

The skills that children have with ICT are an issue in themselves: Calvert (1999) notes that parents now want their children to be computer literate and this demand is leading to the development of more child-friendly software. She also advocates combining entertainment with education for best effect amongst 7 to 11 year olds and even quotes the games manufacturer Sega's maxim: *'To play is to learn'* (p.207). This idea of entertainment and learning is contested in the literature: Kingston (1999) reports the large amount of young people who are computer illiterate and notes that *'we must not mistake kid's lethal virtuosity with computer games or mastery of the video machine for being competent on a word processor or with a spreadsheet'* (p.13). However, Dresang (1997) notes children's *'seemingly innate affinity'* (p. 643) with digital data. Assessing how much support children will need with computers is essential to the public library.

How healthy it is for children to be immersed in technology is also a much debated issue: Haywood (1995) notes a study conducted amongst 8 to 10 year olds about their hobbies. The hobbies were mainly of a solitary nature: computers and TV featured highly, leading to worries that children are losing their social skills. However, more recent research in America (National School Boards Foundation, 2000) suggests that ICT connects children instead of isolating them: 94% of respondents spent the same

or more time with family and friends since getting Internet access. Tapscott (1998) too argues that computer interaction encourages active thought rather than passive viewing and hence is beneficial. The parent's opinion on this subject will also affect children's access to technology as adults control it.

### **3.4 Social Exclusion**

Social exclusion is a much talked about issue at present within the Library and Information world: the LIC (2000) report demonstrates this concern and states that libraries are by their nature symbols of social inclusion. Feather (1994) argues that the information poor are usually those who are deprived socially and economically. Those who cannot afford home computers do not have the same opportunities to become familiar with them as richer people. The contrast between the information rich and the information poor seems to become more marked in the age of rapidly advancing technology and as Haywood (1995) states, in the past, governments have not funded public libraries, as the benefits of easy access to information are hard to quantify. The People's Network seems to be a way to improve access for those who would not otherwise be able to afford the technology, however, as Feather (1994) states, access does not always equate to information wealth. He argues from the example of TV and many people's ignorance of current affairs that they have access to the information, but they simply choose not to know.

The price of computer equipment is still high and beyond the reach of many: Dyson and Wait (1998) note the prohibitive prices alongside people's perceptions that ICT is not actually that relevant or useful to them. Sutherland (1999) also highlights the huge price inherent in Internet access, citing equipment renewal and phone charges as oft forgotten elements. Therefore it would seem the public access computers could be the way to bring technology to everyone and where more obvious than the public library?

Harvey (1999) identified charging as a key barrier to the information poor in his research and indeed the economic considerations do have a great effect on people's ability

to access information. The LIC (1997) implied that libraries should not charge for Internet use in order to allow access for people who cannot afford to pay. However, the LIC did recognise that the money would have to come from somewhere and unfortunately many libraries are already short on ready money and the suggestion of spending more with no increase in funding is impractical. Consequently, libraries often do charge, leading to the conclusion that they may still be excluding those who are most in need of the information.

Another issue often highlighted in the literature is the contradiction between the public library's original purpose and the actual use that they receive now. Kempster (1999) is optimistic and sees libraries as the key institutions to challenge social exclusion in the future. Kempster continues that they are the natural first port of call for information and will be even more so when the computer networks are all up and running. Meanwhile, Vincent (1999) criticises public libraries and claims that they are poor at dealing with social exclusion, mainly because they are geared to serve people from similar backgrounds to the librarians that run them. The implication that all librarians are middle class is erroneous, but the point must be taken that libraries should be serving all the community, not just one sector.

Pateman (1999) exposes the problem with poverty figures, claiming that 12 million people (almost a quarter of the UK population) live in poverty, including 4 million children. Pateman goes on to cite the example of Finland, where the government has consistently supported ICT in public libraries and consequently the Finnish have more citizens online than any other country. Although ICT in public libraries does not directly combat poverty, the implication is clear that they can at least combat information poverty.

### **3.5 The Future - Book or Byte?**

Bakken (1998) states that it is insane to try to predict the future of public libraries due to the technological age in which we live, but he goes on to advise understanding the

potentials of current society as in this way librarians are best equipped to deal with the future. However, this does not stop speculation as was seen on the BBC's Talking Point website: people from all over the world gave their opinions, generally more positive than negative, but a few views predicting the demise of libraries were recorded, for example: *'Soon everyone will have internet access, they will book holidays, look at travel guides, download music and print books. Libraries are on the way out.'* (Stewart Duffill, England).

*'No, there is no future for libraries. Why? Because people don't want to read anymore. And, the only way to attract them to the library is to furnish the public the use of 'free' computers and access to the 'Internet'.'* (Dave Adams, USA)<sup>1</sup>

The literature is understandably concerned with this issue as it reflects on the future of the profession and of the public library as a physical place within society. Many differing views are reflected and it is well to remember that predictions can only be based on limited fact and no one can foresee the future. However, it is still valuable to consider the possibilities in order to be prepared for every eventuality. Blanshard (1998) notes comments from a primary school asking how books can ever compete with the Internet as the latter is up to date and can show things that children otherwise would not be able to see. Kniffel (2000) also notes the popular concept: why have libraries when we can use the Internet? However, the over-expectations people have of technology are also considered. Musiker (1998), although supporting the existence of the book, warns against the threat posed by textual messages in electronic media.

Meanwhile, Haywood (1995) proposes librarians as the best people to order the chaos of the Internet and prevent the seemingly inevitable information overload prevalent now. Ordering of the Internet on a global scale has not been undertaken as yet, but small scale ordering could take place at the public library, for example: a web page with reviewed links. This is certainly the favoured option at present in regard to children as

---

<sup>1</sup> Views taken from the BBC Talking Point website: [Accessed 19/5/00] *Is there a future for public libraries?* Available: [http://news.bbc.co.uk/1/hi/english/talking\\_point/newsid\\_749000/749030.stm](http://news.bbc.co.uk/1/hi/english/talking_point/newsid_749000/749030.stm)

content can be restricted. Ormes (1998) discusses the use of such web pages in order to promote literacy and interactivity with literature, an example is Birmingham Central Library's 'Stories from the Web' site.

Suggestions for the development of libraries vary: Haywood (1995) believes that libraries will have to become more like businesses or they will lose what public funding is left. However, the business ethos appears contradictory to the public service ideal that the library is meant to fulfil. Blanshard (1997) makes tamer suggestions, including the loan of CD-ROMs and a greater emphasis on ICT reference and learning packages.

Whatever the future holds, it depends on continued government support: Elkin and Lonsdale (1996) believe that whilst literacy and information access are important, then libraries will always be so. It is encouraging that the current government saw libraries as a logical place to site the People's Network. However, it must be remembered that *'today's children are the library's future'* (Blanshard, 1997: 13) and without consideration of them and their needs, the library may well be out of date in a few years time.

## **4.0 Background and Community Profiles**

### **4.1 Sheffield and Yorkshire**

According to the Office for National Statistics (1999), Yorkshire and Humberside is generally a deprived area in comparison to the rest of the country; Sheffield itself reflects the figures for the region. Incomes are low with a quarter of people within the bottom fifth of income distribution and the unemployment rate stands at 7%: the third highest in the country. Meanwhile, the ethnic composition reflects the rest of the UK, but GCSE achievement levels are second lowest and the area had the highest recorded crime rate in 1997 (Office for National Statistics, 1999).

Sheffield itself combines affluent areas, inner city districts and more rural communities such as Oughtibridge. It was hoped that the sample for this study would cover a reasonable cross-section of the different areas to give a good general picture of the different sectors of Sheffield.

### **4.2 St Patrick's**

St Patrick's primary school is situated at Lane Top, near the Firth Park area of the city. The 1991 census (Central Policy Unit, 1993) states that the surrounding area is mixed economically, although council housing predominates. The unemployment figures appear higher than the national average, but as the census is so old, this may well have changed. Other economic factors mentioned by the census include that well over a half of all households in this area do not own a car and about a third have no central heating. A more recent interview (Librarian 2) stated that the ethnic population there is higher than the rest of the city, but the unemployment figure is about the same.

The school itself is grant maintained and was recently praised for its award-winning new library (Sheffield Telegraph, 1999a) and its last OFSTED report (OFSTED, 1997a) was good. However, ICT was felt to be an unsatisfactory area at both keystages in 1997 due to a lack of up to date resources. At present there is one computer in each

classroom with just one linked to the Internet. However, there are plans to increase the number of computers in the school.

### **4.3 Ballifield**

Ballifield school is in the Handsworth area of the city, serving a mainly white, mixed socio-economic area and over 50% of its pupils come from the main council estate (OFSTED, 1997b). Employment figures were good in the 1991 census, though OFSTED (1997b) state that many are employed part-time. OFSTED also mention that there are a few children attending from more advantaged backgrounds, but the percentage on free school meals equals the national average.

The school received a good report from OFSTED in 1997 that commented on the strength of its ICT resources and teaching. Keystage one children particularly were better than average in this area. OFSTED also praised the positive attitude towards ICT in the school although the library was felt to be underused. All classrooms at present have good access to both computers and the Internet.

### **4.4 Brightside**

Brightside's recent OFSTED report (2000) provided more up to date information than the census, although the latter did highlight the high number of households with no car and no earner. The school itself is situated near the Meadowhall Shopping Centre in an area of mixed council houses and those privately owned. OFSTED (2000) states that the ethnic composition is mainly white, though about 10% of children come from minority backgrounds. A telling economic factor is the proportion of pupils with free school meals which is around 25%. The Sheffield Star (1997) describes Brightside as '*an inner city school in Sheffield's east end*' (page not known).

The OFSTED (2000) report strongly criticised the computing facilities at Brightside, stating that standards have dropped since 1997. The equipment is old and prone to breakage and a lack of ICT use in lessons was also noted. The ration of

computers to pupils is also low, although the school's action plan to improve skills amongst the children was praised. Brightside currently has just one computer with Internet access and this is situated in the school office, although there are plans to move it and all the school's books into one dedicated library room.

#### **4.5 Oughtibridge**

Oughtibridge is a more rural area and recent campaigns against housing developments have sought to preserve this status (Sheffield Telegraph, 1999b). OFSTED (1999) describes the area as containing mainly private housing and ethnically, 98% of the population are white. Free school meal numbers are low although one teacher described the area as being very different in that about 30% of local residents are professionals, compared to the 70% found in other relatively affluent areas of the city. Unemployment is relatively low in comparison with the other areas covered by this study (Central Policy Unit, 1993).

ICT standards at Oughtibridge were criticised by OFSTED (1999) as being below expectations, although it was acknowledged that the school is trying hard to get the maximum benefit from the resources available. OFSTED also criticised levels of access to computers generally: the school has many of its computers through the NGfL although it is shortly to receive a new ICT suite that will provide an area dedicated to ICT with up to date technology.

## **5.0 Children's use of computers and the Internet**

### **5.1 Introduction**

One of the objectives of this study was to investigate where and for what purpose children were using the Internet. In fulfilling this, it is logical to discover where they are using computers too, whether for the Internet or not. Many responses grouped the two together so it was thought prudent to make consideration of both.

As Blanshard (1998) notes, politicians are placing an increased emphasis on children as their numbers increase and they become a more significant sector of society. She continues to assert that many people see ICT as the future and poses a question: can the two factors be combined successfully? Denham et al. (1997) claim research shows that children benefit both socially and educationally from ICT exposure, but they do not consider the quality of the exposure or which is the best environment to experience it in. Whether children of all ages benefit equally from it is also an issue: Haughland and Wright (1997) note the view that children under seven do not get as much benefit from computers as older children. This study also determined to find out which age group were using computers more.

The LIC (1997) encouraged libraries to link up with schools to provide ICT resources as it was thought that those available in school were limited. However, the evidence from the study will show where children use computers most and therefore where the best access and resources are available.

With regard to the Internet specifically, it seems to have received a lot of hype, so how far actual use matches this is an interesting comparison. Calvert (1999) states that '*Internet access has become a buzzword for academic success*' (p. 205): it would be enlightening to ascertain how far high Internet use is synonymous with the higher achieving schools. However, Net access does not necessarily mean that children's work

will improve, though where they are using it and what for may give some clues concerning its current use as an educational tool.

How far the Internet will prevail over other reading activities is another ongoing debate. Blanshard (1998) suggests the delivery of electronic books to your home, although she notes the Net's precarious future due to its anarchic nature. Showing what children actually use computers and the Internet for may shed light on this issue and demonstrate where its perceived importance lies now.

One point worth remembering is Dresang's (1997) warning that adults perceive children in a stereotypical way and often underestimate children's actual abilities. As this study involved data collection mainly with adults, it is recognised that what they believe their children to be doing and to be capable of may be very different from what actually occurs. For example, when asked whether their children use computers at all, 59 respondents said 'Yes' (92%) whilst 4 said 'No' (6%). As it was ascertained through interviews with staff from all schools that every child uses a computer in school lessons at some point, this could mean that some parents are unaware that their children use computers in school. Alternatively, they may have assumed that the question pertained to home use only, but the question remains whether all parents have a thorough knowledge of their children's ICT-related activities.

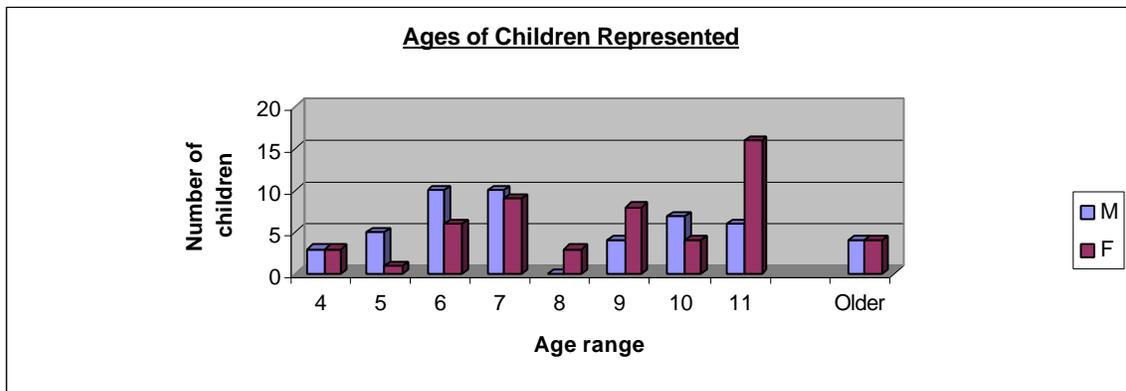


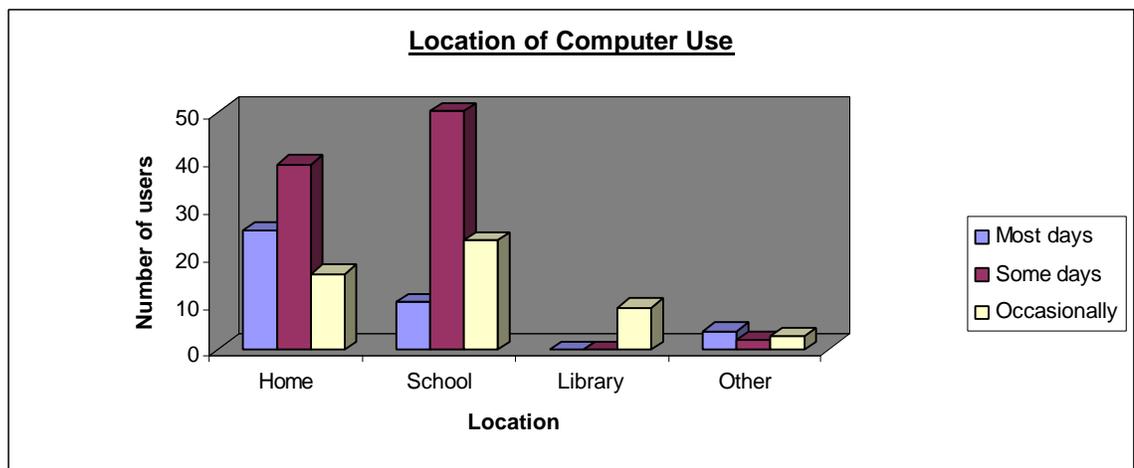
Fig. 1

From 64 questionnaires returned, it was ascertained that the activities of 103 children were represented, 95 who were of primary school age. (See Fig. 1)

The age range covered was reasonably balanced with the higher numbers of children concentrated in the year groups that received the questionnaires. It was hoped that this would be the case so a more general overview of all children of primary school age could be attempted.

## 5.2 Location

Where children used computers was an important point to establish, (see Fig. 2).



**Fig. 2**

Use was concentrated in both home and school, although again, not all parents seemed aware of their children's use of ICT in school: one respondent even wrote this on the questionnaire. Again, parent's perceptions appeared to underestimate the frequency of school use. Interviews with teachers confirmed that most used the computers every day. Use of computers in libraries appeared low, although the fact that most respondents had home computer access suggests that they preferred to use it at home. Other responses mentioned use of computers at relatives' homes, or at a parent's workplace.

### 5.3 Motivation

The reasons why children use computers are also important to consider. The government has placed an educational emphasis on their use with the NGfL and the concept of lifelong learning through the People’s Network in libraries. Whether this intended use matches the actual purposes is a significant point.

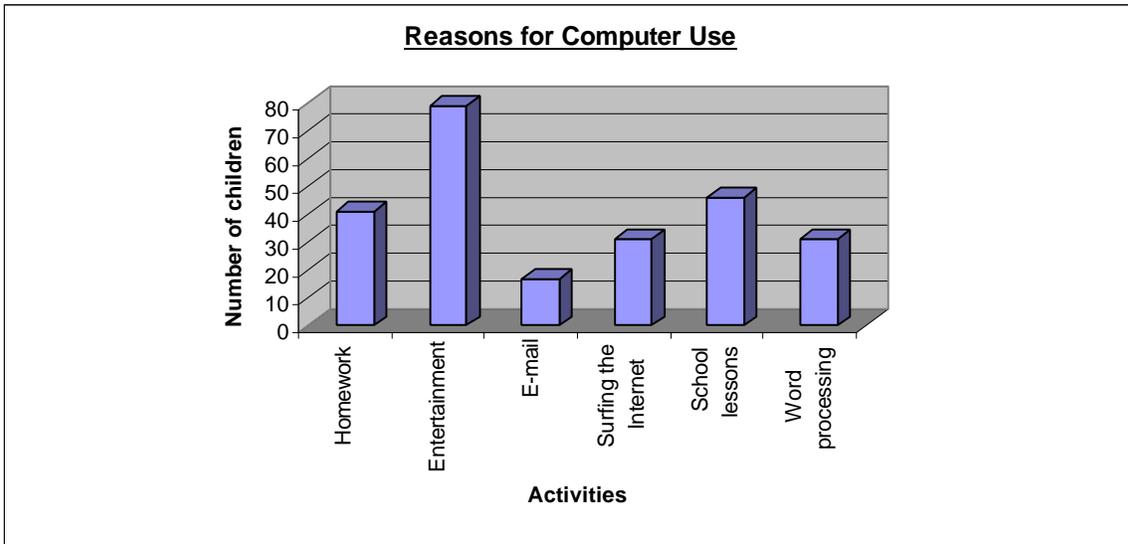
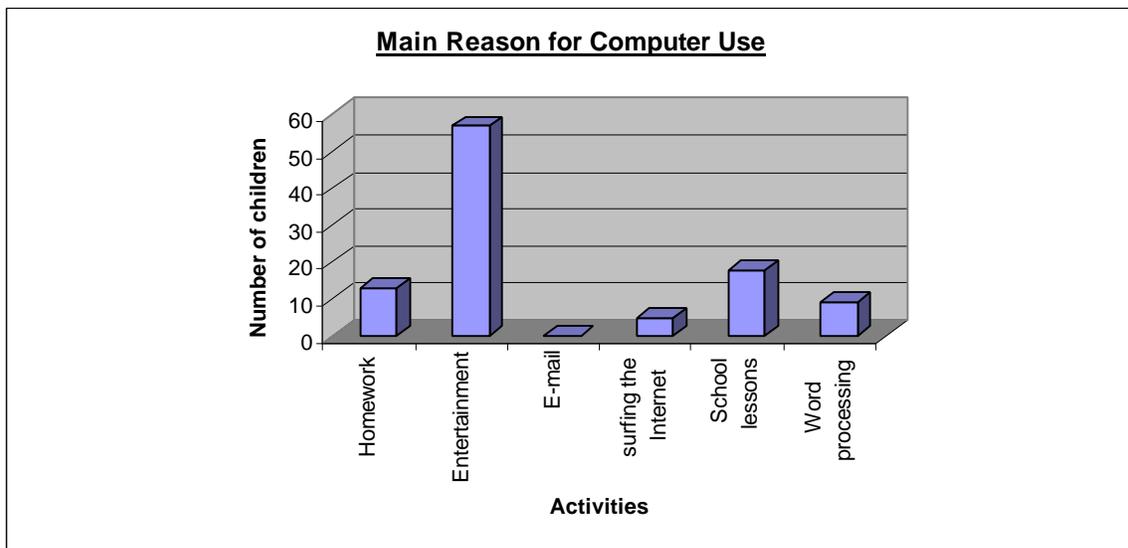


Fig. 3

The results in Fig. 3 show that entertainment is the driving force behind most children’s computer use. However, the educational aspects of homework and school lessons particularly show significant figures. The results suggest that games predominate, indeed, the figures for email and surfing the Net suggest leisure rather than learning. When asked what children used computers for most often, the following was



stated: (see Fig 4)

#### **Fig. 4**

Entertainment again dominates and seven respondents even specified games in particular. The responses stating homework or word processing were mainly related to older children, perhaps suggesting that younger children are encouraged to play more. Calvert (1999) too notes a predominant use of ICT for leisure and argues that children are always seeking new entertainments to displace old ones. The Internet figure was low which could be a result of fewer respondents having home access, or equally a result of parental concern over content. As one respondent stated:

*'I think I ought to [get the Internet] although my concerns are with my young daughter and the things you find on the Net. They can't ever be totally supervised...I wouldn't get it until she's older.'* (Parent 19)

It is significant that parents believed leisure use to be more frequent than classroom use. Again the issue of parent's perceptions is raised: the parents may have answered vis a vis what they know and can observe rather than what they hear about from school.

Email generating no responses suggests that this age of child has little use for it as significant people in their lives are generally around them rather than at a distance which would demand other methods of communication.

## **5.4 Computer use**

### **5.4.1 At school**

Computer use in school was mainly investigated through teacher's interviews and they raised several important issues. A general positive theme emerged about

computers: they were used a lot in schools and the children all enjoyed using them; there was not one negative response on this subject. There was a mismatch in data between the frequency of use that parents perceived versus the actual daily use stated by most teachers. However, this could be explained by the fact that there were generally only one or two computers in a classroom and they were not in use all day. Therefore not every child would get daily usage from them.

Another idea emerging was the benefits of computers for educationally needy children. This effect was linked to a desire for more hardware so that these children could receive even more input:

*'I just feel that there should be more of them. People who don't enjoy writing, whose motor skills are not as developed or who need esteem – for them its brilliant'.* (Teacher 7)

*'I'd like more equipment...I'd like laptops for certain children who are not very good at writing.'* (Teacher 2)

This suggestion of abandonment of traditional skills like writing in favour of computer literacy for the lower achievers is significant: it suggests that computer literacy is perceived to be more important to a child's future than writing. Although this is speculative, it is a fact that job applications, reports and even much school work is now required to be word-processed. If this trend continues, ICT literacy may well become more important than writing. Musiker (1998) suggests electronic textual messages may threaten print, but this could be widened to include the written word.

Although children enjoyed computer use in school, teachers raised several problematic issues. The problems of incorporating it into current teaching methods were voiced:

*'You can't have two children on the computer when you're trying to do class teaching on numeracy or literacy.'* (Teacher 5)

This suggests that there is still work to be done on how to use computers in classrooms most effectively. This issue is also linked to other responses stating how computers can distract the teacher from the rest of the class:

*'It's a real pain because lots of children don't know and it draws you away from the rest of the class. At the start of the year when they don't have the skills, you resent it because it's constantly needing attention.'* (Teacher 6)

*'You set something up, a child presses something they shouldn't and you don't have time in the lesson to sort it out.'* (Teacher 3)

*'The main problem is that if anything goes wrong, it's very difficult for me to leave the class and sort it out – I have to abandon it or I have to abandon the class.'* (Teacher 1)

As these responses indicate technical hitches, the suggestion is that computers need to be more foolproof before use in the classroom can be totally beneficial, or teachers will need to be ICT experts or have one constantly present.

Linked to the latter issue is one of the software available: many teachers indicated dissatisfaction with available resources: two indicated that it was not always suitable for their age group or teaching methods. One stated:

*'We don't do a lot in the way of graphing...at the moment they're not practical to teach.'* (Teacher 7)

This was supported by other responses stating what software they used: literacy and numeracy resources predominated whilst other subjects seemed under-resourced. However, a few had CD-ROMs for other subjects and one mentioned the Internet as a method of collecting information for science topics. The gaps highlighted obviously need to be dealt with as under-resourced schools will engender children and therefore adults lacking important skills. This may suggest a gap for the public library to fill although it should perhaps be supporting schools rather than substituting for them.

The teachers' own skills were a constant theme: many had not grown up using computers and were concerned that their skills were not enough to support children effectively. However, those with their own computers seemed more positive:

*'Some teachers have computers at home and others don't and therefore they are behind and not as in front in skills and confidence.'* (Teacher 5)

*'I'm feeling more confident, not fully but things are moving on. We are having training in school'* (Teacher 3)

*'Personally I've had a lot more confidence since I got my own'* (Teacher 4)

Significantly, one teacher with a home computer was concerned that the children were still more able than she was. Again the skills issue appears linked to home usage, but if the teachers are not skilled enough to stretch the children, will the children get all the skills they need from home use? Indeed, as entertainment was the main use of computers for most respondents, is this in itself making them more able?

There appears to be a definite problem with teachers' own computer skills although the schools are aware of this and provide training. This finding may support the motivation behind the current teacher-training programme: computer literacy is very important and students are now tested on their abilities in this area before they can pass<sup>2</sup>. Parents did not perceive these problems, one suggested:

*'I don't think infants/juniors schools make enough of their use of computers, when children are younger, they learn quicker. Also, schools could do more to learn [sic] parents how to use computers.'* (Parent 37)

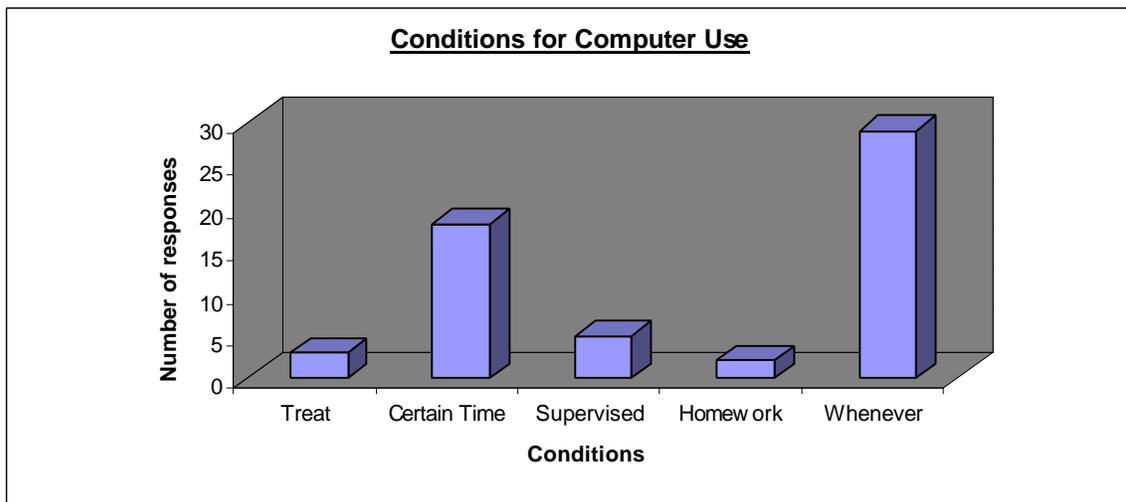
Again there is a mismatch between expectations of what should be done and what can be done: there is an assumption that teachers are automatically knowledgeable in ICT – enough so to teach parents too.

### 5.4.2 At home

From the results of the survey, home ownership and use of computers seemed high: 46 respondents (72%) had home computers, although this may reflect the fact that fewer questionnaires were returned from schools in poorer areas. It also may be due to parents with home computers having a greater interest in the questionnaire than those without, leading to higher levels of returns from them.

When questioned on who used computers, 52 respondents out of 53 who answered the question stated they were for everyone's use, suggesting that Ancarrow's theory (cited in Calvert, 1999) that households with children bought computers earlier than those without is partially flawed. It was not possible to compare the study sample with childless households, however, use by all suggests they may have been purchased for that reason, not necessarily for the children alone.

When asked in what circumstances children could use computers, (see Fig. 5) many stated 'whenever they wish', but a significant number limit their children's time on



them.

**Fig. 5**

---

<sup>2</sup> Information from a conversation with a primary PGCE student qualifying this year.

This suggests a concern with how ICT is used, but the results also demonstrate that most children are allowed to use ICT for use other than education. It is also seen as a necessary part of their lifestyle rather than a special treat indicating that parent's views on computer literacy, or at least familiarity with ICT are forward-looking.

How long people had owned computers was significant: the range of answers was from one month to 15 years although the average time was just under 3 years: this figure was common across all school's answers. This shows a recent surge in home ownership, tying in with the growth figures that the NOP Research Group (1999) noted: 7 million UK Internet users in 1997 rising to 12.69 million in 1999. This is just Internet use, so the figures for computer ownership are likely to be even higher.

Teachers could easily tell which children had home access due to their ICT skills:

*'They're really quick, they know what they're doing.'* (Teacher 4)

*'The ones who have got it at home have more skills than I've been able to teach the whole class.'* (Teacher 1)

However, a child telling the teachers what they have at home was also a common response. The benefits of home use were also mentioned:

*'They're the ones who say 'I know what's wrong with it''* (Teacher 3)

*'More exposure to computers will benefit kids'* (Grimethorpe)

This leads to the deduction that these children are getting a better education in terms of ICT than those without. The fact that they're also learning to troubleshoot is an added bonus: if children can 'repair' computers then even the role of ICT professional may be challenged.

However, another side to the issue was revealed:

*'One or two definitely don't have access at home, they're not confident on the mouse so they get a friend to help them and they end up letting the friend do it and not using it themselves'* (Teacher 2)

*'We found we had to buy a computer to keep up with homework and the computer world we live in'* (Parent 46)

If parents feel obliged to purchase computers, then again children from lower or even intermediate income families will lose out: a point emphasised by several other parent's responses. The lack of confidence from infrequent use is also an issue needing addressing: if children are scared of using ICT then this can only be remedied through practice. This suggests a place where libraries could play a role by simply allowing access to all people.

Several responses indicated a belief that home ICT use is going too far or is unbalanced:

*'I encourage my children to occupy themselves with non-computery activities (art, books, outdoor play) as much as possible'*. (Parent 58)

*'One set of parents requested that their child be asked not to use the computer for homework – he should write it and not type it as they're worried about his handwriting.'* (Teacher 2)

Perhaps parents are concerned that more traditional skills and pastimes will die out: the element of fear that ICT will be too powerful does not seem appropriate as the parents represented above had home computers and used them themselves.

Home ICT use seems prevalent, mainly for entertainment as previously seen and although valuable skills are gained, there are worries over frequency of use.

### **5.4.3 Elsewhere**

As previously seen, the questionnaire established that ICT use in places other than the home or schools was minimal. However, the views and opinions of those

providing the extra access points alongside those of the potential users are valuable. As this dissertation relates particularly to public libraries, use there was examined and several interesting issues were discovered.

Librarians concurred that computers were often far more popular than other available resources:

*'In relation to books, they [computers] are very popular'* (Librarian 1)

*'Very popular. They will come individually or in groups and play on word processing or the Internet.'* (Librarian 2)

Either for play or for information seeking, the children seemed to choose computers first, however, from observations it was clear that this could be due to the novelty factor rather than a natural bias to turn to ICT first. When observed at Upperthorpe library, children with home computers seemed equally eager to use them as those without, but it was the children with no home access who booked to go back after school and use the computers again.

The acceptable use policies in place could have been restrictive: the Grimethorpe interviewee stated that they tended not to encourage children to use ICT due to the legal issues that arise when working with children. However, Sheffield Libraries' acceptable use policy only requires a parent or guardian's signature for a child to become an ICT user. This ease of use, when linked to the questionnaire responses suggests that parents are concerned with supervisory levels. Library use is unsupervised, though misuse is warned against. Another area to investigate would be how far supervisory levels in libraries affect a parent's willingness to allow a child access.

Actual computer use in libraries appeared minimal: only 4 children represented by the questionnaire had ever used libraries for computers and it was not a main reason for going for anyone. Many parents noted that they thought computers in libraries

unnecessary as they had home access. The deduction suggested is that computers in libraries are seen as useful only for those who cannot get access any other way.

## **5.5 Internet use**

### **5.5.1 At school**

Internet use in schools is difficult to separate from general ICT use, however, several issues particular to the Internet did arise. Easily the most common responses concerned problems experienced with it in the classroom. Brightside did not use it at all due to lack of access for the children and several other teachers raised concerns over the usefulness of the Internet as a teaching tool:

*'I don't think it's very good – a lot of the stuff that's educational is too old for this age group.'* (Teacher 6)

*'Books are easier to look in and on the Internet you can't always get straight to what you want.'* (Teacher 4)

This opinion matched the observations at Upperthorpe Library where Net use appeared less directed and therefore more problematic: unless websites had been pre-selected, little useful material was found on the spot. The Internet is evidently used where possible, but its limitations suggest that children cannot use it properly as a resource as they are not capable of manipulating it by themselves.

Navigational problems were also mentioned alongside concerns over firewalls:

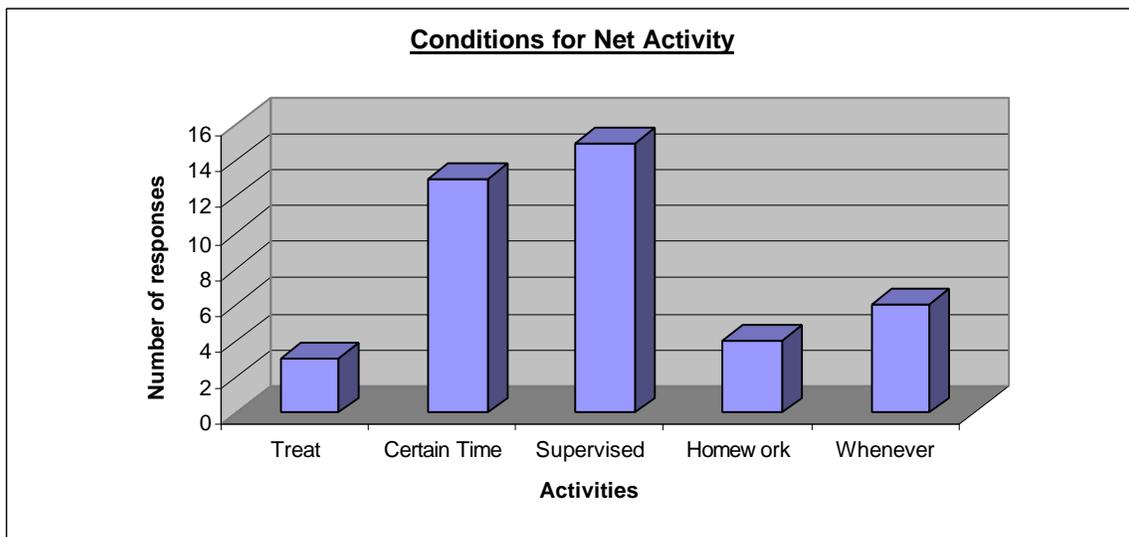
*'The firewall is very random, for example we couldn't get the natural history museum, but we could get the Kama Sutra by Pooh [Winnie]'* (Teacher 7)

This leads to the conclusion that the supporting software itself is not sufficiently developed to allow practical Internet teaching. It seems evident that the Internet does not live up to the hype that surrounds it, certainly where children are concerned and until it does, thorough teaching and learning cannot take place.

### 5.5.2 At home

Home Internet use was harder to establish: this was a failing of the questionnaire which did not differentiate between owning a computer and being connected to the Web. However, of those who had computers, 16 respondents omitted a Net-specific question, suggesting that they did not have home access (35% of computer owners represented). The number of home Net users in this study seems higher than the latest official national figures: 25% of homes in Britain are connected (Arthur and Coyle, 2000). The same figures also stated that 48% of top earners have Net access, leading to a conclusion that it may have been more people in this sector who returned questionnaires.

Responses indicated that home Internet use was much more carefully monitored, both in terms of time and parental supervision than general ICT use. (See Fig 6):



**Fig. 6**

Parental opinions also confirmed this.

*'We tend to watch what they use it [the Net] for'* (Parent 46)

Money and content were evidently major concerns and are also potential barriers to children's access. The worry over content was supported by other views, for example:

*'I also understand that computers and the Internet particularly can be a source of unwanted/undesirable info and therefore believe that children should be guided and carefully supervised during Internet usage.'* (Parent 58)

These views concur with Williams (1999) who acknowledges that children may not have been encouraged in Internet use because of the fear of content.

Although the National School Boards Foundation (2000) found that education was the most prevalent reason for home Net use, this study also found a concern that children should not be completely immersed in computers. Internet use appears to be treated much more warily than general ICT use.

### **5.5.3 Elsewhere**

Specific Net use anywhere other than in the home or school seemed relatively rare in the case study schools, however, some interviewees shed light on library use in particular. Librarian 2 mentioned the government's emphasis on the Internet as the future and the fact that the word has become more important, however it is transmitted. Interviewees also indicated that children had no problems utilising the facilities:

*'Kids now, because they gain so much exposure to IT, they haven't got the same fears'* (Grimethorpe)

*'Children are often more adept at using IT from school or home, they do it at their own level'* (Librarian 2)

A mismatch between what staff are able to teach and what children can already do was apparent, as was evident to some extent with the teachers. Hopefully the NOF

will eliminate this, but if it is not addressed quickly, children growing up will have no need for advice on how to use the Internet as they will know more through practice than a professional can teach them through theoretical knowledge. This suggests that a change in skills may be necessary for librarians so they can be more computer-orientated and therefore more able to assist with all information queries.

Meanwhile, it was found from interviews and observation of the history lists on public access web browsers that library Internet use was mainly for leisure: WWF wrestling and Pokemon alongside pop stars' fan club sites proved most enticing. Little evidence was found of educational use by children except when in a directed lesson. This appears to contradict to government's primary purpose of educational ICT use in libraries, though it may be hoped that children, gaining the relevant skills now, will be able to use the Net for more educational purposes as they get older.

## **5.6 Summary of conclusions**

- Computer and Internet use is concentrated in school and at home though parents do not seem totally aware of all use.
- Leisure activities seem to be the major motivation for ICT use.
- Only older children use ICT mainly for educational purposes.
- Computers are seen as useful for the educationally needy.
- Computer literacy seems in some cases to take precedence over traditional skills such as writing.
- Teachers are dissatisfied with resources, dislike the Net for teaching and find it hard to use computers in class effectively. This is due to the nature of ICT available rather than teacher's skills.
- Teachers felt that their own skills still needed to be improved.

- Home ICT use is limited by time and many parents supervise Net use.
- Growth in home computer ownership reflects national trends.
- Children with home computers were more skilled, more confident and used computers in school more than their peers.
- Lack of library ICT use may be due to lack of adult supervision available.
- Parents with home computers saw ICT in libraries as unnecessary.
- The Internet is generally treated more warily by parents and teachers than general ICT use.
- Children appear to gain ICT skills more rapidly than adults.

## **6.0 The information rich and poor**

### **6.1 Introduction**

The issue of equality of access to information for all has been long debated. Indeed, public libraries owe their existence to a desire to give information access to the poorer people in society. In more recent years, the issue has centred on the idea of the information rich and poor. Feather (1994) describes information poverty as a disadvantage when people are denied information that may help or improve their lives. He also suggests that choice is restricted by the information that one has and therefore without access to all the relevant information, true choice is denied. Applied to ICT, this can also mean a lack of access to digital information, which, due to the expense of supporting hardware, is only available to those who can afford it.

This study attempted to survey schools in four very different areas of the city in order to measure differences in ICT access for children in richer or poorer areas. Public library use was also measured as it has previously been alleged that they are used more frequently by people on higher incomes rather than those on lower incomes who libraries are intended to target (Bakken, 1998).

In the last few years, the term 'social exclusion' has come into common use and the present government makes use of it regularly. The socially excluded are on a par with the information poor: their social and economic situation has led to a lack of access to basic amenities including information and has thus prevented them from fully taking part in society. The LIC (2000) identifies public libraries as the ideal institutions to tackle social exclusion, arguing that the values they are based upon and the services they provide encourage inclusion.

In terms of ICT, it is worth remembering that many people could still be considered information poor due to lack of access to major resources such as digitisation projects which are costly to use. Haywood (1995) suggests public libraries as the ideal environment for most people to benefit from these projects. There are certainly degrees of information poverty, but for the purposes of this study, the main contrast of those who have regular access to information, whether in digital or hardcopy format, and those who do not will be considered.

## 6.2 Comparison of school results

### 6.2.1 ICT use

The proportion of questionnaires returned from parents good overall. The separate schools all produced good response rates; only St Patrick's was noticeably lower than the rest (see Fig. 1).

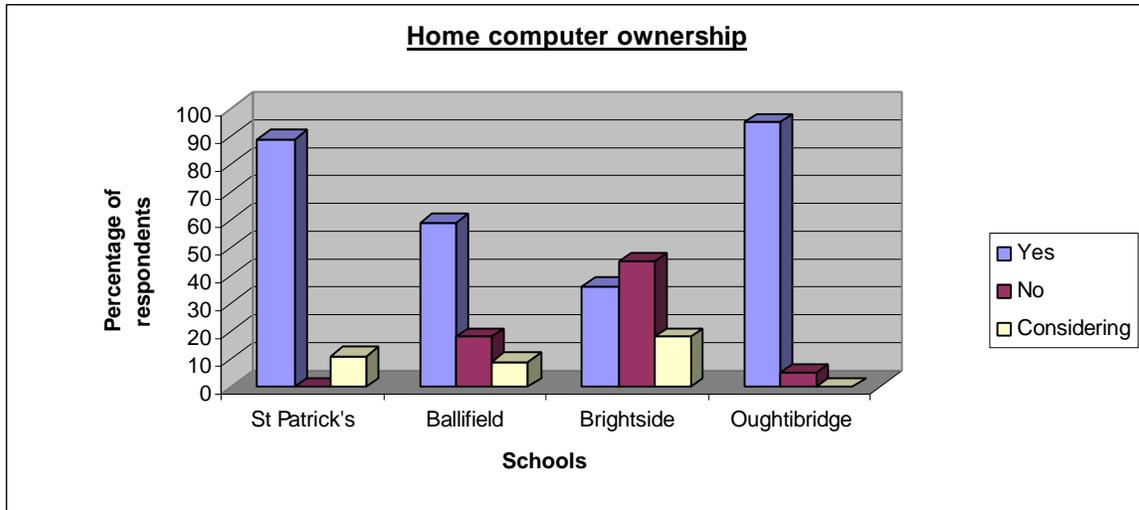
School	Percentage of respondents
Brightside	31
Oughtibridge	33
Ballifield	31
St Patrick's	16

**Fig. 1**

As previously discussed in the community profiles, the schools are very different in their access to computer and library resources. It is valuable to note at this point that none of the schools are particularly close to a public library: St Patrick's mentioned links with Firth Park library, but the distance involved does not lend itself to easy access for the children. Ballifield's local library closed a few years ago, Oughtibridge is only served by a mobile library and Brightside takes its pupils to Limpsfield community library but this was described as small and considerably under-resourced. From investigations of the schools' catchment areas, it would appear that St Patrick's and Brightside are situated in

slightly poorer areas than the other two schools, but it is recognised that the census data used to make this judgement was dated and that this is a generalisation.

Home ownership of computers was a telling demonstration of the differences between the areas (see Fig. 2).



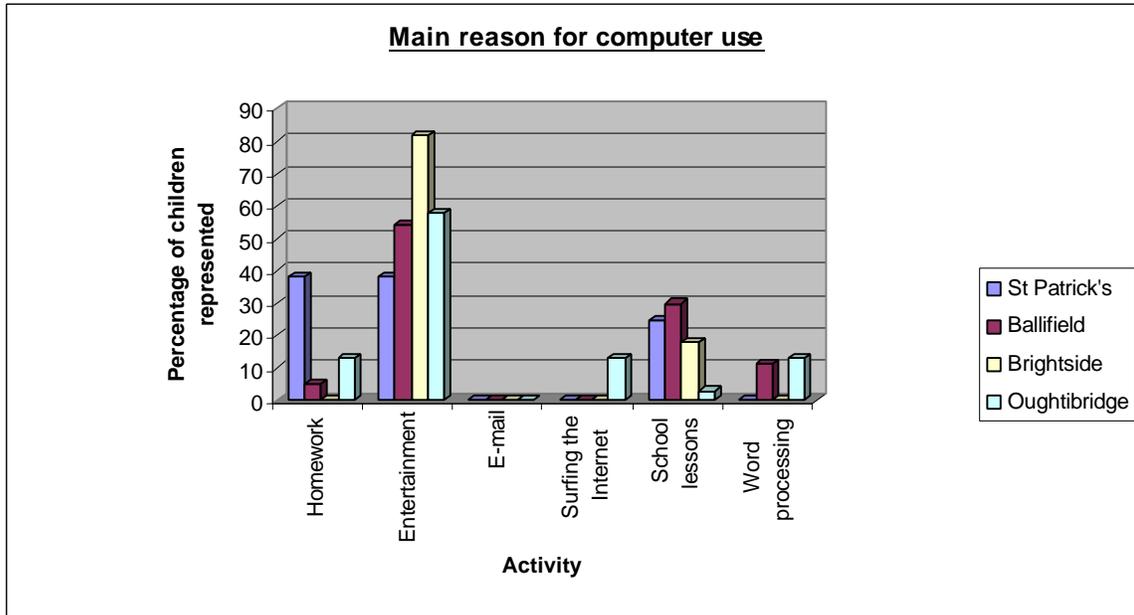
**Fig 2**

The high percentage of home ownership at St Patrick's is perhaps influenced by the low response rate. It can be seen that the proportion of home ownership at Oughtibridge is noticeably high whilst that at Brightside is low. The Ballifield figures may be influenced by its mixed socio-economic intake. Even considering the socio-economic compositions of the areas, home ICT ownership is high and several comments were made to the effect that parents would buy a computer if they could:

*'We would get it if we could afford it – they are expensive'* (Parent 36)

The number of people considering buying potentially makes the ownership figures even higher.

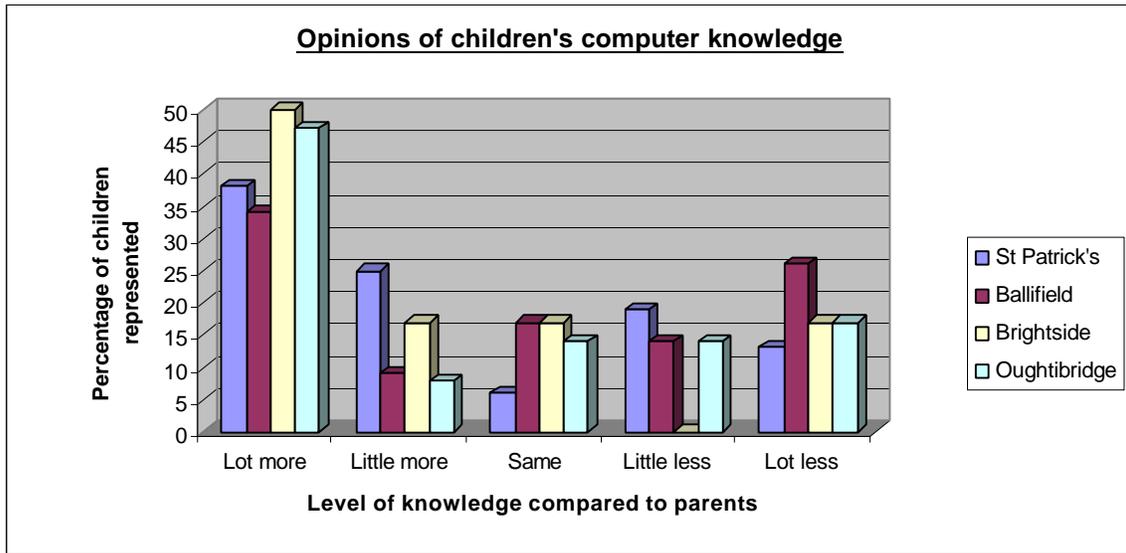
Reasons for children's computer use were diverse and seemed quite proportionately spread across the different activities (see Fig. 3).



**Fig. 3**

As previously discussed, entertainment is clearly the biggest motivation for use, but it is interesting to note that only Oughtibridge mentioned the Net as a main use and use in lessons was considered higher at Ballifield who received praise for their ICT facilities in their last OFSTED report (1997b). However, this could equally be due to the fact that 41% of parents from Ballifield stated that they did not have home computers and therefore use in lessons was likely to be the most common for children with no other access. Oughtibridge's answers seemed to indicate greater home use than at school, possibly partially due to the high proportion of computer owners and therefore the increased access available to children.

Another set of responses from the questionnaire that prove valuable are those concerning parental opinions on ICT knowledge. Parents were asked to rate how far they considered their children more knowledgeable than themselves in this area (see Fig 4).



**Fig. 4**

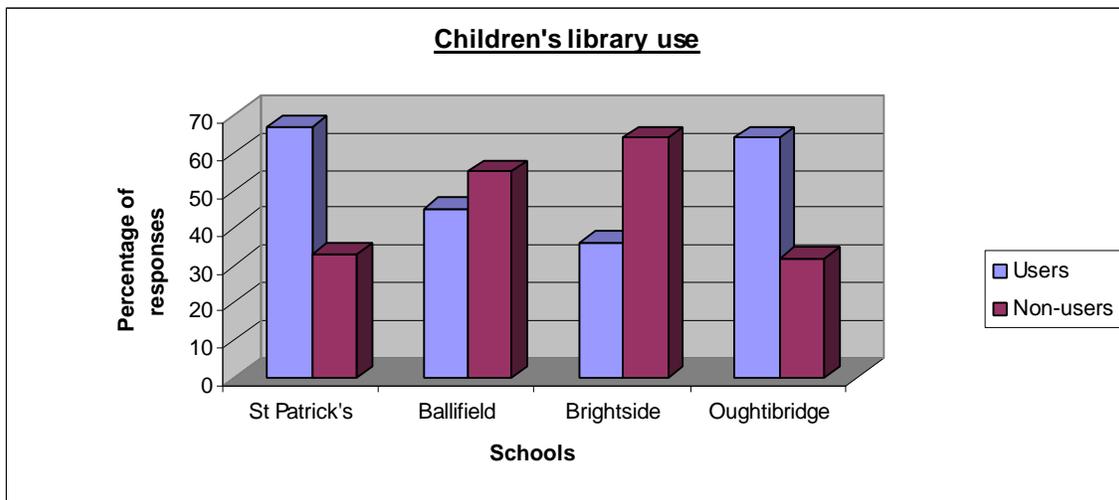
Opinion seemed fairly evenly spread, however, the majority of parents at all schools believed that their children knew a lot more about ICT than they did. This suggests that the combined exposure from home and school benefits many, or for those without ICT at home, simply school exposure is beneficial. A significant proportion believed that children knew less than they did and this appears to be highest at Ballifield. The reason for this is unclear as it could represent those who frequently use computers at work and therefore use ICT more often than their children. It is also interesting to note these figures in the light of Ballifield's praise from OFSTED for its ICT teaching: are parents unaware of their children's abilities or is there simply a greater concentration of ICT-literate adults in the area? This issue would demand further in-depth investigation not possible with this study.

Reasons given for the non-purchase of home ICT varied, but the main response given, (apart from those intending to buy computers) was cost, with Brightside and

Ballifield registering this reason most highly. It is therefore suggested that this is the main reason that people do not buy computers: it is not that they do not want access, but many cannot afford it.

### 6.2.2 Library use

Access to information for the information poor also encompasses access to libraries and their facilities. The numbers of children using public libraries are seen in Fig 5.

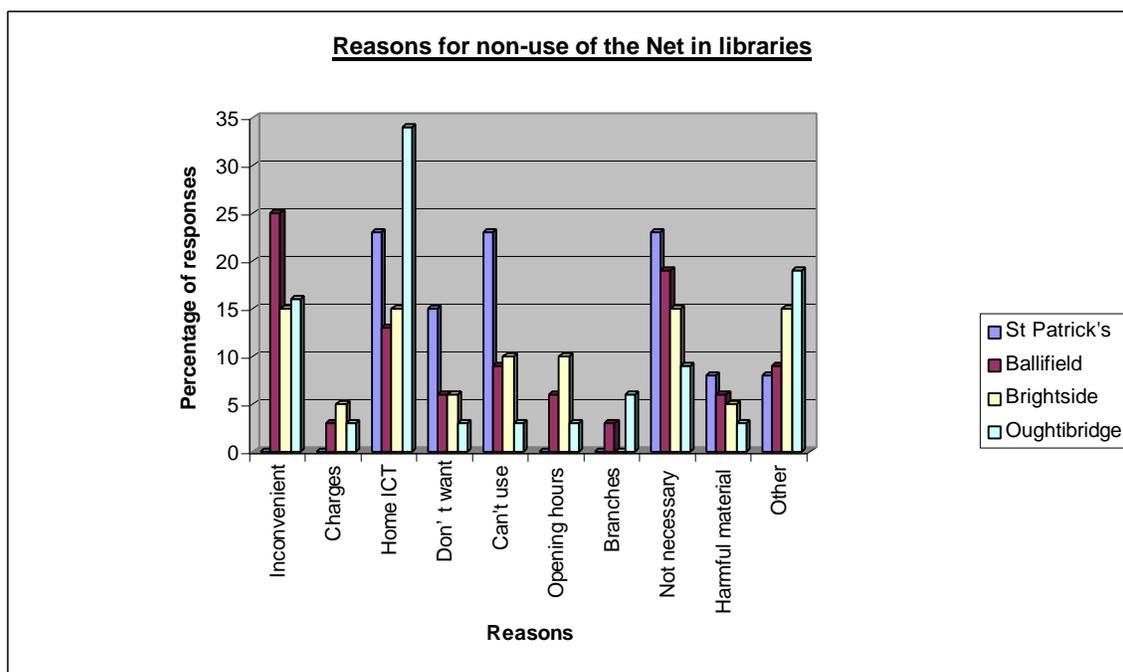


**Fig 5**

From these figures, it is plain that Oughtibridge and St Patrick's had the highest proportion of library users. Brightside in particular had more non-users. This lack of access at Brightside is perhaps due to the lack of local facilities: the nearest public library is not within a comfortable distance and a special trip would have to be made. The high figures at St Patrick's may be in part due to the current Head Teacher's proactive stance on libraries: the school library itself is award-winning and children are encouraged to use libraries where possible. At Oughtibridge, the higher proportions of families from professional and managerial economic levels suggest the ability to travel to other public libraries as Oughtibridge only has a mobile service. Several parents mentioned this mobile service, but a large number mentioned particular libraries in other areas. At Ballifield, the numbers of non-users are slightly higher, perhaps due to lack of a local

public library. Brightside too is without a local library, but it could be suggested that the economic difference between the areas has resulted in a higher proportion of library users from Ballifield. Indeed, this would appear to confirm Webster's (1995) view that half of all library users are from the middle classes, or rather, those who could afford to buy books anyway. Whilst attempting not to make generalisations, it appears that the poorer of the two areas here does display lower public library use.

When asked why the Internet was not used in public libraries, a variety of answers were given. A significant proportion did not even know that it was available, suggesting that public libraries should increase their publicity in this area.



**Fig. 6**

Having home access proved to be a major reason for lack of public library Net use, particularly so at Oughtibridge. However, 'inconvenient to get to' was a popular response from all except St Patrick's, illustrating the lack of local public library access that all 3 schools experience. Children not wanting or not being able to use the Net were also popular reasons, particularly at St Patrick's, which raises the question of skills. However, as most respondents from St Patrick's owned home computers, the responses

are possibly due to that instead. The 'not necessary' response also figured highly, however, it is possible that the parents saw this response referring to their ability to access to Net elsewhere rather than as a reflection of its importance generally.

The schools evidently displayed great differences in library use, but the proportions of use and non-use of both ICT and libraries appeared to be reflected by all. Attempts have been made in this section to differentiate between the schools, but it should be noted that any correlations between to community profiles and the questionnaire responses are not necessarily foolproof.

### **6.3 Barriers to ICT use**

In conducting this study, it was though valuable to include consideration of the potential causes of lack of access to ICT. The public library clearly has a role to provide access where possible to all people and it is therefore useful to know what is preventing children particularly from using ICT. Likewise, it is useful for schools to know how they should be incorporating ICT into the curriculum to benefit those who do not have access elsewhere.

#### **6.3.1 Money**

The factor that links this issue in strongly with the information rich and poor issue is money. This was by far the most popular response from parents and teachers when questioned on reasons for not having ICT access. Teachers identified it as a major issue:

*'There's the issue of buying one – money'* (Teacher 6)

*'Money, being able to afford enough computers for the children in school and the parents being able to get it.'* (Teacher 4)

*'They can't afford to buy them – lots of parents do say to me at parents evenings that they would like to have one but they don't have the money.'* (Teacher 1)

Confirming the latter quote, many parents without home Net access particularly mentioned money as a main reason why not, for example:

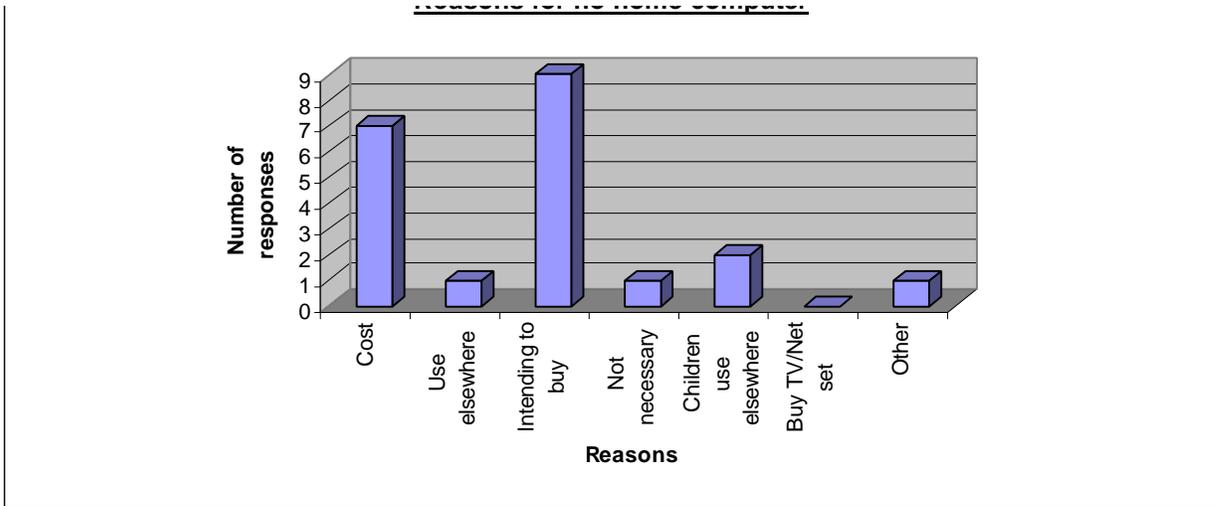
*'The cost – the price of the Net needs to come down, and until it comes down we won't get it.'* (Parent 62)

Clearly the analogy of rich and poor is still valid: lack of financial resources denies access to information leaving the victims doubly impoverished. This evidence is confirmed by research from America which found that 70% of higher income households had Net access compared to only 35% of lower income households (National School Boards Foundation, 2000).

The problem remaining is where these people can afford to gain access: many libraries charge for use of the Net in particular: Librarian 2 mentioned this as a major barrier to children's access even though the charge is minimal. Murphy's (1996) research also suggested that public libraries needed to address the needs of the 'underclass' by subsidising new technologies. Across the country, about a half of library services charge for ICT use and these charges range from £2 to £5 per hour<sup>1</sup>. This clearly would hinder those with very little money from using it at all. The problem appears to emanate from funding levels: Dille (2000) states that Internet access in libraries is intended to be free, but local authorities are not bound by this recommendation. As libraries suffer in funding cuts, so Net access must be charged for to recoup costs. Libraries are thus prevented from acting on the advice of Denham et al. (1997) whose research found free open access to be an important factor in children's ICT access.

---

<sup>1</sup> Results from a survey conducted on the lis-pub-libs email list by Stephanie Coates on 15/05/00.



**Fig. 7**

Parent’s reasons for not having a home computer can be seen in Fig. 7. Of those not intending to buy a computer, the reason is clear: they cannot afford to do so. The cost of online access has been mentioned previously, but as one interviewee warned, the telephone costs may soon be supplemented by other charges leading to an increase in information poverty:

*‘The next thing is that less and less will be free on the Net which will have a detrimental effect on use, [there will be] subscriptions and pay per view... people will use it less because of that - the big corporations will force that issue - people won’t afford access to information again’* (Grimethorpe)

Other issues also emerged affecting access: the Grimethorpe interviewee mentioned the cost in time and money of transport to their facilities. This prevented some school groups from bringing their children in at all. Lack of general funding for ICT in schools also emerged as a problem: some teachers felt that schools by nature needed more provision than currently available and again stated money as a barrier:

*‘The cost of them: in school you need more computers’* (Teacher 3)

At the heart of children’s access is the issue of their parents. As Calvert (1999) states, access is determined by a parent’s decision about buying the hardware in the first place and parents ultimately exercise control over how long their children are exposed to ICT. One teacher identified this as a major barrier to use:

*'Parents and teachers who won't let them on it'* (Teacher 2)

All this evidence suggests that money remains a dominant factor in determining access levels for children although an adult's influence is the ultimate deciding factor. A greater role for public libraries is suggested in increasing ICT exposure for the information poor, but charging for this experience is clearly detrimental.

### **6.3.2 Other Barriers**

Although stated in the methodology that content on the Net was not intended to be covered by this study, it is worth a brief mention as it did emerge in one interviewee's opinions:

*'The biggest barrier is content, as a parent I'm very concerned about the amount of porn on the Net'* (Grimethorpe)

Despite this view, there appeared to be relatively few respondents who rated it as an issue at all. Indeed, only five parents identified it as a worry. This suggests a potential barrier to children's ICT access, however, the low number of responses could mean that it is not considered as big an issue as some have suggested, for example: Williams (1999).

Library opening hours also emerged as a problem. One librarian from a library with quite reasonable hours stated:

*'We close at 7pm but we don't get many in between six and seven. The homework club is between four and six. Other activities prevent them coming in.'* (Librarian 2)

Many other libraries close much earlier and all libraries in Sheffield are closed on Thursdays. At Grimethorpe too it emerged that the library was only open one and a half days per week. It could be deduced from this that libraries are causing a lack of access. Meanwhile, it is recognised that this issue rests on funding too; if libraries do not get funds from the local authority then they cannot increase their hours. The DCMS (2000) recommended that mobile libraries should look into taking ICT out to more rural areas.

An initiative such as this may benefit those in places like Oughtibridge who cannot travel elsewhere for access. However, the DCMS did recognise the associated problems with bandwidth and it seems that this project may be some time in coming.

Another major barrier identified by teachers was the parents' own abilities. As previously seen, many parents did not perceive their children as knowing more than them in terms of ICT. However, several teachers suggested lack of parental skills as a large problem when trying to teach children:

*'Adults not having enough knowledge to lead children forward – the government have recognised that through the New Opportunities Funding, but that's the biggest barrier.'* (Teacher 5)

*'Ignorance on the part of grown ups, lack of knowing what they can do.'* (Teacher 7)

*'Parents not being very computer literate so they're frightened to use them, lots of people who have computers don't realise their potential, they just play games on them. If you want the younger generation to get on then the parents need to be educated so that they can use ICT appropriately.'* (Teacher 6)

Lack of exploiting computers to their full extent is a barrier in itself and the suggestion emerging from this evidence is that parents need much more input and training with ICT than they are receiving at present.

Librarians also identified the attitudes of library staff as a problem:

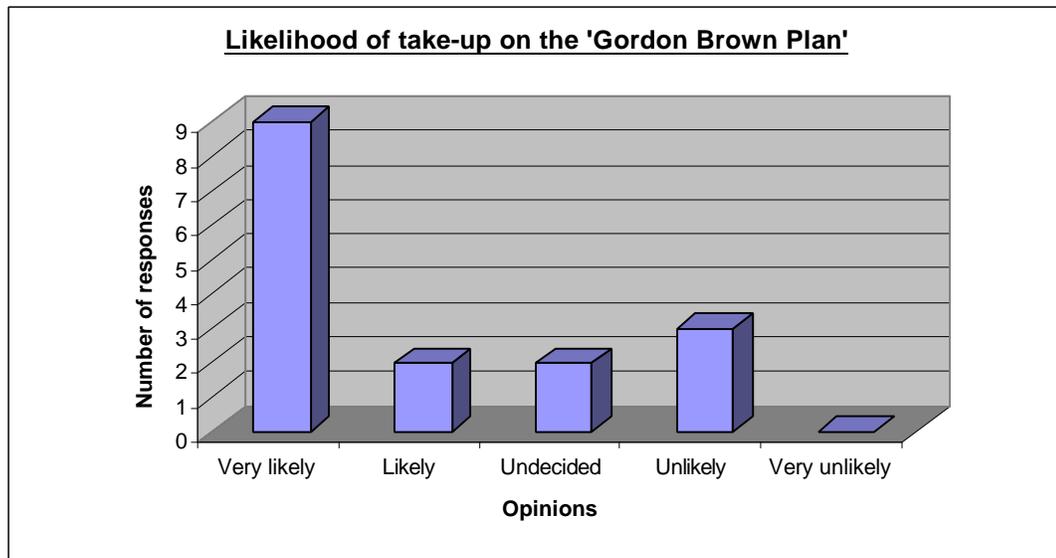
*'Here the attitude to the public coming in to use computers is positive, in other libraries [they think] it's bad enough that people come in, let alone use the computers.'* (Librarian 2)

This reflected the views of several interviewees, although parents made little mention of library staff at all. Clearly, attitudes are still perceived as a problem by some and therefore, further training for library staff seems suggested.

## 6.4 The 'Gordon Brown Plan'

In October 1999, the Chancellor announced a new initiative to lease out computers to the poorest families so that they should not be denied access to new technology and particularly the Internet (White, 1999). As this idea coincided with the objectives of this study, it was decided to investigate this idea as an issue in itself, particularly with reference to those parents surveyed who could not afford home computers.

Parents without home computers were asked how likely they would be to take advantage of this offer if and when it comes into being, (see Fig. 8).



**Fig. 8**

The idea was very popular and although there were a few parents who would not want it, most seemed in favour of the idea. This may suggest that it is the initial financial outlay that puts people off or prevents them getting home access, rather than the running costs. However, it could be the case that the respondents had not considered the running costs at all.

As matters of finance are usually delicate issues, particularly when suggestions of poverty are made, the questionnaire was designed not to single out people who could not afford home computers. Instead, as was hoped, parents brought up lack of money as an important point in their responses to the specific question on Gordon Brown's computer initiative.

*'If computers are not available to all who wish to use one through reasons of cost, we are creating a two-tier society where education is only available to those who can afford it.'* (Parent 21)

This question provoked a great response not only from those without a home computer, but also from many with them. Most answers were extremely positive but there was a significant amount of scepticism, especially from those with computers who had experienced how ICT was used in the home already. A particular issue that arose was a concern that computers would only be used for games or the Internet. These uses were implied as being inferior, the implication being that the best computer use was for educational purposes and that leisure use would not engender as much benefit.

*'Depends what they use it for. Surfing the Net is not the answer'* (Parent 22)

*'I have to say I have a struggle to limit the time especially my oldest, devotes to computer games and I feel that computers make a good servant but a very dangerous master'* (Parent 43)

It is interesting to note this opinion amongst respondents whose main home use of computers was for entertainment. Again the issue of skills arises which will be discussed later in this chapter.

Other responses ranged from positive opinions that identified the long-term benefits such as:

*'It is a good idea since the 'jobs' are all needing computer skills of various levels and those unable to afford computers are at a strong disadvantage'* (Parent 51)

*'Excellent, children from low income families should not be penalised for being such.'* (Parent 35)

However, other parents saw deeper issues and displayed scepticism and an awareness of the complexities involved such as continued financial outlay:

*'In principle, a laudable idea, but has limited application. Families who would possibly rent may still be constrained financially, thus unable to afford Internet access and to acquire software packages (games) etc.'* (Parent 58)

*'A good idea, but if the parents aren't computer literate they need training to help their children'* (Parent 24)

*'Impractical and would probably not benefit/be available to those in need.'* (Parent 44)

Teachers and librarians were altogether more sceptical, indeed, there were no outright positive opinions regarding Gordon Brown's plan. Issues *identified* included those of money:

*'Once they get the phone bill they'll be even poorer'* (Librarian 2)

*'It's all about where they choose to spend their money and priorities. What's the criteria for deciding who are the poorer families?'* (Teacher 5)

*'Are they that expensive that if they were a priority they wouldn't just get them anyway?'* (Teacher 7)

Interestingly, the latter teacher suggested that computers are not considered to be important enough or families would buy them anyway. However, parental responses in this study refuted that idea as many stated that they would love to buy computers but it costed too much. In fact, parents equated Net access with educational benefits and expressed a strong desire to aid their children educationally, but stressed an inability to do so through lack of funds.

Teachers and librarians also suggested misuse of the ICT as a possible result of the Chancellor's initiative, therefore questioning the whole issue of home ICT access.

*'I don't know whether it would improve IT skills, they'd probably just see it as a freebie to play games on – it depends on the guidelines and how well educated the parents are in ICT'* (Teacher 6)

*'Certain families here will take advantage of that because they want something for nothing'* (Teacher 2)

It has already been demonstrated in this study that entertainment is the most popular reason for home ICT use. Combining this with Teacher 6's response above suggests that in that teacher's experience, home use for entertainment has not benefited the children particularly or the answer would not have been phrased in this way.

An alternative response from the professionals was that people would not bother with the scheme:

*'If it takes more than a few minutes to fill out a form and take a computer then no-one will bother.'* (Librarian 1)

*'I think that a lot of people are still quite frightened of computers, probably people who could benefit from having a computer wouldn't do it.'* (Teacher 4)

This latter opinion particularly suggests the necessity of available support services; if people know they can get help, they may be more tempted to take advantage of the offer. The overwhelming theme arising from the more sceptical answers was that everything depends on how the proposed scheme is administered.

ICT access in public libraries appears to be an alternative option and indeed Haywood (1995) suggests that public libraries should provide exactly the same information access that people could get at home. One librarian also noted that there may be people who may simply wish to get out of the home atmosphere and may prefer using ICT in a library (Librarian 2). As exact details about the 'Gordon Brown Plan'

have yet to materialise, it appears to be essential that libraries are able to provide the access that is not yet available in all homes.

## 6.5 Children's ICT skills

An important point to consider in the information rich and poor issue is that of skills: are children from all socio-economic backgrounds getting the right ICT skills to use throughout their lives? Kingston (1999) reports that despite the prolific amount of use that many children make of ICT, use for games and entertainment does not equal abilities in word processing and similar skills. This study also determined to ascertain what levels of skill primary school children have and how far this is affected by home ICT use.

The study revealed that there was a wide variance between the skills of the children represented and although home ownership was a dominant factor, it did not always equate to computer excellence. Many comments suggested a high level of skills was due to home ICT ownership:

*'Probably a third are pretty good at it - they're becoming more aware'* (Teacher 3)

*'Children who have computers at home tend to dominate because they've got more skills.'* (Teacher 1)

Equally, comments were made regarding the lack of skills linked to lack of home ownership:

*'Certain children with keyboard skills do get on it more to do things for displays. There are about 4 to 6 people who do use it more.'* (Teacher 2)

However, the results of observations at Uppertorpe library suggested that the issue was not so clear cut as even children with home computers seemed particularly deficient in keyboard skills. Some teachers' statements confirmed this observation:

*'Their main skills are on the mouse, with finding letters on the keyboard they're really slow.'* (Teacher 6)

*'One or two definitely don't have access at home, they're not confident on the mouse so they get a friend to help them and they end up letting the friend do it and not using it themselves.'* (Teacher 2)

The latter demonstrates that those with well-developed skills appear to get more exposure than their peers who may need the extra input.

Although a lack of skills is not necessarily linked to lack of home access, lack of frequent exposure clearly makes a difference. From this it could be deduced that children without home computers are at a disadvantage. Pateman (1999) cites Labour's belief that social exclusion results from a lack of relevant skills, amongst other factors. He continues to argue that children who become used to poverty from an early age develop lower aspirations and never gain the skills that would enable them to better their social circumstances. This suggests that information poverty and social exclusion are linked and therefore must be tackled together. Conversely, the National School Boards Foundation (2000) found that many low-income families believed strongly in the power of the Internet to increase their children's chances of self-advancement. This suggests again that parental attitudes have a strong influence on a child's development.

Several teachers raised the problem of teaching children with a wide range of skills. It was a particular issue that when teaching an aspect of ICT, for some children it would be entirely new, whilst for others it would cover old ground. There was also the problem of which children used the computers more often:

*'The ones that are most capable will manage to get the most time on it and the ones that are least capable are always too shy and hide.'* (Teacher 5)

Certain children appeared to be reaffirming their skills constantly whilst others did not have the opportunity to develop any.

In the interviews with librarians, the conviction of the library's role in helping children gain skills became clear: *'They're fairly needy and they need a lot of support.'* (Librarian 1). The same librarian also raised the issue of special needs:

*'Kids with special needs are always going to struggle - that's what we're there for.'* (Librarian 1)

The implication was clear that libraries should stand in the gap and provide the time and support that a school may be unable to do for each child individually. However, there are important issues concerning lack of staff time and opening hours: these raise questions over the future of public libraries as effective electronic resource keepers in their current situation.

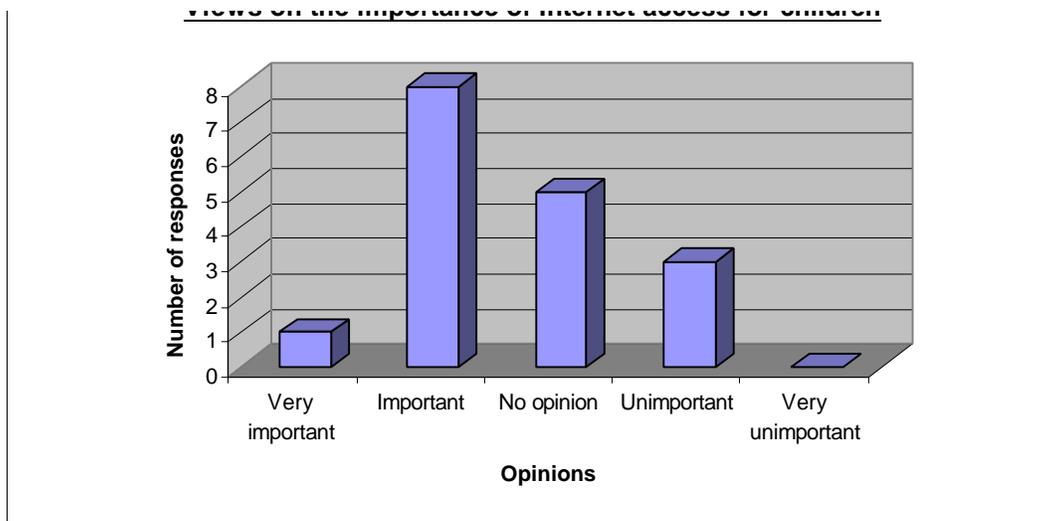
The benefits of increased ICT availability were clear, as one teacher stated:

*'They enjoy using a computer because it taxes their brains – it's letting them practise mental skills. But they're having to develop computer skills to put the mental skills into operation.'* (Teacher 5)

This implies that computer use develops all sorts of other skills in addition to computer literacy: a double benefit. Meanwhile, the study appeared to show a positive reaction from parents towards ICT.

*'I am glad to see computers being made more available because I think it's important for children to obtain basic computer skills, as computers feature in a lot of everyday activities and tasks.'* (Parent 52)

Attitudes towards Internet use were also measured due to the fact that a parent's opinions will affect a child's access. The relevant question in the questionnaire was specifically directed at parents with no home computers in an attempt to measure the strength of opinion regarding the resource (see Fig 9).



**Fig. 9**

Positive opinions here were not as high as those regarding computer literacy, although the majority did rate it as ‘important’. Although the question did not specifically mention skills, the implication remains that Internet skills are not regarded as highly as general computer literacy. This could be due to the perception of the Net as an entertainment medium, though this is conjecture and highlights an area for possible further study. When questioned in telephone interviews, several parents indicated their belief in the equal importance of the Internet and general ICT software, for example: *‘We tend to watch what they use it [the Net] for – it was equally important to get as the computer for their homework.’* (Parent 46)

Altogether, this suggests a mixture of opinions regarding Internet skills and may suggest a role for the public library in educating the public with regard to the importance of Net skills as well as teaching the skills. This could apply to all, not just to children and it could have a specific focus on the information poor, as they are the ones who are unable to develop ICT skills at home.

## 6.6 Summary of conclusions

- Home computer ownership is generally high across the city and is desirable.
- Frequency of ICT use was highest where exposure was greatest.
- Many parents recognise that their children are more skilled in ICT than they are.
- Poorer areas displayed lower levels of public library use.

- Home ownership and inconvenient locations were the main reasons for lack of public library Internet use.
- A major barrier to children's use of ICT is lack of money.
- Parental opinion is the ultimate barrier to use.
- Parental skills affect the level of productive ICT use that children get.
- Library staff attitudes are still hostile to ICT in places.
- Leasing of computers was a popular plan with parents and was seen as an answer to the problem of lack of money.
- Professionals and certain parents identified flaws in the computer lease idea leading to the conclusion that it cannot be fully evaluated until all details are known.
- Levels of ICT skills are generally linked to home ownership, although keyboard skills are poor in many children.
- Children with better skills gain more exposure, often excluding others in the process.
- Libraries believe they have a role in helping children of all abilities.
- Computer use generally appeared to aid skills in other areas.
- Net skills were not rated as highly as general ICT literacy for children.
- The library may have an educative role in allowing children ICT exposure.

## **7.0 Comparison of children's computer use over the last five years**

### **7.1 Introduction**

Before it is ascertained how far public library use has changed, it is necessary to investigate the changes in ICT use. Hopefully this will enable trends to be linked to public library use, however, it is recognised that the two may not necessarily be linked and use of both may have fallen or risen due to entirely unconnected reasons. It was still thought valuable to measure the changes as far as possible as the description of new trends is always useful to those working alongside children in any capacity.

Figures for the growth in home ICT use have already been discussed, however, qualitative information indicated a significant change in children's ICT use since 1995. It was a fault of the questionnaire that this could not be confirmed by quantitative data, however, figures for home ICT ownership as previously considered do have some relevance. The changes in attitudes of government and libraries are also evident: the DNH (1997) makes no specific links between children and technology in libraries, instead emphasising the library as a force to promote reading amongst children. Ormes (1998) also noted the limited experience children had at that time of ICT in the library: it was seen as important, but lack of funding led libraries to prioritise other services. The LIC (1998) and the Labour government have heralded a different emphasis with ICT seen as an essential public service and funding being given to libraries to ensure that this becomes a reality. The LIC (1998) recommends that schools and libraries should be technologically compatible to enhance the learning possibilities. This study intended to cover two main issues in this area: growth of technology and frequency of use amongst children.

## 7.2 Growth of technology

In order to highlight the increase in different technologies available, the interview at Grimethorpe provided most of the significant information. The interviewee stated that when the EVH came into existence in 1994, public computer access was a new idea for councils, but they knew that the Net would be *'the next big thing'* (Grimethorpe). Their experience also showed that in 1996, public Net access was still a novel idea. Indeed, the use of the Net was fairly limited in 1995: Greenhalgh and Worpole (1995) estimated 10 million users worldwide, whereas now, Arthur and Coyle (2000) claim 6.5 million users in the UK alone. Technology itself has developed at a rapid rate: as Robins and Webster (1999) state, new technology has enabled dispersal of information that previously was not freely available. They also predict the inevitability of having to 'buy in' or lose out. The recent launch of high definition television with Internet access has also highlighted the growth in possibilities,

Regular use of ICT in schools was still a fairly new idea and Grimethorpe's own experience suggests that not all local schools wanted to or were able to prioritise it. Grimethorpe offered their services to most of the local primary schools, but only one was able to use them. This school went for two years running until they had their own computers, though the comments show that teachers were unsure of the technology and still saw it as having potential rather than as a day to day resource even in 1998:

*'Staff could see the potential too...Staff were in first outside school hours for six - eight weeks and we got them comfortable first...showing them what was available.'*

(Grimethorpe)

When compared to the results of this study where all schools had computers and 72% of respondents had home computers, there appears to have been a huge growth in technology use over the last 2 years. Duration of home ownership figures from the questionnaire averaged at just under 3 years, suggesting that the most significant changes

have occurred between 1997 and today. Other results confirming this were the information from Grimethorpe compared with the frequency of use figures. The interviewee at Grimethorpe stated:

*'Most had hardly any ICT exposure.'* (Grimethorpe)

This again referred to the primary school's first visits to the centre in 1998. The questionnaire's results indicated that the majority of children used ICT 'some days' although a significant number also used it 'most days' and 'occasionally'. In the questionnaire, these results were divided by where they used the computers, so a graph would not reflect accurate figures of usage by the children represented. However, it is enough to note that most use was noted 'some days' in all the locations listed (see question two, Appendix A). Interestingly, occasional usage figures were higher than the 'most days' usage figure suggesting that although computer use is more widespread, it is not yet used daily by younger children. A reasonably high exposure to ICT is indicated that is also confirmed by other people's perceptions:

*'When I first came here they had one old BBC computer – computers are obviously getting better, only a few people would have had them, now most households have one and the children are very aware of what you can do on a computer.'* (Teacher 6)

*'We've just bought a computer for our kids. Now we've got one we use it more at home'* (Parent 46)

It was interesting to note that the interviewee from Grimethorpe also believed that the primary school children were now ahead of the standard expected by secondary schools:

*'Those kids will frighten the staff at the high school because they are so far in front'* (Grimethorpe)

However, this result, as with all the results from Grimethorpe are inevitably relevant to that particular area and reflect local trends rather than national ones.

Respondents generally acknowledged the rapid growth of technology, all displaying varying viewpoints on how beneficial it is. Meanwhile, a concern was felt by many respondents about where the funding would come from, while acknowledging that 'buying in' was not an option but a necessity.

*'We've got to keep up with the rate of change – digital cameras, scanners...the children talk about these things – they've had experiences [of them] that we've got to tap into and support.'* (Teacher 5)

*'For my son and daughter I'd like one for education. It's money stopping us from getting one and a lack of knowledge.'* (Parent 23)

Digital expansion is occurring with rapidity and all the data points to an awareness of this fact. However, the question remains: will people realistically be able to participate in the information society if the expansion continues at the same rate? Issues of cost are raised alongside the simple fact that if the pace of growth increases, people will not be able to keep up.

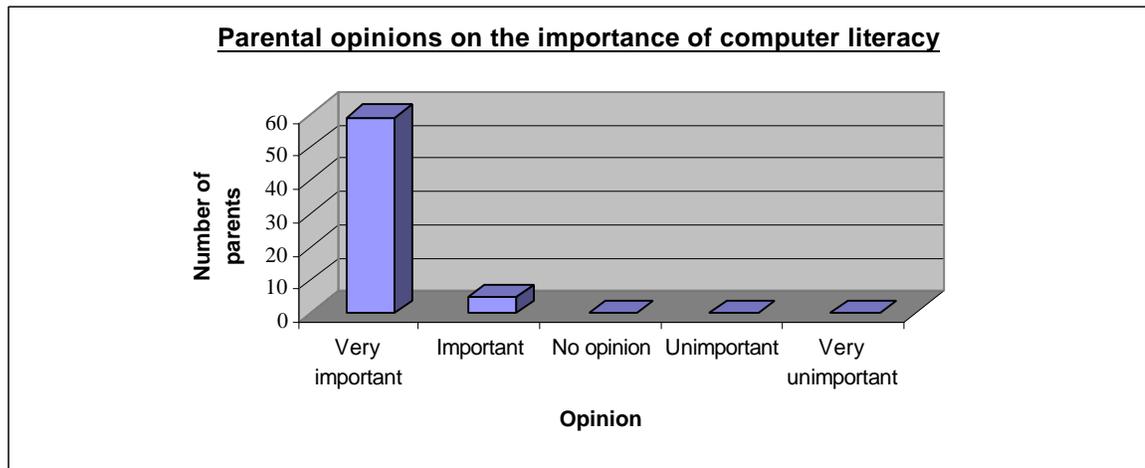
### **7.3 Frequency of use**

A common response during data collection was that children used computers a lot more often than had been the case five years previously. It was difficult to measure the change in use for families with one child, because five years ago, many would still have been toddlers, or still too young to use ICT in a more productive way. However, families with more than one child did give some pointers. The older children were generally the ones who used computers more and their use was more educational than that of their younger siblings. This suggests an increase in use with age, apparently due to schoolwork demands. Many families had only acquired a computer within the last couple of years, again suggesting that frequency of use at school had led to the necessity of purchasing a computer. Parental statements confirmed this:

*'We felt they needed it for information for schoolwork more than anything.'* (Parent 53)

'We found we had to buy a computer to keep up with homework and the computer world we live in.' (Parent 46)

The figures concerning parents' views on the importance of computer literacy for their children (see Fig. 1) also suggest a reason for home purchase.



**Fig. 1**

These figures could also be a result of school use: children use computers in school more, therefore parents perceive a greater need for computer literacy. Whatever else they may suggest, they provide an adequate reason for the increase in children's computer use.

Evidence from librarians indicated that the introduction of computers increased the number of library users:

*'The numbers have trebled [users at the library], it's obviously changed because now we've got the Net.'* (Librarian 3)

Although there was no quantitative data to back this up, it was noted that the reference above was to a new library and as Kempster (1999) states, a new library can increase adult use twofold and treble children's use. As Firth Park library opened in a more

central location with the computers already installed, it is difficult to say which prompted the increase in use.

The fact remains that some children still do not use ICT: several teachers mentioned that there will always be some people who simply do not like computers.

*'When it's free use, some wouldn't go on it.'* (Teacher 6)

With other responses, this phenomenon was linked to a lack of knowledge, as in the case of the above quote. Here the teacher was trying to get across that children who are not familiar with the technology are not usually eager to use it. However, the majority of responses indicate that most children love using the computers.

*'Some of the children are a lot more confident using them and they will ask to use them. A lot will choose to go on the Internet as a treat.'* (Teacher 4)

*'Five years ago, there was just a BBC in this classroom and they couldn't do much with it. The children are quite happy to use the computer now and quite capable – they use it a lot more than they did before.'* (Teacher 1)

*'The majority of children don't have the fear that adults have of doing something wrong. Lack of fear has let them find out so much.'* (Teacher 2)

Teachers also noted the expertise that comes with practice. All this data suggests a vicious circle that children can become trapped in: lack of familiarity leading to lack of use and therefore lack of familiarity and so on. This is evidently an important area that the public library could assist with if it so chooses.

Peer pressure emerged as an influential force on frequency of use. Several respondents noted the influence of others as a significant factor in the decision to buy a computer:

*'Reading on a computer is more cool than reading a book. The pressure from the kids they knock around with has an influence.'* (Parent 53)

*'They did feel under pressure to buy one from the other kids at school and from the work they were bringing home which needed them to use a computer.'* (Parent 46)

*'[It's] a lot higher on their lists of must-haves, its seen as a need rather than a whim, it's a lot less of a novelty and it's not cool not to know how to use it.'*

(Teacher 7)

This could conceivably be extended to Internet use: as Williams (1999) found in his study, peer pressure affected levels of home connection. This in itself suggests that children have a strong influence over their parents' ICT purchases; what a child wants, or indeed, what a child needs to do for school has a strong effect on a parent's decision to buy.

No suggestion was found of parental concerns over frequency of use. Although worries of isolation have prompted previous studies, one found that Net use seemed to enhance interpersonal relationships (National School Boards Foundation, 2000), whilst another identified popular pastimes as being solitary and raised concerns over children's development of social skills (Haywood, 1995). Only one parent stated actively encouraging their children to do other activities, (interestingly this parent works in the ICT industry) and no one viewed computer literacy as unnecessary.

The issue of independent learning experiences is much discussed in the literature. Tapscott (1998) discusses the change in learning trends: before computers, people stopped learning after school and started working. Now, as computers have enabled the amount of knowledge available to us to increase, lifelong learning has become a necessity. Meanwhile, Kehoe and Mixon (1997) consider the effects when a child creates their own learning experience through computer use. They state that when this happens, teachers can no longer control what is learnt and therefore the issue of who is actually responsible for what children learn arises. From this study, it was clear that much computer use was independent, although there was an equally high proportion of directed school use. This concern over what children learn did not seem reflected in many responses, although a few indicated their preference of directed use at school rather than uncontrolled use at

home. These comments were only made with reference to Internet use, for example, the following comment was given as a reason why the family did not have home connection:

*'Where the computer is situated – it's in one of the boy's bedrooms so we don't have much control over what they're seeing and doing.'* (Parent 21)

Children's use of computers evidently has changed greatly over the last five years: technological advancements and the consequent increase in ICT use and perception of its importance appear to have contributed to this. Cochrane (1997) states that many people in their early thirties are computer illiterate and are subject to a kind of technophobia with ICT. This study combined with evidence from literature does suggest that the children of today will not have that problem as computers have been integrated successfully into their day to day living.

#### **7.4 Summary of conclusions**

- Technological advances have led to an increase in computer use over the last five years.
- Attitudes that ICT is essential have become more prevalent.
- Home ownership increased dramatically over the last three years.
- Concern over funding for ICT was common to parents and teachers.
- Older children use computers more than their younger siblings.
- Increased use in school appears to have precipitated increased home ownership.
- All parents saw computer literacy as important.
- Most children are eager to use computers although there will always be some who dislike them and do not use them.
- Peer pressure appears to influence home computer purchase.
- No one believed ICT use eclipsed other activities.

## **8.0 Perceptions of the public library service**

### **8.1 Introduction**

As one of the objectives of this dissertation was to ascertain how children's use of libraries has changed and the relationship that this has to computer use, it is inevitable that perceptions of public libraries should be covered. The second half of the questionnaire was devoted to questions about public libraries, attempting to draw in the issue of computers and ascertain opinions on this subject. The interviews also contained a section on this issue. The main focus was placed upon what children use libraries for and other issues, such as whether schools actively promote public library use, were also considered.

Bakken (1998) distinguishes between the public library as a physical place and as a collection of librarians with certain skills, stating that the latter will always be in demand. However, the future existence of a library building, in his opinion, is more uncertain. The implication here is that libraries will become virtual: a user will be able to gather all the information they need by logging on to their home computer and linking up with the library. The implication can also be stretched to library services as a whole: if the Internet becomes stronger and more indispensable, then users may use it instead of libraries altogether. Measuring the likelihood of an event is a hazardous task, so it was decided to obtain as many opinions as possible regarding public libraries as they are instead. In this way it was hoped that opinion would show how well disposed people are to public libraries. Logically, if people still want to use them and value them in their current format, then they have a role in society; it is only when people look elsewhere for an information provider that libraries will be threatened.

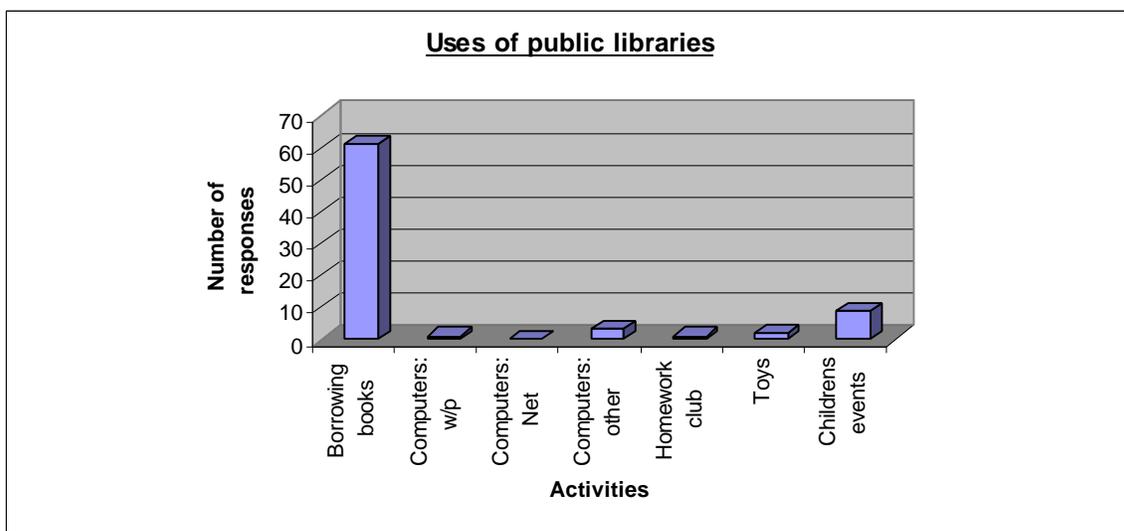
## 8.2 Uses of public libraries

The data collection was also intended to discover how many children made use of public libraries and for what purposes. The actual levels of use were quite surprising at first glance, (see Fig. 1).

Yes	No
34	29

**Fig. 1. Answers to the question: ‘Do your children use public libraries?’**

Only 54% of children represented used public libraries at all. This figure disagrees with Kempster (1999), who states that 70% of children use public libraries. This could be explained by the difference in samples: it is unclear what source Kempster has used, but the sample for this study was small by necessity and therefore cannot reflect national trends. The long distance of public libraries from the schools is also a relevant factor as library use would therefore be more difficult. The figures quoted above were reflected generally across all four schools, but Brightside had the highest percentage of non-users, whilst St Patrick’s and Oughtibridge had the highest percentage of users.



**Fig. 2**

### **8.2.1 Most common reasons for going**

The actual uses that were made of public libraries were overwhelmingly biased in favour of book-related activities, (see Fig. 2). Computers hardly figured at all as a children's library activity. However, this could partly be explained by the lack of computing facilities in local libraries as well as the lack of libraries. Of all four schools, only one was anywhere near a library with computer and Net access and therefore this also may be reflected in the figures. The high level of home ownership may also account for lack of library computer use. It was also surprising that only a few went to children's events at a library, but this could be explained by lack of proximity again. If libraries are difficult to get to, then it is even harder to go at a specific time for an event.

Firth Park library noted a large rise in membership since the new library opened: the librarians attributed it to many reasons, but mainly the computers that are now available there. Kempster (1999) states that a new library in itself will attract new users whether it contains computers or not, so the rise in use may simply be due to the novelty factor. This again seems to contradict the reasons for going given by parents in this study, therefore it might have proved more enlightening to use a school nearer to this library to investigate how library use had changed. This suggests a case study suitable for further future research.

The questionnaire also sought to identify the main reason for using public libraries and the results here were again overwhelming. Only four parents noted that their children used libraries mainly for children's events. Everyone else stated that the main and often only reason for going was to borrow books. This suggests that many parents do not perceive any other purpose for the public library, which may mean that a major publicity operation will be needed to inform people that public libraries will also be running the People's Network in the future.

### 8.2.2 Changes in the last five years

Although it was difficult to ascertain trends over the last five years due to the age of the children concerned, it was possible to measure how long they had been using public libraries for. Of those who used them at all, most had been going from an early age (see Fig. 3), but many younger children were represented who were not necessarily old enough to have been going for more than five years. The five year measure was therefore not as useful for coming to conclusions as had been assumed.

Under 5 years	Over 5 years	No longer use
9	14	1

**Fig. 3**

However, it was difficult to tell which children no longer used libraries, as the questionnaire did not allow for this answer. The response shown in Fig. 3 was mentioned in comments written by this question. When people did mention past use of libraries, mainly in later telephone interviews, the change was usually linked to moving house or the local library closing. This suggests that if there was a library closer to these people then their children might use it again. How long children had used libraries for ranged from two weeks to ten years and most had obviously started quite young. This in itself suggests that library going is a habit which, if developed when young, may continue for years.

### 8.2.3 Expectations

With regard to ICT in public libraries, Lilley and Usherwood (2000) state that users now expect it to be provided. In this study, that expectation was not clear, indeed, the main expectation that emerged was of a good quality book stock. ICT had not occurred to many people as a resource libraries should be providing. Indeed, many were not aware that there was Internet access in any library at all.

*'We tend to have enough books at home to be going on with - books handed down from my older children. I do not have any knowledge of Internet access in our local library as we have not asked.'* (Parent 43)

This quote shows a common reason for not using libraries: buying books instead. Other parents, who stated that the price of books enabled them to buy rather than borrow, confirmed this.

*'The time limit on books [from libraries] is a bit of a drag and books are cheaper than they used to be. I buy books for myself and my daughter and I buy books regularly because I can get them cheaply and I can read them at my own pace.'* (Parent 19)

Librarians displayed different opinions regarding children's expectations of ICT in libraries. Those questioned agreed that there were higher expectations of ICT and one suggested that this was linked to children's own perceptions over sources of information.

*'Their perception is that IT and the Internet is a source of information in the same way I used to look at books as a source of information. They'll go to the Internet rather than reference books and would rather use Encarta or Britannica on CD-ROM...There is an expectation that we will provide games, but we don't. We do try to find educational material that takes the form of a game.'* (Librarian 1)

The expectation of the provision of games demonstrates children's views on the purposes of ICT. Leisure was a popular reason for use in this study and the aforementioned explanation may show that children expect libraries to provide ICT for entertainment: what they themselves consider its main use.

An expectation of the librarian's skills also emerged:

*'They expect you to know more than they know, not so much with the Net, but with Word, they expect you to know how to do it - we do know some things but we don't know it all.'* (Librarian 3)

Children evidently perceive librarians as knowledgeable figures regarding ICT: a reasonable assumption considering they are the custodians of the technology. However, the librarians questioned indicated a generally lower level of ICT literacy across the staff. This means that children expect what staff cannot yet deliver, although the NOF training due to start soon is intended to alter this.

The general perception of the main focus being book-related is perhaps supported by Creaser's (1999) general library statistics. Creaser states that non-book provision is becoming more complicated: 73% of library authorities have CD-ROMs, although most are for reference only and many mention Internet access as a service. However, not all of these materials are available in all libraries: this is certainly the case within Sheffield. It was also clear from the stock questions in Creaser's survey that there is still a very strong book emphasis within libraries nation-wide. Other resources such as computer software do not figure highly at all. Therefore it could be suggested that this study may reflect nation-wide trends: if Sheffield's ICT provision is limited and users perceive books as the main library purpose, then limited nation-wide ICT resources may mean the same national perception.

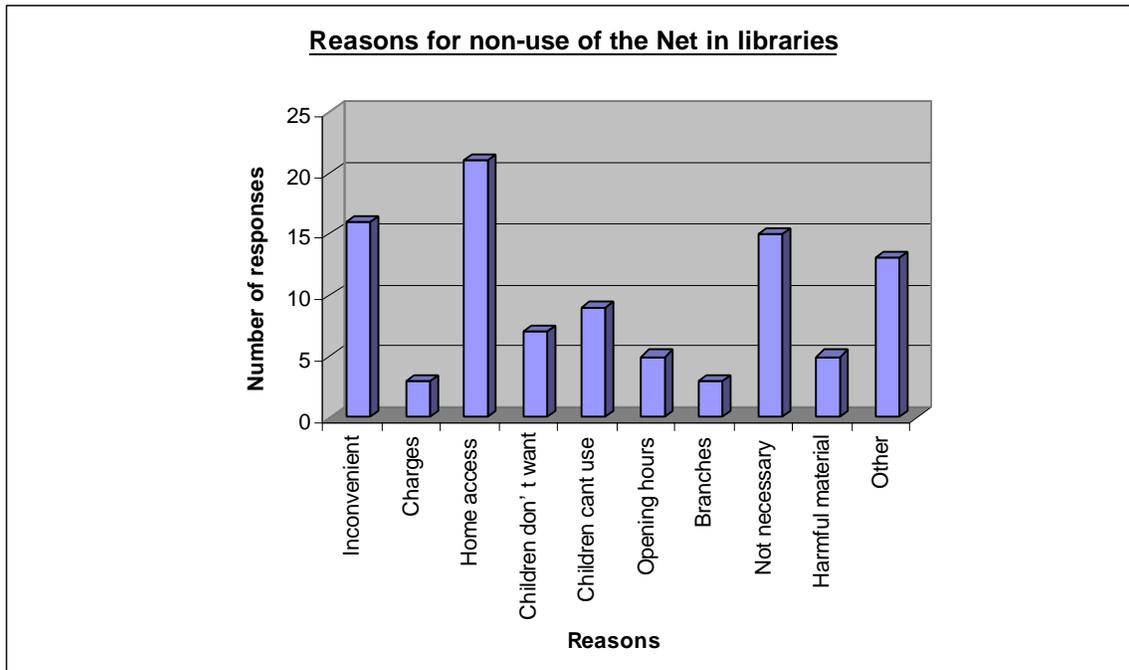


Fig. 4

#### 8.2.4 Internet use in libraries

The reasons for not using the Internet in public libraries were varied - see Fig. 4.

Clearly, having a home computer is the main reason stated, however, it is significant that there were also large responses for 'Inconvenient to get to' and 'I don't feel it's necessary'. The former response again supports the view that it is the location of local libraries that is a major barrier to children's use of the Net there. Logically, if parents cannot get the children there, then the ICT available cannot be used. The 'not necessary' response was surprising, especially as many parents had previously indicated their belief in the importance of computer literacy and Net access. This response could be explained by the question's format: parents were asked to tick all reasons that applied to them and this response was often coupled with the 'home access' one. Therefore a different interpretation is suggested.

Other reasons given included limited parental time; the parents not wanting to leave the children unsupervised; technical problems with the service had put them off and not knowing about the service in the first place. The latter was a response was given by five parents. This, alongside the responses that children did not know how to use the Net indicates a general lack of knowledge about ICT, how to use it and where it can be accessed. This suggests that there are a significant number of people who are not part of the information society and are in danger of being excluded from it. Alternatively, it could mean that we are not living in an information society as yet as not enough people are able to be part of it.

Librarians and the Grimethorpe interviewee identified other problems that may have affected people's desire to allow their children to use computers in libraries.

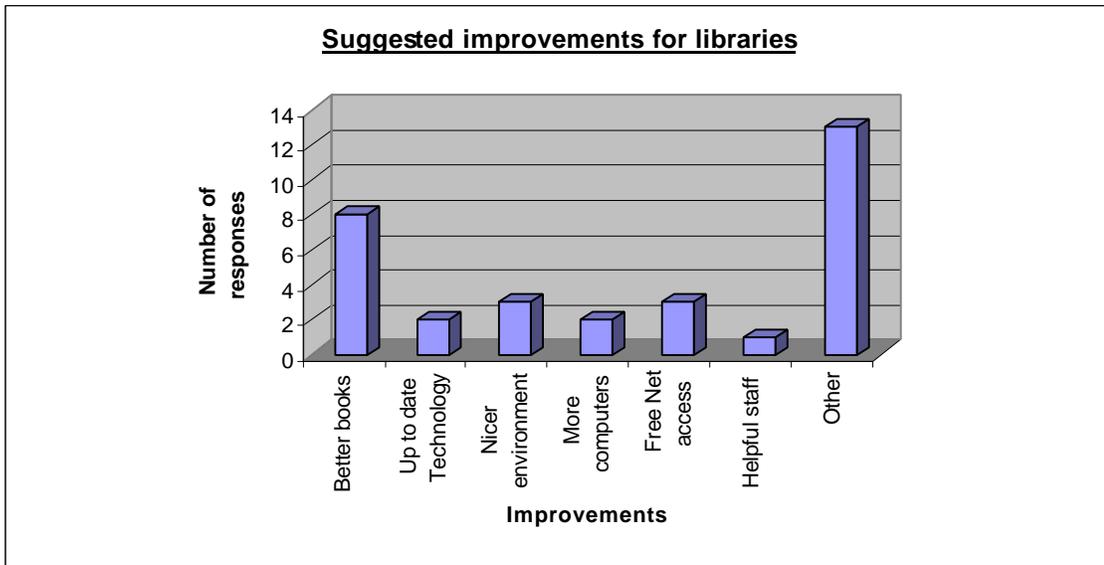
*'The librarian's view of embracing the new technologies was Luddite - very negative'* (Grimethorpe)

*'At Upperthorpe there are two people there where that's their job which makes it a lot easier. Maybe in libraries which don't have a big readership, they could concentrate on that.'* (Librarian 2)

These views suggest problems in staff attitudes and perhaps a concern over job descriptions: if librarians believe they should only be there to provide books, then this attitude will be perceived by users. Negativity is catching and may dissuade people from using a service if those running it are not keen to help them. Again, the NOF training may go some way towards changing this, but if staff attitudes remain a problem, it may not bode well for the People's Network.

### **8.2.5 Improvements**

Parents were also asked how public libraries could be improved, (see Fig 5).



**Fig. 5**

The book stock is clearly an important factor to many, again supporting the notion that people perceive libraries as being mainly book-focussed. Other reasons given were varied, but included: those who thought children should use the school library instead; longer opening hours and five parents who wanted a library closer to them. Three parents stated that they would not use public libraries anyway.

The low response levels in Fig. 5 for ICT resources suggest that there may not be much demand for computers in libraries, certainly amongst those with home access. Few parents specified that their children would use a public library if computers were made available there. This may be linked to a lack of knowledge about what is available as has been demonstrated previously. It may also be due to a genuine perception that ICT and Net access is not really necessary, although this is unlikely given the importance placed on these resources in other responses. Only time will tell if demand for ICT in public libraries will increase.

### **8.3 Do schools encourage use of public libraries?**

As schools are an influential force in children's lives, it was decided to include consideration of the schools' attitudes to public libraries. It was reasoned that a school's encouragement or lack of it might affect a child's desire to use a library. Denham et al.(1997) reason that a child's computer skills will depend on which school they attend: the level of ICT access on offer will certainly influence their progress. They proceed to advise the use of public libraries as an opportunity to gain familiarity with computers. Whether the schools themselves advise this is another matter.

The first point that emerged from discussions with librarians was that some schools actively visit libraries to use ICT facilities. It was noted from the observations and a discussion about Netherthorpe School that they took a group to Upperthorpe library regularly and they had been advised by inspectors to continue this practice, as the children were benefiting from it. However, the issue of whether all use is good use arose again.

*'They're allowed to do what they want to do...Most go to wrestling or Pokemon sites and quite a lot come back by themselves after school...The teachers see it as a bit of a treat.'* (Librarian 3)

Children seemed to use the time for recreational Internet use and the librarians took the attitude that any use was beneficial. The fact that the teachers saw it as a break rather than as a chance to educate the children in ICT literacy suggests that a more relaxed approach to learning was used. However, it is not clear exactly how much use this kind of access is educationally.

More generally, five out of the seven teachers interviewed actively encouraged the children to use public libraries or made them aware of the library's existence as a resource. This was not particularly for ICT, but as a general information resource. Some took children on visits, but recent closures of local branches appeared to stop this practice or make it more difficult.

*'We used to take them to visit the local one.'* (Teacher 3)

*'We've taken groups of children to use the computers in Firth Park library, but the nearest public libraries to here are actually closed.'* (Teacher 1)

This suggests that lack of access to public libraries is generally a problem and may affect the level of library use by children. If they are never taken into a library first, they may never go in one by themselves. The other two teachers were anxious to stress that they always encouraged extra reading, but not necessarily within a public library.

The major problem emerging in terms of ICT in libraries was the lack of it. If schools themselves do not have numerous computers, there is a further issue. Brightside for example, is lacking in computer facilities, is in a poorer area in comparison to the other schools and does not have a local library with computer access. Indeed, it does not have a local library at all apart from a small community one. There remains a challenge to the public library service: how to enable children from areas such as this to access technology. There is potential through the mobile service, but little has been done as yet. As their computer literacy could affect children's future job prospects, it is an important issue and is one that the library service should be taking seriously.

## **8.4 Opinions of the future**

This section of the questionnaires and interviews provoked a high response. Many people had opinions regarding how they thought libraries should be, but fewer had practical ideas. It should also be noted that it was adults being questioned, not the children themselves and therefore the responses were not necessarily a true reflection of what the children think or how they may use public libraries in future.

### **8.4.1 The purpose of libraries**

Previous sections have considered what children use libraries for and this therefore reflects on perceptions of a library's purpose. Most children represented

used the library mainly for books and some used it only for books, suggesting that this is still perceived as the main purpose of the library, or at least, that it is still the main service the library provides. Arguably, this is certainly the case at present, but technological developments may mean a switch in focus to a more computerised service.

The consensus of opinion from the qualitative data showed that the professionals (librarians and teachers) regarded the public library's main focus as providing a source of information, in whatever format it comes. Computers specifically were frequently mentioned as an afterthought, but it is clear that they were not regarded as the primary service. Meanwhile, the parents demonstrated an overwhelming belief in a book focus for the library. Many described their enjoyment of books and suggested that the library's task was to instil this love in children. Parents did mention the educational purpose and the information providing service, but much less often. Only eight parents specifically mentioned ICT in public libraries as part of the service, although more did state that libraries should provide information by whatever means necessary.

Some opinions highlighted the other roles that have been set out for public libraries, particularly that of community focus. Responses to the suggestion the ICT removes the need for public libraries were strong:

*'People need somewhere to go, public libraries do a bigger job than that, people are not going to sit and read novels at a computer screen, they need to interact.'*

(Teacher 7)

*'I'd find it a bit worrying - the idea that people wouldn't go to meet people or do anything - you can't chat to a computer.'* (Teacher 4)

Librarians also volunteered information connected to this:

*'It's got the potential to [take over from libraries]- it could do it now - it's whether they [people] want to be isolated.'* (Librarian 1)

*'Still, people come in for the friendly staff, or for a book or because it's a warm place.'* (Librarian 2)

*'We do get a lot of people through who are quite lonely.'* (Librarian 3)

The latter quotes show that public libraries are at present doing far more for their communities than simply issuing books: they are providing a focal point where people can interact. This evidence suggests that there is still a need for this type of role and therefore for a physical library building within society although whether the next generation will use the library in the same way remains to be seen.

#### **8.4.2 The effects of libraries**

It was reasoned that if libraries can make a visible difference in some way, then this would demonstrate beneficial use of the resource. Therefore, teachers were asked whether they were able to identify the children who used public libraries. Nearly all of the teachers questioned linked this to reading books, although no specific library services had been mentioned. A few teachers thought that they could tell which children used public libraries, although most stated that they could not tell whether a child's development was due to reading at home or using a library. One teacher in particular linked good reading skills to the curriculum:

*'The literacy strategy is the main contributing factor.'* (Teacher 5)

Another teacher linked library use to information seeking skills rather than to reading skills:

*'They're the ones when we have a library session, they know where to go and how to look for things.'* (Teacher 2)

This in itself suggests that a public library can develop these skills in a child.

Information seeking skills are becoming more important in today's world, whether using ICT or not and if libraries can develop them, it increases their importance.

One parent linked the library's purpose to learning:

*'Learning through entertainment - make learning fun.'* (Parent 27)

This brings together all the arguments about entertainment as education, although from the observations, this approach seems to be the one taken by Sheffield libraries. The children observed were certainly having fun and although the direct educational purpose of the session was not clear, the chance to increase their familiarity with computers by whatever means was the main benefit sought. If libraries can work towards making learning fun by using ICT, then their role is increased and no loss of purpose seems likely.

### **8.4.3 The technological future?**

Opinions were sought on whether the Internet is likely to replace the public library service. It was hoped by this to establish how important people considered them both to be, particularly with regard to children. Most respondents indicated a belief that books would never disappear, showing in itself the association in their minds between libraries and books. For example:

*'It's no substitute for reading a good book – there's no comparison. It [the Net] may do for information purposes, but not for recreation.'* (Teacher 1)

Libraries as information providers including ICT access did not figure and thus opinions about home computers versus public computer access could not be measured. Some did regard take-over by the Net as inevitable, although they themselves did not eagerly await the event of the library's demise. Ormes (1998) argues that children's libraries must fight this by focussing on supporting literacy; providing access to all formats of information; and promoting services relevant to children's lives. This obviously includes ICT and its importance for children now ensures that libraries will need to incorporate it into their service. Others such as Denham et al. (1997) found that children expected ICT access in their local library as they have it at school. Nankivell and Kayam (1997) also note that librarians and users think that it should be included in a library, particularly as it is thought to be a good way to attract children.

All this suggests that great value is put on the public library as a public resource. Although incorporating ICT into the service is inevitable, the complete disappearance of public libraries is not considered to be likely. However, some remarks did indicate that the public library must work to make a difference:

*'Libraries have had our own battle to persuade the council we're valuable. It's up to libraries to prove why they ought to be here.'* (Librarian 2)

*'There is a certain pleasure in selecting a book from the shelf but that may die in the next generation - I don't know. We need to make the Internet relevant to libraries - roles will change but it's not a death knell. We've got to move with that... There's got to be a culture change within libraries. Frontline staff are still very much stuck in a traditional role and their view is that the library is a place where people borrow books.'* (Librarian 1)

The implication here is that libraries cannot sit back and let the government install the People's Network of computers. They must be proactive and must change, otherwise the whole scheme will not work.

#### **8.4.4 Are libraries up to date?**

An important measure of opinion regarding libraries is how up to date they are perceived to be. This perception may affect how often children use libraries and being out of date may cause children to stop using them. If this happens then the children may never return in later life.

The question aimed to gauge opinion on this provoked strong views, (see Fig. 6).

Up to date	Not up to date	Don't know
12	20	11

**Fig. 6 Responses to the question 'How up to date is your local library?'**

Clearly, most parents felt that their library was not up to date and those that did not know were generally those who did not use a library. Criticisms in this area were mainly aimed at the book stock rather than lack of technology, suggesting that many people are still not aware of the plans to bring ICT into local libraries. This focus on books is echoed by Esson and Tyerman (1991): *'a well chosen, well maintained stock is the basis of good library provision and should never be neglected'* (p. 7). However, this work is almost ten years old and was published before computers achieved their current importance. This evidence from parents also conflicts with Eve's (2000) study, which showed an average of 50% of respondents (library users and non-users) who considered ICT provision in public libraries as a vital part of the service. Sheffield as represented in this study clearly differs from the rest of the country, perhaps due to more limited library ICT resources. The deduction remaining is that the book stock is still considered to be a core part of the service and ICT is not yet widespread enough to equal this status within libraries.

A few parents stated that they believed the central library was up to date, although one teacher was more scathing:

*'I think that Sheffield [central] library is absolutely abysmal – it's archaic, badly resourced...having come from a university, realising the resources you have, going back to using a city one is just terrible. If the government do want to improve literacy and numeracy they need to put money into libraries – at the moment good areas have good ones and bad areas have bad ones.'* (Teacher 6)

The lack of actual branches also emerged as a concern with some parents:

*'The only 'local' library is a mobile library with obviously a limited choice and is only available at a certain time. It could be updated to a permanent structure with more books and access to computers (in a perfect world)'* (Parent 59)

Closure or lack of branches would certainly affect a child's use of them and if the only local library is a mobile one, there is no possibility of ICT access there as yet.

Other parents and librarians identified lack of funding as a major problem:

ultimately, a library cannot be up to date if it does not have enough money.

*'Not very [up to date]- but good in view of pecuniary constraints from the governing authorities'* (Parent 44)

The general consensus amongst the more positive responses was that libraries were doing the best they could considering their financial circumstances.

Altogether, opinions stated that libraries did have a future, but respondents were critical of them in their current form. However, financial restrictions were allowed for. The DNH (1997) stated that books would continue to be an important part of the library service, but predicted changes in the medium term in ICT. It also suggested that libraries should provide first experiences with ICT for those who would otherwise not use it. As children use it more regularly in schools, the idea of bringing the library up to date could include more ICT provision. Batt (1998) suggests that people will still need libraries as physical places and will use them for books and ICT. However, the evidence shown from this study suggests that in Sheffield, libraries are still perceived to be for books only and ICT is often accessed elsewhere. The implication is that if libraries do not market themselves as providing an ICT and Internet service, people will not use them and today's children may eventually regard them as solely for providing books. This would limit the service and limit the potential of its development in the future.

## **8.5 Summary of conclusions**

- Library users were fewer than the literature suggests is the national figure.
- Children used libraries mainly and often solely to borrow books
- Lack of and location of branches alongside plentiful home computers meant that few children used libraries for ICT.
- Most children who used libraries had been doing so for over five years.
- Parents did not expect ICT in libraries, but librarians noted growing expectations from children.
- Children expected librarians to have good ICT skills.
- Home ICT ownership led to opinions of ICT in libraries as unnecessary.

- Internet skills were lacking in some children.
- Library staff attitudes were perceived to be a hindrance to library development.
- School trips to libraries to use ICT were generally entertainment based.
- Most teachers encouraged children to use public libraries.
- Lack of ICT in libraries could lead to schools without many resources being marginalised.
- Most professionals saw public libraries as information providers whilst most parents saw them as book providers.
- Public libraries were still thought valuable as a community resource.
- Library users were not thought to be more skilled at reading than non-users, but increased information seeking skills were noted.
- Most people thought that public libraries are still valuable, but libraries must work to make themselves more relevant.
- The most common ideas to bring libraries up to date were book-related rather than ICT-related.
- Financial restrictions have resulted in out of date libraries.

## **9.0 Conclusions**

### **9.1 Significant issues identified**

This research highlighted a number of important issues, some more surprising than others. Main conclusions for each chapter have been described at the end of each, but the main findings of the whole study will be considered here.

The first main finding was that children of primary school age use computers and the Internet mainly for entertainment. There were indications of more educational use amongst older children, but for the younger ones, educational use seemed confined to the school environment.

The children represented and observed in the study showed a significant lack of skills. ICT skills did vary widely between children: some, particularly those with home computers, were excellent. However, many could use a mouse proficiently, but they had trouble with basic keyboard skills. This finding was common for children with home computers and those without, suggesting that home use, mainly for entertainment, is not necessarily useful.

Children in poorer areas of the city without nearby library facilities are losing out. As some schools are better equipped than others in ICT, this suggests that there is a gap for the library service to fill. Meanwhile, the information gap is widening between those who are ICT literate and those who are not. Children with fewer ICT skills were also more reluctant to use the technology, thus preventing them from self-development.

Many children have computer access at home and this seemed to render ICT use in public libraries unnecessary, at least in the eyes of their parents. However, parents and teachers recognised the importance of ICT and welcomed ideas to enable access for people whom otherwise could not afford it.

Public library use amongst children has not changed much in the last five years in Sheffield, although generally, use in Sheffield seems to be lower than elsewhere. Public libraries are seen as book-providing services, particularly by parents and news of ICT provision and the People's Network has not reached many. These perceptions may alter once the People's Network is fully operational, but for the moment, parents equate libraries with promoting only reading and books.

Financial restrictions on parents, schools and libraries have created the current situation. Money was the main barrier to children's access to ICT. Many parents without home computers stated that they would buy them if they could afford them. Likewise, teachers identified problems with current software and the need to spend more in this area. Librarians too noted funding and opening hours as major problems.

The Internet was not considered to be as useful as other software for educational purposes, although general ICT literacy was seen as essential by all. The lower regard for the Internet by parents particularly, may be due to the financial aspect and the need to supervise children when using it. Both of these responses were common when questioned on restrictions to children's use of the Net.

## **9.2 Evaluation of the research**

There were several shortcomings of the study identified, but it is recognised that the small scale of the study and the small timescale do in themselves engender problems. The first limitation was in the choice of schools available for the case studies. Selection of the sample was limited to those willing to participate, which resulted in a more opportunistic sample than had originally been envisaged. However, this sample was reasonably representative of Sheffield as a whole, encompassing schools in the inner city, suburbs and more rural areas. Economically richer areas were considered alongside poorer areas and it is therefore felt that the sample was a good selection for this study.

The fact that the children represented were only studied through other people's perceptions of them may be a shortcoming. Secondary evidence can be flawed, but the data given was from those in closest contact with the children. Observations also allowed some direct contact with children, but most of the deductions were based on others perceptions of what children do and how they feel about the issues concerned. Perhaps more direct questions on children's own attitudes could have been considered to gain a more balanced picture of all views.

The benefits of the study hopefully speak for themselves, but a main result is the clearer picture gained of what children use ICT for and whether or not this use is benefiting them in any way. The study also aimed to give a better idea of how children from poorer backgrounds need supporting in regard to ICT literacy. There are also interesting results for librarians in the Sheffield area: the study shows what public libraries are perceived to be doing for children by means of what they are used for. This will hopefully suggest areas that need more promotion or may be considered unnecessary by many. The popularity and satisfaction levels with public libraries around Sheffield have also been demonstrated: always a useful indicator for librarians. Finally, the study gives a clearer picture of the trends occurring in different areas in Sheffield. This will allow limited comparison with the rest of the country and is particularly interesting to teachers and librarians who may be assessing themselves against national standards.

### **9.3 Recommendations**

Main recommendations are as follows:

- Libraries may need an image overhaul in Sheffield to complement the installation of the People's Network. They are currently thought of as mainly book providers and until people are made aware of what else they can offer, use of these other services will not be at maximum levels. Staff attitudes to ICT also

need addressing although the NOF funded training is intended to raise awareness and hopefully will engender positive attitudes.

- Libraries should consider a more educational role with direct teaching of ICT skills to parents and children. Current public library ICT use seems leisure dominated and children particularly are falling short in basic skills. If libraries can work alongside schools in this, then primary school children will be given a head start and may be able to develop their skills further as they get older.
- Greater links between schools and the library service should be fostered, particularly for schools who do not have a local library. Library support in both ICT and hardcopy resources would be beneficial.
- As the People's Network is established, the information poor should be targeted as potential users. Those with home computers saw ICT in libraries as unnecessary for them, but many who cannot afford home access would benefit from low-cost local access.

#### **9.4 Suggestions for future research**

- A case study of the schools near Firth Park library or Upperthorpe library would prove enlightening as children could be considered who have ICT access in their local library.
- An investigation into children's own views about libraries and ICT. This would collect data from children directly instead of gaining opinions through authority figures.
- To consider how far the Internet is viewed solely as a medium for entertainment and the effect this has on use of it in the library.
- To identify differences in ICT skills and behaviour between older children, children of different genders and different ethnic backgrounds.
- An investigation into the educational benefits for children of Internet access.
- A repetition of this study after the People's Network is fully installed to investigate changes in opinions and behaviour.

## Bibliography

- Arthur, C. and Coyle, D. (2000) 'Access to the Net soars but 'digital divide' opens up'. *Independent*, p. 11 (11/7/00).
- Bakken, F. (1998) 'The Possible Role of Libraries in the Digital Future' *Libri* 48(2), 81-87.
- Batt, C. (1998) 'I Have Seen the Future and IT Works' *Ariadne: the Web version* Issue 18 (December 1998). Available: <http://www.ariadne.ac.uk/issue18/batt/> [Accessed 9/11/99]
- Blanshard, C. (1998) *Managing library services for children and young people* London: Library Association Publishing.
- Blanshard, C. (ed.) (1997) *Children and young people: Library Association guidelines for public library services*. London: Library Association
- Calvert, S.L. (1999) *Children's journeys through the information age*. Boston, MA: McGraw Hill
- Central Policy Unit (1993) *Census 1991, report no. 7, Constituency Profiles* London: HMSO.
- Cochrane, P. (1997) *Tips for Time Travellers* London: Orion Business
- Craumer, P. (1995) 'The new information future: where are libraries going with information and where is information taking libraries?' *Public Libraries* 34(4), p. 208-211
- Creaser, C. (1999) *A survey of library services to schools and children in the UK 1998-99*. Loughborough: Library and Information Statistics Unit (LISU), Loughborough University.

Denham, D; Nankivell, C; Elkin, J. and Ashley, K. (1997) *Children and IT in public libraries* British Library Research and Innovation Report No. 51, London: British Library.

Department of Culture, Media and Sport (2000) *Sixth Report: Public libraries*. Available:

<http://www.publications.parliament.uk/pa/cm199900/cmselect/cmcmums/241/24102.htm>

[Accessed 12/6/00]

Department of National Heritage (1995) *Investing in children: the future of library services for children and young people*. London: HMSO.

Department of National Heritage (1997) *Reading the future: a review of public libraries in England*. London: DNH.

Dilley, R. (2000) *Libraries, read not dead* Available:

[http://news.bbc.co.uk/1/hi/english/uk/newsid\\_749000/749290.stm](http://news.bbc.co.uk/1/hi/english/uk/newsid_749000/749290.stm)

[Accessed 16/5/00]

Dresang, E.T. (1997) 'Influence of the digital environment on literature for youth: Radical change in the handheld book' *Library Trends* 45(4), p. 639-663.

Dyson, C. and Wait, A. (1998) 'Providing access to the Information Society for disadvantaged groups' In Armstrong, C.J. and Hartley, R.J. (eds.) *New networks, old information: UKOLUG 98*, p. 71-82. London: UKOLUG.

Elkin, J. & Lonsdale, R. (1996) *Focus on the child: libraries, literacy and learning* London: LA Publishing.

Esson, K. & Tyerman, K. (1991) *Library provision for children* London: AAL Publishing.

Eve, J. (2000) 'Vital measurements' *Library Technology* 5(4), p. 49 & 51.

- Feather, J. (1994) *The information society*. London: LA Publishing.
- Glaser, B.G. and Strauss, A.L. (1967) *The discovery of grounded theory*. New York: Aldine de Gruyter
- Goldsbury, L. (1999) 'The way of the world' *Educational Computing and Technology* **March Issue**, p. 9-11.
- Greenhalgh, L. & Worpole, K. (1995) *Libraries in a world of cultural change*, London: UCL Press.
- Gross, M. (1999) 'Imposed queries in the school library media center: A descriptive study' *Library and Information Science Research* **21**(4), p. 501-521
- Harvey, P. (1999) *The people's network? An evaluation of Internet access in public libraries throughout a survey of public libraries challenge funds awards and a case study of provision in Derbyshire*. MA Dissertation, University of Sheffield.
- Haugland, S.W. & Wright, J.L. (1997) *Young children and technology - a world of discovery* Needham Heights, Mass: Allyn & Bacon.
- Haywood, T. (1995) *Info-Rich, Info-Poor*, London: Bowker Saur.
- Hendry, J. (2000) 'Here comes the sun' *LA Record* **102**(5), p. 272 - 273.
- Kehoe, B.P. & Mixon, V. (1997) *Children and the Internet, a Zen guide for parents and educators*, Upper Saddle River, NJ: Prentice Hall.
- Kempster, G. (1999) 'The real powerhouses in ordinary lives' *Public Library Journal* **14**(4), p. 84-85.
- Kingston, P. (1999) 'Game over for computer underclass' *Guardian Education*. p. 13, (5/10/99)
- Kniffel, L. (2000) '2000 is here! What happened to the visions?' *American Libraries* **31**(1), p. 50-53.
- Kuhlthau, C.C. (1997) 'Learning in digital libraries: An information search process approach' *Library Trends* **45**(4), p. 708-724.
- Library and Information Commission (1997) *New library: the people's network*. [UK]: LIC
- LIC (1998) *Building the New Library Network*. [UK]: LIC

LIC (2000) *Libraries: the essence of inclusion*. [UK]: LIC. Online version, available:

<http://www.lic.gov.uk/publications/policyreports/inclusion.html> [Accessed 4/5/00]

Lilley, E. & Usherwood, B. (2000) 'Wanting It All: The Relationship Between Expectations and the Public's Perceptions of Public Library Services'. *Library Management*, **21**(1), 13-24.

Makyut, P. and Morehouse, R. (1994) *Beginning qualitative research*. London: The Falmer Press.

Mellon, C.A. (1990) *Naturalistic inquiry for library science*. Westport, CT: Greenwood Press.

Moore, N. (1981/1987) *How to do research*. 2<sup>nd</sup> ed. London : Library Association.

Murphy, J.P. (1996) *Within the context of rapidly emerging network technology, can public libraries play a role in closing the gap between the information rich and the information poor?* MA Dissertation, University of Sheffield.

Musiker, R. (1998) 'Some reflections and thoughts on the future of books and libraries' *South African Journal of Librarianship and Information Science* **66**(4), 176-180.

NOP Research Group (1999) *Internet User Survey* Available:

<http://www.nopres.co.uk> [Accessed 6/6/00]

Nankivell, C. and Kayam, G. (1997) 'IT Point: the development and evaluation of a new public library service, bringing access to IT and networks to the public' In: Beaulieu, M & Davenport, E. (eds.) *Library and Information Studies, Research and Professional Practice*. Proceedings of the second British-Nordic conference on Library and Information Studies, p. 32-43. London: Taylor Graham.

National School Boards Foundation (2000) *Safe and smart: research and guidelines for children's use of the Internet* Available:

<http://www.nsb.org/safe-smart/index.html> [Accessed 2/5/00]

Neuman, D. (1997) 'Learning and the digital library' *Library Trends* **45**(4), p. 687-707

Office for National Statistics (1999) *Regional Trends No. 34* London: Stationary Office.

OFSTED (Office for Standards in Education) (2000) *Inspection report: Brightside nursery and infant school* Available:

<http://www.ofsted.gov.uk/inspect/index.htm> [Accessed 11/7/00]

OFSTED (1999) *Inspection report: Oughtibridge primary school* Available:

<http://www.ofsted.gov.uk/inspect/index.htm> [Accessed 11/7/00]

OFSTED (1997a) *Inspection report: St Patrick's Roman Catholic primary school*

Available: <http://www.ofsted.gov.uk/inspect/index.htm> [Accessed 11/7/00]

OFSTED (1997b) *Inspection report: Ballifield primary school* Available:

<http://www.ofsted.gov.uk/inspect/index.htm> [Accessed 11/7/00]

Ormes, S. (1998) 'The use and importance of the Internet in literature-based services in children's libraries' *Electronic Library* **16**(6), p. 379-385.

Pateman, J. (1999) 'Social exclusion: an international perspective on the role of the State, communities and public libraries in tackling social exclusion' *Journal of Information Science* **25**(6), p. 445-463.

Robins, K. and Webster, F. (1999) *Times of the Technoculture: from the information society to the virtual life*. London: Routledge

Sheffield Star (1997) Untitled article on Brightside school. Found in clippings folder in Sheffield Central Library. 29/5/97.

Sheffield Telegraph (1999a) Untitled article on St Patrick's school. Found in clippings folder in Sheffield Central Library. 30/4/99.

Sheffield Telegraph (1999b) Untitled article on Oughtibridge housing campaigns. Found in clippings folder in Sheffield Central Library. 8/10/99.

Stone, S (1984) *CRUS Guide 6, Interviews*. Sheffield: British Library

Stone, S. and Harris, C. (1984) *CRUS Guide 1, Designing a user study: general research design*. Sheffield: British Library

Sutherland, J. (1999) 'Why surfing is still a rich kid's sport' *Guardian* 1/11/99, p5

Tapscott, D (1998) *Growing up digital: the rise of the Net generation*. London: McGraw Hill

Vincent, P. (1999) 'Are your users just like you?' *Public Library Journal* **14**(4), p. 93-95.

- Webster, F. (1995) *Theories of the Information Society*. London: Routledge
- Webster, F. and Dempsey, L. (1999) 'Virtual library – false dawn?' *L.A. Record* **101**(5), p. 284-285
- White, M. (1999) 'Chancellor unveils plan for computers for the poor' *Guardian* 28/10/99, p3
- Williams, P. (1999) 'The net generation: the experiences, attitudes and behaviour of children using the Internet for their own purposes' *ASLIB Proceedings* **51**(9), p. 315-322.
- Yin, R.K. (1994) *Case study research: design and methods*. 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage

## Appendix A Schools Questionnaire

This questionnaire is part of the research for my Masters degree dissertation at Sheffield University which examines the relationship between public libraries and computer use amongst children. I would be very grateful if you could spare the time to answer the following questions. Any responses given will be kept confidential and used only for the purposes of this research.

This questionnaire should take about 5 to 10 minutes to complete: most questions can be answered by ticking the boxes. Please complete answers for all your children who are of primary school age (4-11 years).

Please complete and return to your child's school by 23<sup>rd</sup> June.

### SECTION A

*I would first like to ask a few questions about computer use.*

1. Do your children use computers?

Yes  (*answer questions 2 - 11 then go to section B*) No  (*answer questions 11 -15 then go to section B*)

2. To your knowledge, how often and where do your children use computers?

<b><u>CHILD 1</u></b>	HOME	SCHOOL	LIBRARY	OTHER
(please specify)				
Most days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Some days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____

<b><u>CHILD 2</u></b>	HOME	SCHOOL	LIBRARY	OTHER
(please specify)				
Most days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Some days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____

<b><u>CHILD 3</u></b>	HOME	SCHOOL	LIBRARY	OTHER
(please specify)				
Most days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Some days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____

3. What do your children use computers for?

	CHILD 1	CHILD 2	CHILD 3
Homework	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surfing the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School Lessons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word Processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. What do your children use the computer for most often?

Child 1 \_\_\_\_\_

Child 2 \_\_\_\_\_

Child 3 \_\_\_\_\_

5. If you have more than one child, please indicate which one(s) use computers more.

Child 1

Child 2

Child 3

6. Do you have a home computer?

Yes  No  Considering

If so, how long have you had a computer for? \_\_\_\_\_

7. If you have a home computer or are considering getting one, who is it for?

For your use only

For your children's use only

For use by everyone

8. Under what circumstances is your child able to use computers?

As a treat  Only for homework

For a certain amount of time  Whenever they wish

Only when you are supervising

9. Under what circumstances is your child able to use the Internet?

As a treat  Only for homework

For a certain amount of time  Whenever they wish

Only when you are supervising

10. To what extent do you feel that your children are more knowledgeable than you with computers?

	CHILD 1	CHILD 2	CHILD 3
A lot more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A little more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The same	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A little less	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A lot less	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How important do you think that it will be for children to be computer literate in the future?

- Very important
- Important
- No opinion
- Unimportant
- Very unimportant

12. If you do not have a home computer, please specify why not: (tick all that apply)

- Costs too much
- Don't think its necessary
- I can use one elsewhere
- The children can use one elsewhere
- Intending to buy one
- Will buy a TV/Internet set
- Other (please specify) \_\_\_\_\_

13. If you do not have a home computer, how important do you think it is for your children to have access to the Internet?

- Very important
- Important
- No opinion
- Unimportant
- Very unimportant

14. The Chancellor, Gordon Brown announced last year that he intended to start a scheme to rent low cost computers out to families. How do you feel about this idea?

---

---

15. If you do not own a home computer, how likely are you to take advantage of this offer?

- Very likely
- Unlikely
- Likely
- Very unlikely
- Undecided

**SECTION B**

*I would now like to ask some questions about your children's use of public libraries.*

16. Do your children use a public library?

Yes  (*answer questions 17 - 19 and 21 onwards*) No  (*answer questions 19 onwards*)

If so, how long have they used it for? \_\_\_\_\_

17. If so, what are their reasons for going? (please tick all that apply)

	CHILD 1	CHILD 2	CHILD 3
Borrowing books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers for word processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers to access the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers for other information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homework club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playing with toys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children's events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. What activities do your children prefer to do there most often? (please tick one box per child only)

	CHILD 1	CHILD 2	CHILD 3
Borrowing books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers for word processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers to access the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the computers for other information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homework club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playing with toys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children's events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. If your children do not use the Internet in a public libraries, then please state why not:

(please tick all that apply)

- |  |   |
|--|---|
| Inconvenient to get to <input type="checkbox"/>            | Opening hours too few <input type="checkbox"/>              |
| Charges <input type="checkbox"/>                           | Not enough branches have computers <input type="checkbox"/> |
| Have home access <input type="checkbox"/>                  | I don't feel it's necessary <input type="checkbox"/>        |
| Children don't want it <input type="checkbox"/>            | Possibility of harmful material <input type="checkbox"/>    |
| Children don't know how to use it <input type="checkbox"/> |   |
| Other (please specify) _____                               |   |

20. If you and your children do not use a public library, is there anything that would persuade you to do so? (please tick all that apply)

- |                            |                          |                      |                          |
|----------------------------|--------------------------|----------------------|--------------------------|
| Better book stock          | <input type="checkbox"/> | More computers       | <input type="checkbox"/> |
| More up to date technology | <input type="checkbox"/> | Free Internet access | <input type="checkbox"/> |
| Nicer environment          | <input type="checkbox"/> | More helpful staff   | <input type="checkbox"/> |

Other (please specify) \_\_\_\_\_

21. In your opinion, what should the main purpose of the public library be for children?

\_\_\_\_\_

22. How up to date do you feel that your local library is? Please specify anything that you would want to improve.

\_\_\_\_\_

\_\_\_\_\_

23. Please write the ages and circle the sex of your children:

Child 1 \_\_\_\_\_ M/F

Child 2 \_\_\_\_\_ M/F

Child 3 \_\_\_\_\_ M/F

24. Please write the full name of the child who brought this questionnaire home to you.

\_\_\_\_\_

Please add any further comments that you would like to make below:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I am interested in your opinions about this issue and would like to interview you further if possible on the telephone. If you are willing to be interviewed in this way, please write your name and phone number below and state the most convenient time for calling. Thank you.

\_\_\_\_\_

**Thank you for your time.**

## **Appendix B Interview Schedules**

### **TEACHERS**

#### **ICT**

1. How often do you use computers in the classroom?
2. What do you use them for?
3. How do you feel about using them?
4. Are those parts of the lessons popular amongst children?
5. Do you use the Internet in the classroom?
6. What other software do you use?
7. Do some children use the computers more than others?
8. What problems have you encountered with using computers in schools?
9. Is it easy to tell which children have home PC's?
10. Could you name them for me please?
11. How good are the children at exploiting computers to their full extent?

#### **Public libraries**

12. Do you encourage the children to use public libraries? For computers?
13. How do you publicise the use of public libraries to children?
14. Is it easy to tell which children use public libraries?
15. What effect and what level of popularity do you think that Gordon Brown's plan will have?

#### **The future**

16. In your view, what is the primary purpose of the public library?
17. In your view, what are the biggest barriers to children's use of computers?
18. How important do you think the Internet will become in the future?
19. How do you feel about the idea that the Internet will take over from public libraries?
20. In your opinion, how has computer use amongst children changed over the last 5 years?

## **LIBRARIANS**

### **ICT**

1. How are the information needs of children assessed?
2. What part does ICT play in meeting these information needs?
3. How popular are your computers with children?
4. How do you promote the use of computers here to children?
5. What do children here tend to use the computers for?
6. What sort of backgrounds do children using your computers come from? One more than another?
7. How important do you think ICT provision for children is in the public library?
8. Do you feel that the library is able to offer adequate access to ICT for children?
9. What expectations do children have in terms of ICT in the library?
10. How good are the children at using the ICT available?
11. What effect do you think that Gordon Brown's plan will have on the usage levels in the public library?

### **The Future**

12. How important do you think the Internet will become in the future?
13. How do you feel about the idea that the Internet will take over from public libraries?
14. In your view, what is the primary purpose of the public library?
15. What barriers do you see that prevent the public library from becoming the hub of the information society?
16. Do you think that children's use of this library has changed in the last 5 years and in what way?
17. In your view, what are the biggest barriers to children's use of computers?

GRIMETHORPE

## **Computer Use**

1. Could you tell me a bit more about Grimethorpe as a place/community?
2. Could you tell me about your organisation, how long it has been going on etc?
3. What sort of links do you have with local children/schools?
4. How often do they come here?
5. What sort of software do you use/teach?
6. Can they come in and use the computers when they like?
7. How popular are your computers with children?
8. How do you promote the use of computers here to children?
9. What do children here tend to use the computers for?
10. Will those children have home computers or is that unlikely?
11. What proportion are likely to have them?
12. How good are the children at using the ICT available?
13. Do they have the necessary information seeking skills?
14. Are children quicker than their parents to learn and are they more skilled?

## **Public libraries**

15. Do you encourage the children to use public libraries? For computers?
16. What is the public library computer provision like in this area?
17. Is it easy to tell which children use public libraries?
18. What do you think is the primary purpose of public libraries?

## **General Opinions**

19. What effect and what level of popularity do you think that Gordon Brown's plan will have?
20. Do you think that it will affect you adversely? Or public libraries?
21. In your opinion, how has the use of computers changed over the last 5 years?
22. How important do you think the Internet will become in the future?
23. In your opinion, what are the biggest barriers to children using computers?

24. How do you feel about the idea that the Internet will take over from public libraries?