An Investigation into the Impact of Information Communication Technology (ICT) on Mobile Library Service Provision and Use.

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Abstract

In relation to the current emphasis on ICT provision in public libraries, this study attempts to assess the potential impact of this technology on mobile library service provision and use. Within this context the study attempted to ascertain the current situation concerning the utilisation and implementation of ICT by mobile library services in England and Wales and any impact which this may have had on service provision and use.

Both qualitative and quantitative data was collected for the purposes of the study. A nationwide survey was conducted with more detailed information being obtained from the staff and users of two case study authorities. Questionnaires were used as the main data collection method, with observation and interviews used to supplement the information gained from the former. Opinions were also compiled from responses to a request posted on a mobile library discussion list.

The findings of the study suggested that the utilisation of ICT across England and Wales is uneven with certain authorities ahead of others in terms of technology, finance and provision. It was found that mobile libraries are far behind static libraries in terms of computerised circulation, as well as user access ICT. This was emphasised by the views of staff in the case study authorities who felt that ICT will enable mobile libraries to offer equity of service. The main facilities provided were the online library catalogue and the Internet. These were also the two facilities which users felt would be most useful.

The main constraints to ICT provision were finance, space, technology and stop duration with the latter being a concern of authorities, staff and users alike. Some authorities felt that the mobile library was not the way in which to provide ICT access to the geographically isolated. Others felt that ICT on the mobile service could be used to combat social exclusion. Users were divided on whether ICT would be useful to them or not.

Overall it was concluded that as each mobile library service is different, serving a clientele specific to that authority, a standard level of ICT provision would prove unhelpful. Certain criteria to be considered before the implementation of ICT became evident from the findings of both the survey and the case studies. These included the role of the service, the

requirements of users and stop duration. The priority for mobile library services should be the provision of ICT to aid staff roles before supplying end-user applications.

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1 INTRODUCTION

With the emergence of the information society the role of the public library is changing. To ensure their continuing relevancy, public libraries are adapting their services in order to respond to the changing information needs of the public. New roles are being developed, alongside more traditional ones, in order to meet and anticipate user requirements. These changes in role are being encouraged by the Government who:

"expects the service to play an integral part in broader societal development, and is willing to provide some funding for this" (Eve & Brophy 2001, 10).

The *Public Libraries and Museums Act of 1964* allows for the statutory right of free access to public library services for all people in a local authority area. The *Charter for Public Mobile Library Services* (Library Association 1997) states that, in some cases, "this statutory right is best delivered through the provision of a public mobile library service". Mobile libraries serve not only rural communities, but also urban areas, and for many people are the only means of gaining access to their local library service. This is a service that they have a right to and a service that they pay for (Northwood 1994). In 1999 there were 664 mobile libraries in operation in the United Kingdom but the number has been decreasing steadily over the past few years (LISU[1] 2000).

The Library Association *Charter* (1997) goes on to state that mobile libraries should aim to provide as wide a range of services as possible. Therefore the services available on mobile libraries should, in theory, also be changing to reflect those available across the public library sector.

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[1] Library & Information Statistics Unit, Loughborough.

The Government has made it clear that the provision of ICT[2] in public libraries is a priority (DCMS 2000a[3]).   ICT applications can be used to provide many library services but the Government is concentrating on ICT provision for the public in the form of Internet access. *New Library: People's Network* (LIC 1997[4]), outlines how public libraries can become part of the online network and, by November 1999 41% of public libraries were connected to the Internet. The Government is clear in its ambition to make this figure 100% by the end of 2002 (DCMS 2000a).

The Government's position on whether mobile libraries should be connected, however, lacks clarity.   In *New Library: People's Network* (LIC 1997), for instance, there is a definite statement that mobiles should be connected to the network. In comparison the *Sixth Report on Public Libraries* (DCMS 2000a) contains statements which show that mobiles were originally excluded from Government plans for ICT provision in public libraries. The commitment of mobile libraries to provide ICT is noted and welcomed later in the same report. The Government response to the *Sixth Report* (DCMS 2000b) states that static libraries are the priority when it comes to connecting service points, reiterating the secondary position of mobile libraries to static libraries.

This lack of clarity is also seen in the Government's view of the role of mobile libraries. In the *Sixth Report* (DCMS 2000a) the importance of the mobile library service for rural and urban communities is stated.   A year later the report *Culture and Creativity: The Next Ten Years* (DCMS 2001a) contains no reference to mobile libraries and instead suggests the use of remote access points in rural post offices to increase access to public library services.

Despite the fact that mobile libraries are, to some degree, being investigated and encouraged as a means of delivering ICT to certain communities there are no official published figures for the number of mobile library services which are currently utilising ICT in the United Kingdom. Information about successful projects, such as the Walsall LAMPOST, is restricted to publications of limited interest to those outside the mobile library service (for example see

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[2] Information and Communications Technology.

[3] Department of Culture, Media and Sport.

[4] Library & Information Commission

Stringer 2000a). There also seems to be a lack of knowledge and information about the effects that ICT could have on mobile library service provision and use. Both of these problems, it could be suggested, have resulted, in part, from the lack of Government clarity about the role of mobile libraries and the application of ICT in this sector of the public library service.

1.1 Aims and Objectives

The problems that emerge are those of a lack of information and encouragement for and about, mobile libraries and ICT especially as far as the Government is concerned. The aim of this study is to address the first of these issues by investigating the current situation concerning ICT and mobile library services, with regards to present provision and future plans. A further aim is to examine the impact, which ICT has, or is perceived to have, on mobile library provision and use. This study will address these issues in terms of the numerous ICT applications available for use in libraries (these are outlined in more detail in sections 1.2 & 1.3). This dissertation and the information it provides may be useful for mobile library services involved in, or planning to utilise ICT.

This study does not intend to concentrate on the view of the Government towards the role of mobile libraries aside from when this view imposes on the issue of ICT in relation to mobiles. There is an argument for the use of mobile libraries to combat social exclusion and, whilst this is significant, the issue will not be a focus of this study (Doughty 1999).

The scope of this dissertation is limited to mobile library services provided by English and Welsh library authorities and therefore does not address this issue with regards to Scotland and Northern Ireland.

This study will therefore attempt to fulfil the following objectives:

- **To establish the current level of ICT use within the mobile library services of England and Wales and identify any future trends:**

As there has been very little research into this aspect of the mobile library service it is necessary to establish a base on which to discuss the findings of this study. By ascertaining the level of ICT use within the mobile library service, a picture not only of the present situation but also of any future trends will be provided. Constraints to the utilisation of ICT on mobile libraries will also be addressed to ascertain which of these has affected the level of provision.

- **To establish whether the use of ICT has had an impact on the provision of mobile library services:**

This section will investigate whether ICT has had an impact on the provision of mobile library services in the view of mobile library staff, library managers and users. Where ICT has not yet been implemented, the perceived views of the sample will be noted. The collected data will be used to show whether ICT should or should not be a priority for mobile libraries.

- **To establish whether the use of ICT has had an impact on the use of mobile library services:**

By questioning mobile library staff and users, any effect, on the use of the service due to the presence of absence of ICT, can be established. This takes into account whether the lack or presence of ICT has affected borrower numbers or behaviour and also the types of ICT facilities that users would be most likely to use. Again, where ICT has not yet been implemented, the perceived views of the sample will be noted.

1.2   A Definition of ICT

The accepted expansion of the acronym ICT is Information and Communication(s) Technology (see for example LIC 1997).   However, this does not define the types of hardware and software that this term encompasses. One definition provided by Nick Poole, an ICT advisor from Re:source, outlines the factors which constitute Information, Communication and Technology within the context of this acronym[5].

"The information part covers ... applications such as a library catalogue", the "communications part refers to the various technologies that enable the transmission and receipt of that information between remote locations", and "the technology part of ICT refers to the physical components ... that act as a vehicle for this data".

This definition is typical, in that it is open to interpretation in terms of the types of application that ICT encompasses, and therefore it has proved difficult to find one accepted definition of ICT for the purposes of this study. Another definition, provided by the New Opportunities Fund, suggests some of the facilities that are included and is as follows:

"ICT is the combination of telecommunications, computing and broadcasting and covers any product that will store, retrieve, manipulate, transmit or receive information electronically, for example, telephone, fax, computer or television" (2001 http://www.nof.org.uk/edu/edufaq.cfm).

By using a combination of these, and adapting another version provided by Scottish Executive Education (2000), it has been possible to formulate a definition to fit the specific nature of this research.   For the purposes of this study ICT encompasses a range of applications, communications and technologies which aid information retrieval and research, communication and administration. These include Internet access, e-mail, PC applications (for example Excel), telephones, CD-ROM, online databases, library management systems and fax machines. ICT would seem to be a relatively modern term[6] and certain quotes, within this study, from the literature before 1997 refer to Information Technology (IT). IT can be defined as "the technology of data processing/information management" (ComputerUser.com 2000) and therefore is encompassed under the term ICT, as defined above.

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[5] This information was related via email after a request for a definition was posted on the LIS-LINK discussion list.

1.3 ICT Applications in Public and Mobile libraries

The wider definition shows that ICT in libraries is not just for public use or Internet based as is the impression presented by the Government in their most recent reports (for an example see DCMS 2000a). There are many applications, such as library management systems, which can be used to increase the effectiveness of service provision (Batt 1998). These have become popular in the last two decades, although they have been used since the 1960s, as an effective method of controlling issues and managing stock, and are often seen in static libraries (Line cited in Eve & Brophy 2001, Batt 1993). As Gallimore (1997, 13) states, libraries and other information providers "are becoming dependent on IT for service delivery, … day-to-day management [and] administration." However the evidence for the utilisation of this type of ICT is limited within the literature. Other facilities include PC's for administration tasks, CD-ROMs and the Internet for staff use in answering queries (Batt 1998).

1.4 The Government Position on ICT and Public Libraries

"The biggest changes in public libraries over the coming years will arise from the impact of information technology" (DNH 1997, 10[7]).

The Government has been very active in advocating the use of ICT in public libraries. In *New Library: The People's Network* (LIC 1997) guidelines and recommendations were stated with regards to the development of a public library network, advocating "minimum standards of connectivity for all locations" (p.46). This dedication to ensuring that all public libraries are online is reiterated in the DCMS *Sixth Report* (2000a), though this is later narrowed to ensuring that all static libraries are online by the end of 2002 (DCMS 2001a). The DCMS's official view is that:

"Libraries should be a major vehicle for providing affordable (or preferably free) access to ICT at local level" (1999, 5).

This is linked to the Government's desire to exploit the information age for all UK citizens through their major policies (Central Information Office cited in Eve & Brophy 2001). The key

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[6] The first use of the term ICT is credited to Stephenson in the Independent ICT in Schools Commission (1997) report*, Information and Communications Technology in Schools: An Independent Inquiry*.
[7] Department of National Heritage

areas of these policies are social inclusion, Lifelong Learning, and the expansion of ICT facilities, which are reliant on widespread public access and the view is that:

"Libraries are apparently well-placed to aid in meeting these Government objectives as they can provide facilities to those who do not have access elsewhere" (Eve & Brophy 2001).

The promotion of this technology now means that ICT "features high on the agenda of the majority of public library services in the UK" (Batt 1998, 48). The Government's view seems to be that the public library should be used as a support to help people access ICT (LIC 1997). This new role, as educators, has been challenged by CPLUG[8] (in DCMS 2000a) who believe that ICT should not be introduced to the detriment of traditional services.

The Government focus is the Internet, though it continues to refer to ICT provision, and therefore seems to have neglected, especially in the most recent reports, the other applications which libraries can utilise in order to provide a more comprehensive service. There is little mention of the benefits of having access to on-line reference materials from the librarian's perspective (Batt 1993). Whilst *New Library* (LIC 1997) is recommending that all static libraries, regardless of size, should be connected to the Internet, a number of small branch libraries are not yet, or only recently equipped with automated library management systems. In 1997, 72% of static library service points used an automated circulation system[9] (Batt 1998). The fact that this figure is not 100% suggests that there is a need to address the issue of providing ICT for administration and service provision in some static libraries before that of Internet access. This issue is even more pertinent with regards to the mobile library service, as only 22% used automated circulation in 1997. With this is mind it is perhaps appropriate to look at the Government's position on ICT and mobile libraries.

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[8] Camden Public Library User's Group, in a memorandum submitted to the DCMS for the *Sixth Report* (2000a).

[9] The second figure of 72% was calculated using the returned questionnaire data of Appendix 1.1 in Batt, C (1998). *Information Technology in Public Libraries*. 6th edition. London: Library Association.

1.5   The Government Position on ICT and Mobile Libraries

The Government priority, made evident in the *Third Special Report* (2000b), is for static libraries to be connected. Since 1997 the Government reports have addressed the issue of ICT and mobile libraries only briefly. In *New Library: The People's Network* (LIC 1997) mobile libraries are stated as an integral part of the public library service and the report recommends that they be linked to the network. It could therefore be assumed that the recommendations for public libraries, throughout the remainder of the report, implicitly include mobile libraries. In later documents the Government admits that mobile libraries were originally left out of the plans to create a public library network (see for example DCMS 2000b). This suggests that mobile libraries were not implicitly included in those original recommendations. In the *Sixth Report* (DCMS 2000a) there is some encouragement of the mobile library commitment to provide ICT, however in the response to this report it is made clear, in some way by the small amount of money made available, that mobiles are still of secondary importance as far as ICT connectivity is concerned.

The reason for this, as stated in the *Sixth Report* (DCMS 2000a) is that the technological difficulties are still a major barrier to connectivity. The success of ICT projects on mobile libraries in Derbyshire and Somerset should be proof to the Government that these barriers can be overcome (Gent 1998, Cawthorne 2000). If there are technological barriers to access then maybe it should be made clear by the Government that separate guidelines are needed for mobile libraries in relation to ICT.

Mobile libraries serve numerous communities that are entitled to the same level of service provision as they would receive at a branch library. It could be suggested that, whilst the issue of ICT to those who are geographically isolated is being addressed, the Government is discriminating against those people who rely solely on the mobile library service for their library provision, whatever the reason for this may be. The overall impression is that the Government is ultimately less encouraging and supportive of attempts to utilise ICT on mobile libraries than it is for static libraries.

1.6 Other Views on ICT and Mobile Libraries

There are a small number of favourable views from the library sector in England and Wales concerning ICT provision on mobile libraries but these are countered by a lack of support from the professional group associated with mobile libraries.

Certain authorities have already successfully attempted to provide ICT facilities, either for staff or public use, on their mobile libraries. One example is the Walsall LAMPOST project which is a separate vehicle for ICT access (Stringer 2000a). Members of the mobile library services are obviously eager to make use of these applications, as was evident at the 2001 Mobilemeet[10], in order to improve their services but this is not widely represented in the literature. This eagerness is not supplemented by the views of the Branch and Mobile Libraries group of the Library Association (Library Association 1997) who do not set an explicit standard concerning the use of ICT in mobile library services either for service provision or public use. Instead there are indications that:

"mobile libraries should provide the user with the means to identify and locate stock not immediately available on the vehicle" (Library Association 1997, 3).

This could be interpreted as the need for an online catalogue but that is not stated explicitly. Later on in the *Charter* (Library Association 1997) however, it is confirmed that mobile libraries should be part of the network by utilising advanced ICT. Again this does not make it clear whether the reader should assume that the mobile library itself should utilise ICT or whether it is part of a larger service which will. This could be attributed to the date of publication but for the fact that an earlier report, by ASLIB (1995), outlines that mobile libraries will utilise ICT facilities in the future. It is disappointing that the Branch and Mobile Library Group have not addressed this issue in more depth or suggested a standard level of ICT provision.

The differences in opinion between the Government and these other authorities can perhaps be put down to their differing views on the role of mobile libraries.

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[10] These views were stated during personal discussions with individuals from mobile library services across the country. The Mobilemeet took place at Rother Valley Country Park on 5th May 2001.

1.7   The Role of Mobile Libraries

Mobile libraries are used in both rural and urban areas to provide a service to those communities or individual users who are not able to reach their nearest static library, yet are entitled to use this facility (Northwood 1994).   This inability to reach their local service point could be due to many factors including geographical isolation or mobility problems. Mobile libraries should not be used to fill in the gaps in service provision but should, instead, fulfil a unique purpose within a set of established priorities, especially as the service is flexible and responsive to emergencies and user needs (Telfer 1997).

Commentators from America believe that:

 "mobile libraries can provide an equivalent level of service to that offered by smaller branch libraries" (Suyak Alloway cited in Hyman 1999, http://www.slis.ualberta.ca/cap99/bhyman/ecapping.htm).

According to ASLIB (1995), in their *Review of the Public Library Service,* many library authorities have attempted to ensure this level of provision on their mobile libraries. The Branch and Mobile Libraries group in the *Charter for Public Mobile Library Services* (Library Association 1997) only recommends that mobile libraries can form an effective link to the service provided by the library authority. This does not go as far as saying that mobile libraries should provide an equal service to branch libraries, but instead implies that if the services are not available on the mobile then a link can be made to them, perhaps through a fax or telephone. For those who believe in the provision of an equal service to all members of the community this would be seen as a secondary level of provision. The group does however reiterate the importance and essential nature of the mobile library service in the evidence that they submitted to the DCMS (2000a).

The Government's view of mobile libraries lacks clarity. In *New Library: The People's Network* (LIC 1997) mobile libraries are included as an important part of the public library network.   In the *Sixth Report* (2000a) the DCMS welcomed the commitment that mobiles libraries will provide access to information and communications technology but in the same

report expressed concern that some rural communities were only served by mobile libraries. It goes on to state that:

> "The mobile library service performs a valuable and cost effective function, and provides an important community link, fulfilling a key social role for its users" (DCMS 2000a, Evidence para. 20).

The Local Government Association stated that the use of non-library buildings as access points would "limit the need for mobile libraries" (in DCMS 2000a, xv[11]). However this partial solution deals only with the issue of geographical isolation, which is not the sole factor addressed by the mobile library service. For example this would not aid those people with physical disabilities that prevent access to their local branch library. Despite this the DCMS have taken the idea on board and are now promoting the use of rural post offices as access points (DCMS 2001a). In *Culture and Creativity: The Next Ten Years* (DCMS 2001a) there is no mention of mobile libraries, therefore, one wonders whether these post office access points are designed be used in conjunction with or instead of mobile libraries. This dual stance is confusing for all and the mobile library service faces an uncertain future.

Other commentators have also questioned the role of mobile libraries. UNISON for example, in a memorandum submitted to the DCMS for the *Sixth Report* (2000a), state that mobiles cannot be used as substitutes for branch libraries. Their case is based around the amount of services a mobile cannot provide, such as that of a meeting place. They also state that mobile libraries cannot provide ICT access but authorities such as Walsall have proved this to be possible. The lack of standards and funding provided to aid mobile libraries in allowing ICT access for staff and users, along with the statement that static libraries are a priority, show that the Government sees the mobile library service as being of secondary concern. This service, however, serves those members of the community who are perhaps even more disadvantaged than those users served by branch libraries. At this point in time it seems as if the Government are not addressing the issue of providing ICT to these users.

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[11] The Local Government Association views are taken from evidence submitted to the DCMS (2000a) *Sixth Report: Public Libraries*.

1.8   The Situation in Other Countries

It seems evident from the literature available on this topic that Australia and the USA are also developing ICT provision on their mobile libraries, or bookmobiles as they are otherwise known. Similar, or in some cases larger, constraints to those noted by the library profession in England and Wales are evident in the literature from these countries, with the largest being finance and technology (Kenneally 1999). Despite this, however, both Australia and the USA seem to be in an advanced position, compared to England and Wales, when it comes to ICT and mobile libraries. It can also be seen in the literature that the focus is not solely on providing ICT for public use. The potential of ICT to help provide a more efficient service is stated quite explicitly in accounts from both countries in stark contrast to the majority of literature from England and Wales. There follows a description of the situation in each of these countries and also an examination of the situation elsewhere in Europe.

1.8.1   Australia

Osborne (1998) states that the mobile library can expand its traditional role and become a "major player" in the support of lifelong learning in rural and marginalised communities by taking advantage of technological advances.

A survey of mobile libraries in Australia, undertaken in 1998, shows that at this time 77% of vehicles had an automated circulation system on-board though 57% of those operated offline (Osborne 1998). This figure can be compared with the United Kingdom where only 22% of mobile library vehicles used automated circulation in 1998 (Batt 1998). 28% of the vehicles had access to the library catalogue but this was mostly for staff use. 12% of the vehicles offered community information databases, CD-ROMS and printers with a smaller number offering Internet access (Kenneally 1999).   It is not possible to compare these latter figures with the mobile library service in England and Wales as these facilities have not been surveyed.

The Maroochy mobile library offers an online OPAC, available for staff access in 1993 and the public in 1998, which is in almost constant use at most stops. This facility is seen as having a "valuable role in general service delivery" (Osborne 1998, 303). Noosa mobile library began to offer Internet access for their patrons in 1998 and this has been invaluable due to the length of their stops.

The Australians view their mobile library service as a vehicle designed to facilitate public access to the library service for those whose access is limited in any way (Library Council of Victoria cited in Kenneally & Payne 1999, Library Association 1997). This is much the same view as that held by the Library Association in this country. The majority of respondents to the 1998 Australian mobile library survey believed that ICT could improve the quality of their service (Kenneally & Payne 1999).

1.8.2   The USA

Bernard F. Vavrek, director of the Center for the Study of Rural Librarianship, is quoted as saying

"Essentially the same sort of services provided in the library, bookmobiles are trying to provide on the road" (Mendels 1998,
http://www.nytimes.com/library/tech/98/06/cyber/articles/10bookmobile.html)
echoing the sentiments of both Australia and the United Kingdom. The reasons given for going online are to make operations run more efficiently and to allow patrons, whose sole contact to the library service is through the mobile library, access to the Internet (Mendels 1998).

A bookmobile in Westminster, Colorado went online in 1985, aiming to provide equivalent information to that available in a branch library (American Libraries 1985). The technological difficulties experienced in England and Wales are evident in the USA also and many discussions on this topic have been held on the BKMOB-L discussion list[12] run by Clarion University. Many submitees state a lack of adequate telecommunications as a reason for the unfeasibility of being online and often ask for information and solutions from other bookmobile librarians.

Unfortunately there is no evidence of how many bookmobiles in the USA have some form of ICT on board therefore the situation as a whole cannot be ascertained. However the majority of the literature which refers specifically to mobile libraries and ICT applications, stems from either Australia or the USA suggesting that they are at the forefront of this issue.

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[12] The BKMOB-L discussion list can be joined at http://eagle.clarion.edu/~grads/csrl/listserv.htm [Accessed 27.8.01].

1.8.3   Europe

The literature for ICT and mobile libraries in the rest of Europe is very limited. In 1992/3 the MOBILE project was started which was designed to investigate the approach of the mobile library service towards the opportunities provided by ICT. The project involved the Netherlands, Belgium, the UK and Greece, though the best results were found in the latter (Carpenter & Trohopoulos 1997). The outcomes of the project included the realisation that a decent national telecommunications network would be required to put mobiles online. One conclusion was that the time constraints of a combined book and cybermobile would be too great and that perhaps the two should be made separate.

In Finland, the Tampere City mobile library vehicles are provided with online computer issue utilising a small modem and mobile phone lines. Whilst this technology is available for use in England and Wales it is more costly than in Finland (Stringer 2000b).

2 METHODOLOGY

This dissertation will investigate the topic, of ICT and mobile libraries, from an inductive viewpoint by examining specific cases and consequently reaching theoretical conclusions. Patton (1990) describes how this approach allows themes and patterns to emerge from the collected data. In this way it does not set out to prove a theory, and could be seen as using the "grounded theory" method, whereby a theory is built up from the bottom (Gorman & Clayton 1997, 28).

2.1 Qualitative and Quantitative data

Both quantitative and qualitative data will be collected through the use of the methods outlined below. As Bell (1987) states, no approach depends solely on one method and the use of a questionnaire or case study may provide quantitative and qualitative data. Quantitative data "uses numerical representations to quantify occurrences" (Gorman & Clayton 1997, 28) and in the context of this study will include the number of mobile libraries in service in England and Wales and the number of these mobile libraries with some form of ICT provision. This type of data allows trends in the amount of ICT provision across the country to be examined. For the purposes of this study simple statistical analysis will be carried out on the data in order to achieve the specified goals. All mean values and percentages have been rounded up for ease of reading.

Qualitative data will also be collected in order to examine the effect of ICT on the provision and use of the mobile library service. Qualitative data will be more appropriate in this case as quantitative data cannot explain 'why' certain trends occur (Patton 1990). Patterns and trends, perhaps different from those evident in the factual data, will emerge through the attitudes and opinions of the sample group. This qualitative data can also have a degree of statistical analysis carried out upon it though one is often less able to carry out precise numerical interpretation (Patton 1990, Gorman & Clayton 1997). However this type of data is less open to generalisation (Patton 1990).

2.2   Triangulation

"Often the best approach to understanding a problem is to use more than one method" (Stone & Harris 1984, 20).

This is equally true when attempting to establish a picture of a situation, as is one objective of this dissertation. Bell (1987) also recommends using a variety of data collection methods to improve the overall quality of the results. This allows the cross validation of the information collected (Hittleman & Simon cited in Gorman & Clayton). In order to meet the three objectives of this study a number of different methods have been utilised both within, and outside of, the context of the survey and case studies. These methods include a literature search, questionnaires and interviews.

The two main approaches to data collection are a survey and two case studies. Within these other data collection methods have been used, such as interviews, questionnaires and a literature search. The aim of this study is to ascertain the views of staff and users of the mobile library service and identify the impact of ICT on mobile library provision and use. The methods outlined below allow this to be achieved.

2.3   Approaches

A combination of strategies, in this case a survey of England and Wales and two case studies, can increase the range of information found and the two are often complimentary, with the detailed nature of the latter allowing closer examination of issues arising from the former (Robson 1993).

2.3.1   The survey

In order to meet the first objective, of ascertaining the current provision of ICT on mobile libraries in England and Wales, a survey was deemed to be the most effective method of data collection. In order to collect as full a picture as possible of the situation in the study area a four-page questionnaire was sent to all English and Welsh library authorities by e-mail. The design and success of the questionnaire are outlined in greater detail in section 2.4.3.

2.3.2   The Case Studies

The challenge of using case studies is the drawing of general conclusions from the findings so that these can be used by a wider group of people (Bell 1987). For the purposes of this dissertation a comparative case study was deemed appropriate as this was seen to be more effective in terms of the wider significance of the findings. The authorities chosen for the case studies were Sheffield and Derbyshire. Sheffield was chosen because of impending plans to utilise ICT on their mobile libraries. Derbyshire, in contrast, already has ICT for public use on three mobile library vehicles. It was felt that a detailed comparison of the views of the staff and users in these two authorities, one with ICT and one presently without would provide an interesting picture.

For the purposes of the study the Heads of Mobile Library Services in both authorities and a number of mobile library staff have been interviewed. In order to provide a more balanced point of view other library managers, who are not involved in providing the mobile library service, have also been interviewed. User opinions are also important and in each authority, where possible, parity exists between surveyed groups of users within the sample.

2.4   Research Methods

This section outlines the data collection methods utilised in the research of this study and the reasons for their use.

2.4.1   The Literature Search

Before both the survey and the case studies could be carried out, a literature search was necessary to provide background information on the topic and also to suggest what the major themes and trends might be (Busha & Harter 1980). This enables gaps in knowledge, significant issues and possible questions to be identified.

The initial search was designed to identify current literature on the topic of mobile libraries focusing on the issue of ICT. It became apparent after searching the Sheffield library catalogue and a number of databases, including *LISA* and *Emerald Library*, that there was a shortage of literature on the overall topic of mobile libraries. The search was expanded to include the *Google* search engine and by using the advanced facility the search was narrowed down enough to provide a manageable amount of results. It was this search which linked to the State Library of Queensland *Mobile Library Literature* bibliography (2001) which meant that many relevant articles could be tracked down. Previous Sheffield dissertations on related topics, including Hunter (1998) and Harvey (1999), were examined for background literature and, whilst nothing of bearing to this particular study was found, the bibliographies of both were used to suggest further reading.

Government literature relating to mobile libraries was found through searches of the House of Commons web-site and the DCMS web-site[13] and official documents relating to the mobile library service in the United Kingdom were obtained from the Library Association.

Serendipity has provided a great deal of the literature used within this dissertation as it was difficult to find articles relating specifically to mobile libraries and ICT, though on reading many authors did comment briefly on this issue.

Other literature was obtained through e-mail based discussion lists and responses to requests for views and information posted on both the LIS-PUB-LINK[14] and BKMOB-L lists.

For the case study authorities literature was gathered from the authorities themselves, where available and also from web-sites. This was made more difficult as Sheffield Libraries do not have a web-site, however the Best Value plan is available in electronic format and much of the data was retrieved from this document.

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[13] Available from http://www.parliament.the-stationery-office.co.uk/pa/cm/cmcumeds.htm and http://www.culture.gov.uk/heritage/index.html [Accessed 27.8.01].
[14] Membership of this list is available from: http://www.jiscmail.ac.uk/docs [Accessed 27.8.01].

2.4.2   Preliminary Interviews

Preliminary interviews allow the focus of the study to be concentrated through the discussion of the themes and trends discovered in the literature. Those people directly concerned with the topic, in this case the Heads of Mobile Libraries in Sheffield and Derbyshire were able to identify those issues that would be most useful to them as professionals. There is also the possibility that:

"lines of questioning emerge which might not have been anticipated but which might be highly relevant to the study" (Stone 1984, 19).

To support the findings of the literature search and provide a background to the case study areas a preliminary interview was carried out with the relevant Senior Management. This first interview meant that the study could be focused and that further reading could be more relevant.

2.4.3   Library Authority Survey

The survey of English and Welsh library authorities was carried out through a questionnaire sent as an e-mail attachment. It was designed to ascertain overall views and trends relating to the use of ICT on mobile library vehicles and contained both open and closed questions in order to collect both factual (quantitative) and attitudinal (qualitative) data. A copy of the questionnaire sent to the authorities is included in this dissertation as Appendix A. Data procurement by questionnaire was chosen as an effective way of collecting useful information from a large number of people, the potential for which is outlined by Stone and Harris (1984). The questionnaire was designed to be self-completed, however Heather and Stone (1984) point out that questionnaires designed in this manner can elicit a low level of response that in turn could distort the findings of the study.

E-mail was chosen as the method of distribution because access to the sample group was, in theory, 100%. Technological problems, such as delivery failure and invalid addresses, have been stated as a disadvantage of using e-mail as a distribution method (O'Lear 1996). However the benefits of e-mail including the "ability to survey persons … that are geographically dispersed" (Roselle & Neufeld 1998, 153), the increased speed of delivery and the reduced cost involved (Schaefer & Dillman 1998) counteract these disadvantages. Research

has suggested that e-mail surveys elicit a lower response rate than postal surveys (Schaefer & Dillman 1998) but work done by Smith (1997b) suggests that a multiple contact approach could be utilised in order to counteract this. An introductory e-mail was sent to each authority outlining the study and the nature of the questionnaire. This was followed by the questionnaire itself and, two weeks later, by an e-mail reminder. Schaefer and Dillman (1998) have suggested that e-mail questionnaires elicit more detailed answers to open questions than those in print form due to the ease of typing compared to writing by hand. The literature implied that some of the sample would probably prefer the questionnaire to be delivered in paper form (Schaefer & Dillman 1998), therefore this option was made available where requested.

A pilot study of the questionnaire was vital in order to:

 "help show up any weaknesses in the questions, such as ambiguities [and] lack of clarity about the meaning of terms" (Stone & Harris 1984, 19).

Various pilots of the study were carried out, originally with people not necessarily associated with the library profession, in order to correct the structure and wording of the questions. The questionnaire was then refined through a pilot carried out with library professionals in order to ascertain the relevancy of the questions being asked.

2.4.4   Interviews of Library managers

Interviews of library managers, both those who are associated with the mobile library service and those who are not were carried out during the course of the study. These interviews were mainly limited to managers within the case study authorities due to time constraints however an option for further participation was included on the library authority survey. Because the nature of this study is exploratory, an unstructured or interview guide approach was the most appropriate method of interviewing as this allowed for flexibility (Stone & Harris 1984). In using this method, clarification of questions and the emergence of new areas of focus are permitted. A list of topics was drawn up but where necessary these were not adhered to strictly. All interviews were recorded by taking notes to keep the informal nature of the meeting.

The aim of these interviews was to clarify some of the points raised by the survey and to look at more managerial aspects of the utilisation of ICT for the mobile library service. The

interviewing of non-mobile library managers was designed to prevent a biased opinion from dominating this valuable source of information.

2.4.5   Interviews of Mobile Library Staff

These interviews took a similar format to the interviews carried out with the library managers though with less focus on the managerial aspects of ICT on mobile libraries and more focus on the effect that this could have on themselves and the users. The sample included both Driver Assistants and Library & Information Assistants as, in both authorities, these staff both provide services to the user. As time and location limited access, no set sample number was decided upon and staff were interviewed where possible. Many of these interviews took place whilst on the mobile library vehicle and often strayed from the interview guide onto new and relevant topics. Again the views of the staff were recorded by hand. It was felt that the mobile library staff would be in a suitable position to provide observational information about the mobile library patrons and also outline more practical difficulties that might not be immediately obvious to anyone outside the mobile library profession. The ability to talk to certain members of staff after observing methods of service provision or user behaviour also allowed many points to be clarified. All staff were promised anonymity and were recorded only by their authority and job title.

There are disadvantages to interviewing that have been taken into account when choosing this method and undertaking the actual interviews. Interviews are especially open to bias; both through the interviewer attempting to gain validation of personal views and also through the desire of the interviewee to state a view that they believe the interviewer wishes to hear. Interviewing is also costly, in money and time, but this is outweighed by the advantages that include immediacy and personal contact (Gorman & Clayton 1997).

2.4.6   Survey of Mobile Library Users

It was decided that a survey should be carried out amongst mobile library users in order to ascertain their views of whether ICT is/would be beneficial to the service that they receive[15]. Although the survey was in the form of a questionnaire, adapted by one used by Cerlim[16], it was researcher administered for two reasons. The first is that there was the potential for bias if the users felt that a member of library staff was administering the survey (Bookstein 1985).   An explanation of the nature of the study (a university dissertation) and an explanation of what would be done with the information provided had the potential to discourage this reaction. The second was that it was felt that many of the questions regarding the types of ICT used on the library would need further explanation due to the nature of the topic. Because of the administration method of this survey it was important to keep the questions short due to the duration of some mobile library stops.

Each library authority provides a different service to its users depending on the geography of the region and needs of the community.   Eve and Brophy (2001) suggest that users in urban and rural areas may utilise ICT in different ways. In order to reflect these potential differences of opinion a wide variety of stops needed to be surveyed. However, it was felt that a time limit should be decided upon and therefore 3 days were spent in each authority collecting data from users. This meant that there was variety in the number of stops visited in each authority, at least one urban and rural route was included, with the other day being used to visit stops of over an hour duration. The sample was therefore made up of users from four different types of stop, these being urban and rural and, within these, out of hours (for those users who attend school or work for example) and longer stops. Certain stops fulfilled two or more of these criteria. The routes surveyed were chosen in order to provide as comprehensive a picture as possible of the service provided by each authority.

The potential difficulty in predicting the number of users meant that the number of people using the mobile library dictated the sample number. Users were approached throughout

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[15] A copy of this questionnaire is included as Appendix B.

[16] The questionnaire was used by Cerlim to assess the value and impact of end-user ICT and is available from: http://www.mmu.ac.uk/h-ss/cerlim/projects/vital/workbook.doc [Accessed 27.8.01].

the day, with a maximum of 10 users being questioned at each stop in order to provide a manageable sample. However on many occasions this number was not met, usually due to the duration of the particular stop. Each stop was visited only once and, whilst it is acknowledged that the lack of repetition may effect the outcome of the study, it was felt that as mobile library users are quite regular in their visits, further time spent on this part of the data collection could prove irrelevant. The sample was not discriminated by age, race or gender, however lone children were not approached and this policy has resulted in a low amount of feedback from the under-16 age group. As it turned out the majority of the sample were over 65, White and female but this appears to be the nature of the mobile library clientele. Where possible, all users were approached for their views dependent on whether they had the time available to respond to the questionnaire.

2.4.7   Observation

By using observation "the information required by the investigator is obtained directly" (Stone & Harris 1984, 2). Although this was not a major data collection method, by observing both methods of service provision and user behaviour new issues presented themselves. As the staff were aware of my presence on the mobile library vehicle this type of observation can be seen as overt whereas the users were unaware of the reasons for my being there.

2.5   Problems and Limitations

Numerous problems with the methods adopted during this study have already been addressed in the relevant sections. The majority of these relate to the mobile library user and authority surveys. Overall time constraints were a big problem, with data collection on the mobile library being limited to certain days and routes in both authorities. This was made more difficult in Derbyshire due to the limited transport options to the various mobile library bases making choice of services difficult. Also on numerous occasions normally busy stops, according to the staff, were underused on the day that the survey was administered. This quite natural variation in use may have distorted the picture quite considerably.

It was pointed out by staff that users seemed intimidated by the fact that the survey was a university based one and also by the nature of the questions and it is worth bearing in mind that this may also have affected the results of the survey. In retrospect the use of flash cards, with the list of ICT facilities and explanation needed for Question 7 of the user survey, would have been useful. Users seemed unsure as to the nature of each facility and it is possible that personal explanations may have biased the results. The enthusiasm of the author for the work of the mobile library service may have also distorted the results and discussion unintentionally.

Another limitation is that non-users of the mobile library were not interviewed on whether they would be more willing to utilise a service that had ICT. This may have provided some very interesting views but again time constraints prevented this from happening.

The technological problems experienced through the library authority survey distribution have already been mentioned. The other disadvantage of that particular method was that it was difficult to clarify certain responses to open questions. As far as possible terms such as 'mobile library vehicle' and 'ICT' were defined but despite this there were still some discrepancies.

3   THE RESULTS OF THE NATIONWIDE SURVEY

This section addresses the results of the nationwide survey, which was designed to meet the first objective of this study, namely the development of a picture of ICT provision and mobile libraries in England and Wales. For each section, where appropriate, there is a review of the literature that was used in the development of each question, followed by a discussion of the results from the survey. Finally a comparison is made between the literature and the results of the original research presented here, in order to highlight similarities and discrepancies.

3.1   The Sample and Response Rate

A total of 163 public library authorities in England and Wales were contacted via e-mail, and asked to complete the survey. A total of 77 authorities responded giving a response rate of 47%. Of the 88 authorities that did not respond, six were due to failed e-mail addresses. Of the 77 authorities who did respond, only 68 completed the survey. Seven authorities stated that they did not provide a mobile library service to their users and two authorities declined to participate due to time constraints. This has led to 42% of the target sample being used in the following discussion.

Class of authority	No. of respondents who completed the survey	% of respondents from that authority class	% of total no. of respondents
County	17	52	25
Metropolitan District	11	31	16
Unitary	19	41	28
Welsh Unitary	8	40	12
London Borough	13	46	19
TOTAL	68		100

Figure 1. The respondents

The 68 authorities can be categorised into five classes[17], as shown in column one of Figure 1. The sample was divided in this way to allow for easier comparison of the data. The table shows that whilst the number of responses from the Welsh Unitary authorities is clearly the lowest (as seen in column two), the percentage of those contacted who responded is actually comparable with the figures for the other classes of authority at 40%. The smallest response rate by percentage, from within an authority class, was from the Metropolitan Districts with 31%. The views of this group may, therefore, be underrepresented.

3.2   The Number of Mobile Library Vehicles

The *LISU Statistics for Public Libraries* (2000) state that the number of mobile library service points in 1998/99 in the UK was 664. This figure does however include mobile library service points in Scotland and Northern Ireland. Between them, the 68 public library authorities that responded have 249 vehicles and it is this figure that will be used in the following discussions.

Of these 249 vehicles, four are trailer libraries, two are travelling libraries, six are specifically for young people and one is a library bus. For the purposes of later analysis the mean number of mobile vehicles per authority has been calculated and this is shown in Figure 2.

Class of authority	No. of respondents	No. of mobile vehicles	Mean no. of mobile vehicles *
County	17	150	9
Metropolitan District	11	25	2
Unitary	19	29	2
Welsh Unitary	8	27	3
London Borough	13	18	1
TOTAL	68	249	4

Figure 2. The mean number of mobile library vehicles.

* All mean values have been rounded to the nearest integer value to avoid confusion.

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[17] These classifications were taken from the CIPFA document *Public Library Statistics 1999-2000*.

The table shows that County authorities have five more mobiles than the overall average whilst the other authority types all have less. This can be demonstrated more graphically in Figure 3.

The Mean Number of Mobile Library Vehicles per Authority Type
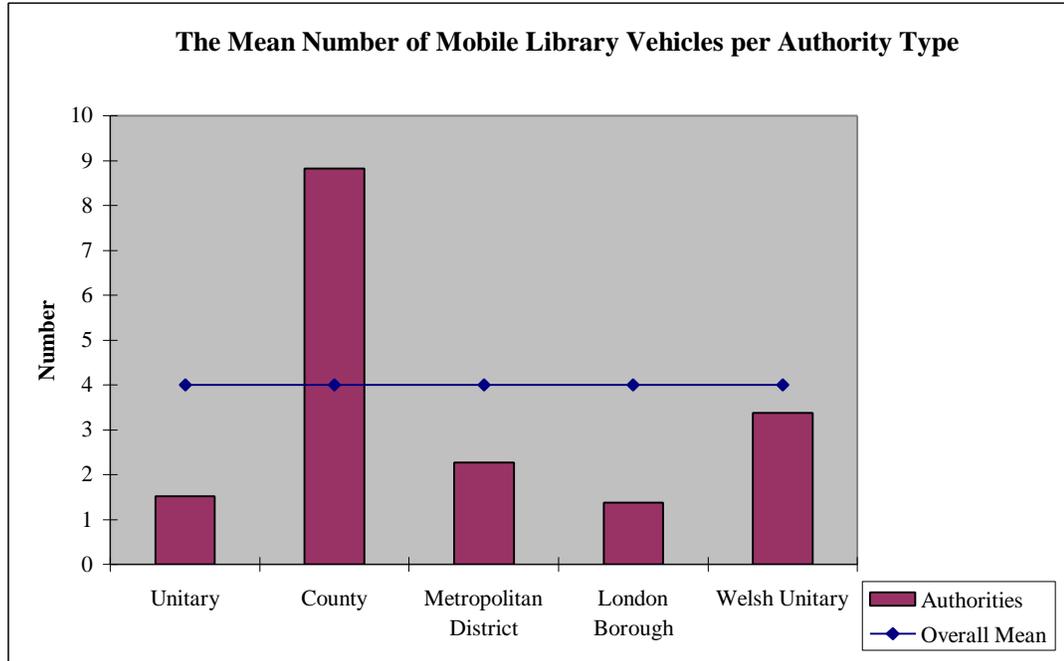
Figure 3. The mean number of mobile library vehicles per authority in comparison with the overall mean.

3.3   The Extent of ICT Provision

Authorities were asked to indicate whether they had any of the listed ICT facilities (see Question 2.1 in Appendix A) on one or more of their mobile vehicles in an attempt to ascertain the present provision of ICT in England and Wales. Unfortunately there are no previous figures with which to correlate the results of this study.

Class of authority	No. of respondents	No. of respondents with ICT on one or more vehicle (% in brackets)	No. of respondents with ICT (exclusive of telephone) on one or more vehicle (% in brackets)
County	17	15 (88)	10 (59)
Metropolitan District	11	10 (91)	4 (36)
Unitary	19	18 (95)	12 (63)
Welsh Unitary	8	7 (88)	1 (13)
London Borough	13	12 (92)	10 (77)
TOTAL	68	62 (91)	37 (54)

Figure 4. The number of authorities with ICT on one or more of their mobile library vehicles (inclusive and exclusive of telephones).

The overall percentage as shown in Figure 4 is 91%, which would suggest that provision of ICT is high amongst the responding authorities. However on closer examination of the survey responses, it was found that a high number of these vehicles only had mobile telephones on board. Mobile telephones were included because they are encompassed under the definition of ICT used in section 1.2 and it was expected that the majority of authorities would utilise this technology as a means of allowing the vehicle to keep in contact with base. As this would seem to be the case, if the number of authorities with vehicles that only utilise mobile telephones is removed an indication of the level of provision of other ICT facilities can be ascertained.

This revised figure is shown in column four of Figure 4. The overall percentage has dropped dramatically from 91% to 54%, indicating that provision of ICT facilities other than mobile telephones is far less widespread. Most dramatic is the drop in figures (from 88% to 13%) for the Welsh Unitary authorities. The data also shows that the London Boroughs are ahead of the other authority types in providing ICT facilities for their staff or users. The differences in these situations could perhaps be explained by the effect of constraints on the authorities. These constraints are discussed in a later section but to illustrate this point it may be that the technological solutions which the London Boroughs have utilised are not suitable for the Welsh Unitary authorities, perhaps due to geographical limitations.

The same original data can also be used to show the number of vehicles per class of authority, which have one or more ICT facilities. The results are shown in Figure 5.

Class of authority	No. of mobile vehicles	No. of vehicles with ICT facilities (% in brackets)	No. of vehicles with ICT facilities (exclusive of telephone) (% in brackets)
County	150	64 (43)	41 (27)
Metropolitan District	25	20 (80)	7 (28)
Unitary	29	24 (83)	16 (55)
Welsh Unitary	27	22 (81)	4 (15)
London Borough	18	15 (83)	13 (72)
TOTAL	249	145 (58)	81 (33)

Figure 5. The number of mobile library vehicles with one or more ICT facilities (inclusive and exclusive of telephones).

These figures show a slightly different picture when mobile telephones are included and excluded, than in Figure 4. The County authorities appear to be utilising ICT to a lesser extent on their vehicles than the other classes of authority. One explanation for this is that, whilst mobile telephones were included on the list of ICT facilities on the survey (see Question 2.1 in Appendix A), many authorities did not appear to count vehicles solely equipped with mobile telephones when asked how many of their vehicles had one or more ICT facilities on board. The fact that County authorities have more mobile vehicles, on average, compared to the other classes of authority, suggests that if the County respondents have not included vehicles solely equipped with telephones then this could have caused the figure to be much lower.

Overall 58% of mobile library vehicles had one or more ICT facility on board, though the possible distortion of the County figures must be kept in mind.

When the original data are recalculated exclusive of telephones the figures show that ICT provision in the London Boroughs is higher than that of the other classes of authority. However as shown in Figure 2 these authorities average one vehicle each whereas the Counties average nine. The added cost of furnishing these extra vehicles may explain why only 27% of the County authority mobile vehicles have some form of ICT on board aside from telephones, compared to 72% of London Boroughs. The Welsh Unitary authorities average three mobile vehicles therefore the lack of ICT provision could be due to a combination of financial and

technological constraints which will be discussed in more detail in section 1.7, rather than the number of vehicles to be equipped.

3.4   The Number of Authorities with Dedicated ICT Vehicles

3.4.1   The Literature

The literature suggested that one method of delivering ICT facilities to users was to create a dedicated ICT vehicle to target those users who required and needed access to electronic information systems (Carpenter & Trohopoulos 1997). Drumm and Groom (1997) have gone as far to suggest that in the future all mobile libraries (or bookmobiles) will consist solely of electronic information systems. In America this service is known as the "electronic bookmobile" or "cybermobile" and according to Khalil (1998) should consist of nine Pentium-based computers, videoconferencing and two-way satellite transmission. The computers will allow access to CD-ROMs and the Internet.   Published examples of dedicated ICT vehicles are variants of this format.

Several authorities in England and Wales have developed ideas along the lines of Carpenter and Trohopoulos' suggestion. Hertfordshire have created "Rolling Zone", a mobile cybercafe with Internet and CD-ROM access. This service targets schools and youth clubs and was developed to parallel the traditional service, which is required to consist of many short stops, making ICT access inappropriate (Smith 1997a). Walsall also has a dedicated vehicle, a converted mobile library, which offers Internet access through eight Pentium PCs. A scanner and two colour printers are also on board. The project is known as LAMPOST[18] and aims to deliver:

"tutor supported training to communities within Walsall which are suffering from a significant degree of economic deprivation and social exclusion" (Stringer 2000a, 6).

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[18] Local Access to Mobile Provision of Skills and Training (Stringer 2000)

3.4.2   The Survey Results

Of the 68 authorities which completed the survey, only one (County authority J) stated that they had a dedicated ICT vehicle, and another (Metropolitan Authority A) stated that they had one on order which would consist of 8 individual workstations, a photocopier, a printer and a scanner. The vehicle will also contain significant storage for CDs, Videos and DVDs along with a projector screen and a work table. Books may also be stocked on the vehicle, though it was not clear to what extent.

Whilst reflecting the situation within the respondent group these results are obviously not fully indicative of the situation in England and Wales as evidenced by the scope of the literature outlined above.

3.5   The Types of ICT on Mobile Library Vehicles

In order to create as complete a picture as possible of ICT provision on mobile libraries in England and Wales it was necessary to establish the types of ICT that are being utilised or provided by mobile library services.

3.5.1   The Literature

Research of the literature showed that in Australia 70% of mobile library vehicles operated computer circulation systems with equal numbers being offline and online. 47% of the vehicles provide an online library catalogue. The figures drop when ICT facilities with greater user potential are examined. Only 12% have Internet access and 11% CD-ROMs. The provision of PCs for users is only 9% (Kenneally 1999). The use of databases as information sources for staff and users was also suggested and is evident on Australian mobile vehicles (Osborne 1998). Fax machines were suggested as an alternative to mobile telephones as a method of connecting to the mobile library base (Elliott 1998).

The literature from America suggested that the same types of facilities were being planned or utilised on bookmobiles there (Khalil 1998), with the most prevalent being access to CD-ROMs and the Internet and less emphasis on online circulation.

The literature from the UK concerning the utilisation of ICT on mobile libraries is limited, however both Brent and Derbyshire have published details of the facilities which they provide in tandem with the normal service.

"Brent was the first local authority library service in the UK to have an on-line library management system" (Palmer 2001, 31).

This enables renewals and requests to be carried out immediately. Derbyshire have installed three laptops on their MCVs which provide access to the Internet, the library catalogue and networked CD-ROMs amongst other things (Gent 1998). This is discussed further in the case study profile of Derbyshire (see section 4.2). Somerset have also equipped a new vehicle with ICT equipment whilst retaining space for 2700 books. The circulation system is offline but users can access the Internet and the library catalogue (Cawthorne 2000)

The collation of a list of possible ICT facilities, which a mobile library could utilise or provide, was achieved by examining the literature outlined above and through preliminary interviews with Senior Management in the case study authorities. Users were asked which of the facilities they already had in static libraries and on their mobile vehicles, those that they were definitely planning for, those that were desired and those that would not be required. As facilities such as the Internet, the online catalogue and CD-ROMS for instance could be utilised by both staff and the public, these categories were split so that respondents could indicate their priorities.

Figure 6. shows the types of ICT facilities already utilised on mobile library vehicles in order of percentage of authorities that have one or more vehicle with that facility. The results confirm that mobile telephones are currently the most popular ICT facility on mobile library vehicles within the respondent group. Figure 8 (see page 34) shows this graphically. The next most popular is the Internet both for staff and users, followed by the library catalogue for staff use. This suggests that, when it comes to getting connected, mobile library services are more concerned with providing added services to users rather than improving the administration of the service through online circulation for example. However the figures for the facilities after mobile telephones are so close that it is hard to determine a pattern of preference.

Type of ICT	% of Authorities
Mobile/Telephone	88
Internet (Staff)	15
Internet (Public)	13
Databases (Staff)	13
Library catalogue (Staff)	12
Email (Public)	12
Email (Staff)	12
Offline circulation	11
CD-ROM (Staff)	10
CD-ROM (Public)	10
PC's	9
Online circulation	7
Library catalogue (Public)	7
Databases (Public)	7
Fax machine	3
Other	0

Figure 6. The types of ICT currently utilised by authorities on their mobile library vehicles.

Authorities were also asked to indicate which of the same ICT facilities were present in one or more of their static libraries. Figure 7 shows the order, by percentage of authorities, of the different ICT facilities.

Type of ICT	% of authorities
Fax machine	96
Internet (Staff)	94
Library catalogue (Staff)	94
CD-ROM (Staff)	93
Internet (Public)	91
Mobile/telephone	91
E-mail (Staff)	90
CD-ROM (Public)	90
Databases (Staff)	88
PC's	88
Online circulation	85
Library catalogue (Public)	85
E-mail (Public)	82
Databases (Public)	78
Offline circulation	34
Other	3

Figure 7. The types of ICT currently utilised by authorities in one or more of their static libraries.

This table shows that in static libraries, fax machines are the most prevalent ICT facility, followed closely by the Internet for both staff and, slightly less widespread, users. The ubiquity of these services could be attributed to the New Opportunities Funding (NOF) which is available for static libraries to get connected to the People's Network (New Opportunities Fund 2000). Only 34% of authorities use offline circulation in one or more of their static libraries and it is far less popular than online circulation. This was the only ICT facility which had less than 60% of authorities using it, and therefore the figures suggest that within the responding section of the sample, ICT is in widespread use across the static library network. Figure 8. compares the percentages of authorities with each type of ICT facility in their static libraries and on their mobile libraries and shows quite graphically the gap of provision between the two types of service point.
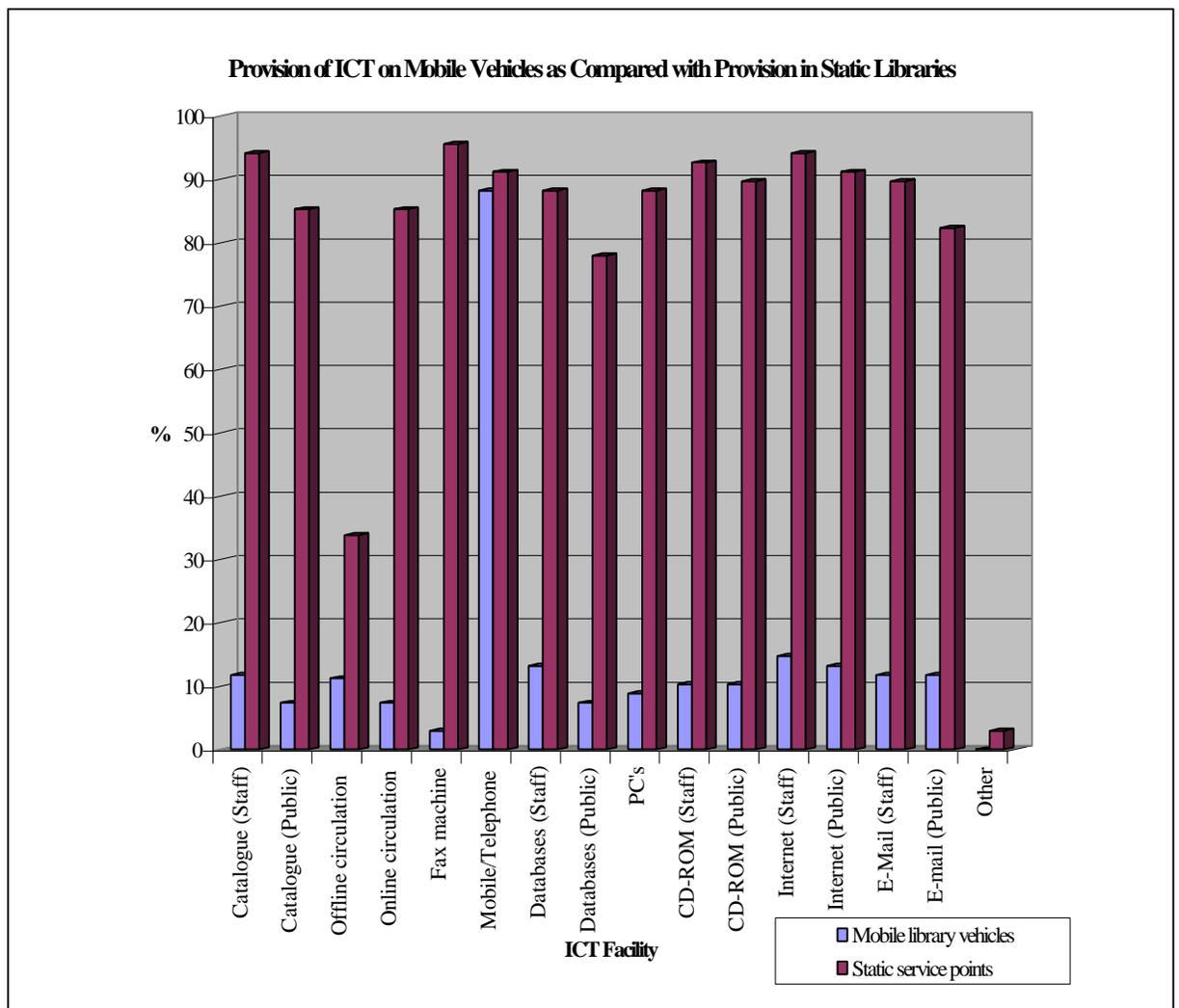
Figure 8. The provision of ICT on mobile library vehicles compared with static libraries.

3.6   ICT Plans for Mobile Library Vehicles

Many library authorities have begun publishing their Annual Library Plans on the Internet, the contents of which suggest that some authorities are planning to investigate the potential of ICT and mobile libraries. For example North Lincolnshire Libraries are planning long term development involving investigating and implementing Internet access on their mobile libraries (North Lincolnshire Libraries and Information Services 2000). Somerset is hoping to extend its service to rural communities by equipping more vehicles with ICT facilities (Somerset Local Education Authority 1999).

The question about plans for ICT provision on mobile library vehicles included a time constraint of December 2002 to coincide with that set by the Government for connection of static libraries to the People's Network (DCMS 2000a). The question was in two parts, one asking the respondent to outline any plans to be implemented before the end of 2002, and the other asking the respondent to indicate the types of ICT facility being planned for the mobile vehicles.

3.6.1   Plans to be implemented by December 2002

Figure 9. shows the number of authorities, by class, who have developed plans to implement some form of ICT on their mobile libraries by the end of 2002.

Authority type	No. of respondents	No. of respondents with ICT plans (% in brackets)
County	17	7 (41)
Metropolitan District	11	4 (36)
Unitary	19	3 (16)
Welsh Unitary	8	3 (38)
London Borough	13	5 (31)
TOTAL	68	22 (32)

Figure 9. The number of authorities that have developed plans to implement ICT on their mobile libraries by the end of 2002.

Overall 32 % of the respondents are planning to implement ICT on their mobile vehicles. The figures show that less Unitary authorities have developed plans than the other classes of authority. There is no real indication of why this should be so. Financial constraints

could be an issue though more County authorities, with more mobiles to equip, are making plans, therefore other factors and constraints may have had an influence.

Perhaps a clearer view of the situation can be seen by looking at a variety of the comments made by the respondents:

"any plans will have to wait until the next vehicle replacement" (Unitary Authority D).

"we are waiting for the replacement of our current library management system before looking at how to provide these services" (London Borough H).

Some authorities are hoping to implement offline circulation on their vehicles:

"we hope to develop this to allow for online access to the Internet" (County Authority O).

Other authorities are planning immediate online Internet and library catalogue access for staff and users, for example County Authority B are planning two new vehicles, one with access to the catalogue and the other with three laptops and dedicated to larger rural communities with half day stops. Those authorities already offering ICT facilities were hoping to extend these to all of their vehicles or develop greater technological reliability (Metropolitan Authority E). The class of authority appears to have no effect on the focus on providing circulation, catalogue information and Internet access, which was apparent in the respondent group, yet these viewpoints also gave no indication of why less Unitary authorities have plans.

3.6.2   The Types of ICT Being Planned

The second part of this question requested that the respondents indicate which types of ICT facility they were planning for their mobile libraries. Figure 10 shows the types of ICT facilities being planned in order of the percentage of authorities planning them.

The main priorities appear to be catalogue access for staff and users, an online circulation system followed by more wide-ranging information provision facilities such as the Internet and databases. When compared with the results from Figure.7 it appears that the main end-user provision is public Internet access. However it could be concluded that authorities are concentrating on increasing the range of facilities available to staff, including automated circulation. However, the percentage of authorities planning to provide any of these facilities is

below 30%. Various reasons, such as waiting for replacement vehicles, are outlined above for why this may be and linked to this is the question of financial constraints which will be discussed in more detail in section 3.8.2. Time constraints are also a possible factor.

Type of ICT	% of authorities
Library catalogue (Staff)	28
Online circulation	25
Library catalogue (Public)	22
Databases (Staff)	19
Internet (Public)	18
Offline circulation	18
Databases (Public)	18
Internet (Staff)	16
E-mail (Staff)	15
CD-ROM (Public)	15
PCs	10
E-mail (Public)	10
CD-ROM (Staff)	9
Mobile/Telephone	6
Fax machine	1
Other	1

Figure 10. The percentage of authorities planning to have each ICT facility on one or more mobile vehicle.

3.7   Other Views of the ICT Facilities

This section addresses the views of authorities in terms of those ICT facilities that are desirable but unobtainable for the moment and those which are unnecessary for the mobile vehicle to utilise or implement. These questions were designed to ascertain any difference between the views of the respondents and those stated in the literature used to construct Question 2.1 (see Appendix A). Figure 11. compares the percentage of authorities that have planned to provide each ICT facility with the percentages of those who would like to provide each of them, given the opportunity, and those who think certain ICT types to be redundant.

Views of the Authorities Towards each ICT Facility
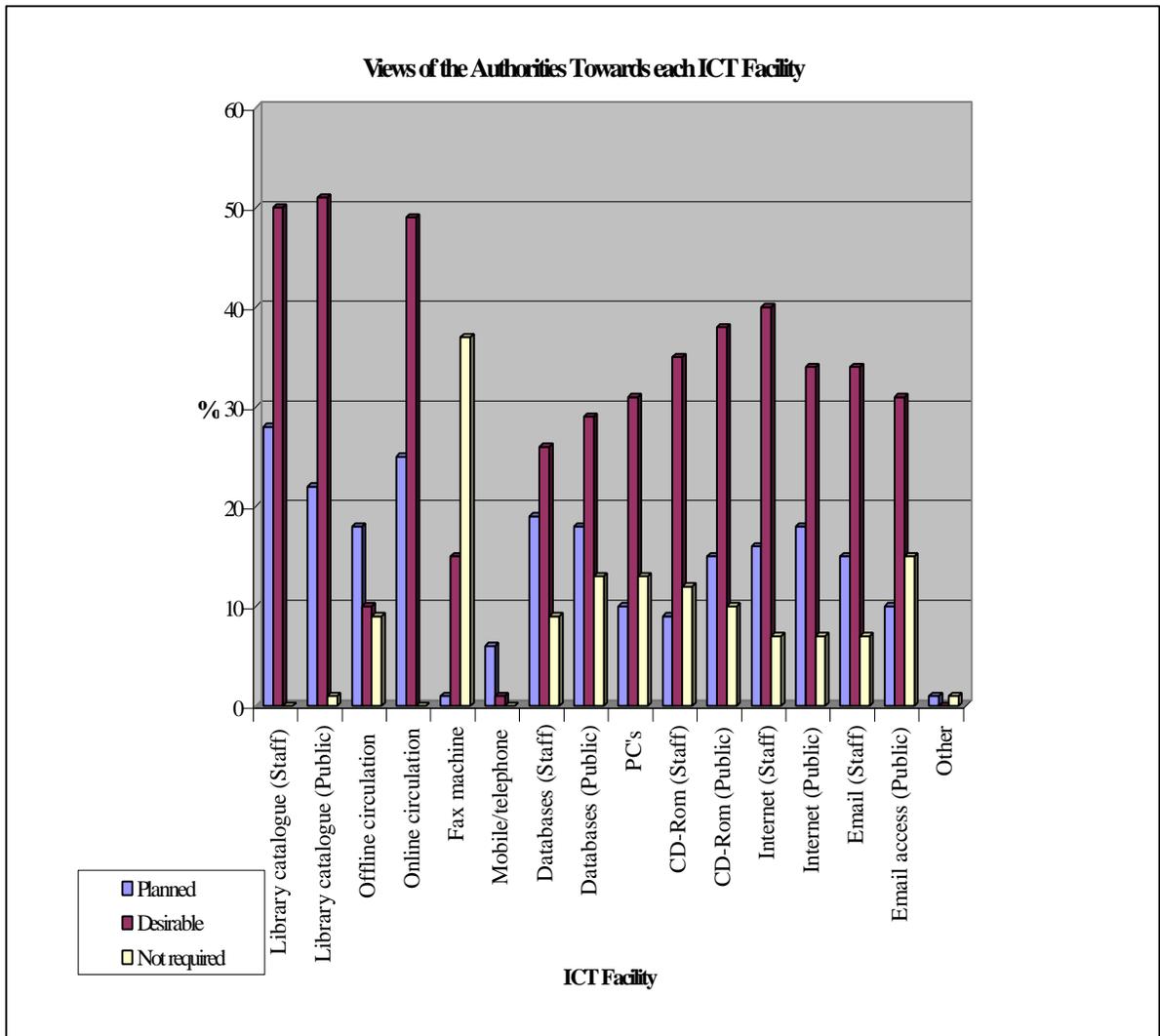
Figure 1. Respondent's views of each ICT facility.

The graph shows that for the most planned ICT facilities, the library catalogue for example, the trend is continued with authorities wanting to provide them if it were possible. Fewer authorities desire offline circulation than are planning for it already. This is possibly because given the choice, most authorities would prefer online circulation. Fax machines appear to be the ICT facilities that are believed to be the most redundant. Quite a high percent of authorities, more than those already planning for it, believe that e-mail access for users is unnecessary although a higher percentage would like to provide access given the opportunity. A small percentage of authorities do not see the need for the Internet, CD-ROMs or databases for staff or users on their mobile vehicles. This could be due to the constraints to be detailed in the

next section or perhaps because of the view of those authorities to the role of their mobile library service. Comments included:

> *"The mobile library service is not the way to deliver ICT to rural communities"* (County Authority I).

> *"We are investigating ICT applications on mobile but would like to ensure that we buy the most suitable rather than rush in"* (Unitary Authority B).

> *"We have recently undertaken some informal consultation with Parish Councils ... with one or two exceptions there was minimal demand although access to the catalogue was felt to be desirable"* (County Authority E).

3.8   Constraints to Mobile Library ICT Provision

This section addresses a major factor of the subject of ICT and mobile libraries, namely the constraints against such provision. The literature suggests that mobile libraries face added financial and technological constraints to providing ICT facilities than those faced by static libraries (LIC 1997, DCMS 2000a). These will be outlined below along with other constraints that have been suggested as affecting ICT provision on mobile libraries.

The results of the nationwide survey will then be examined in order to note any correlation between the views of the authorities and those stated in the literature.

3.8.1   Technology

The problems of providing ICT facilities on a mobile vehicle were recognised as early as 1990 though this was mostly related to the high cost of the technology required rather than problems with the technology itself (Suyak Alloway 1990). Certain considerations need to be taken into account when planning ICT on a mobile library. The power source needs to be reliable and uninterrupted or else data will be lost, therefore it is suggested that the vehicle generator would make a good power source (Suyak Alloway 1990, Drumm and Groom 1997). Another suggestion is to hook up to power points located at the stopping places (Suyak Alloway 1990).

Methods of communication, for online connections, also need to be taken into consideration. In 1990 this related mainly to techniques for contacting base in order to request information. One method is radio, popular in the past because MDR (Mobile Data Radio) allows computer data to be transmitted via radio waves (Suyak Alloway 1990). This method is also used in Denmark for communication between the vehicle and headquarters (Carpenter & Trohopoulos 1997). To accomplish this type of transmission an antenna is needed on the roof, which provides a range of approximately 25 miles (Suyak Alloway 1990). However this type of technology would be mostly unsuitable for transmitting large amounts of data, for example an Internet connection (Carpenter & Trohopoulos 1997).

To allow transmission of large amounts of data vehicles could plug into telephone lines in nearby buildings. This provides reliable transmission but less flexibility of choice for stop locations (Suyak Alloway 1990). This method is employed by the Noosa mobile library vehicle in Australia whereby there is a fixed meter box at each stop which allows provision of an online catalogue for circulation and enquiries and access to databases through the National Library (Osborne 1998). There have been some reliability problems with the Noosa library modems and from stop to stop but this method was chosen as the most effective due to the hilly nature of the Noosa area and its affect on mobile phone transmissions (Elliott 1998). For similar reasons Derbyshire employ a variation on this method which is unique to the authority. ISDN lines have been installed permanently in a community building close to the mobile library stop. Attached to this ISDN line is a transceiver with another transceiver attached to the computer in the vehicle. These transceivers allow the computer to connect to the ISDN line without staff intervention (Gent 2000). This method is also used in Seattle where the modems for Internet connections operate off transmitters in lampposts[19].

Cellular phone was also suggested as a method of voice or data transmission. This method continues to be a popular one and is being used by Sheffield to allow their mobile libraries to provide catalogue and online circulation data[20]. GSM [21] networks have low start-up

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[19] Information taken from an e-mail posted on the BKMOB-L discussion list in response to a posted query.

[20] Information about Sheffield is taken from interviews with Library Management.

[21] Global Systems for Mobile Communications (GSM World 2001, http://www.gsmworld.com/technology/faq.html).

costs and are therefore a popular method. Brent, the first local authority to have an online library management system on their mobile vehicle, uses a mobile telephone link to provide this facility. They use 'Spoofing Technology' to reduce costs as this allows the connection to be dropped when no data is being transferred. It is known as 'Spoofing' because both ends of the connection are fooled into thinking that the connection is still there. Call charges are, therefore, only incurred when data is transferred (Palmer 2001). Cellular technology is not the solution for every mobile library service especially when the terrain is hilly. Senior management from Derbyshire stated that the standard mobiles could not be connected to the DELTA system through cellular technology because of the lack of reception in most areas[22].

Finally satellites or Mobile Satellite services (MSS) can transmit video, voice and digital data covering even in the most isolated and rural areas (Suyak Alloway 1990). This is one reason why:

"Satellite communication is increasingly being seen as the answer to mobile libraries online communication and Internet access in Australia" (Pestell 1998, 17).

However, as Senior Management at Derbyshire has outlined, satellite connection is very costly, both in terms of vehicle conversion and connection charges. This is supported by reports that satellite transmission trials in Canada were shut down as it was costing the local authorities too much to run (Elwin 1998).

As part of the process of data collection a message was sent to the BKMOB-L discussion list administered by Clarion University in the United States of America asking mobile librarians for their views and experience on ICT and mobile libraries. These again mainly related to problems with the telecommunications needed for online services such as the Internet and circulation. One Librarian from Georgia stated that ICT had not had an impact on the service they provided because of the lack of adequate telecommunications. This was mainly due to the mountainous terrain the library is situated in. They have been able to set up an offline circulation system but are unable to go online. The speed of connections was another technological concern. A Librarian from Texas described plans to switch to a different service in order to increase the speed of Internet connections, however other services, notably in North Carolina, have discussed how this technology did not work on the mobile vehicle and suggest

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[22] For more details see section 4.1.2.

that a slower connection may be a better idea. However it was pointed out by a Librarian in Illinois that slow connection meant that it was difficult to issue and discharge books at busy stops. The Librarian from Texas also outlined the unreliability of online ICT facilities on mobile vehicles, stating that some days the system will just not start.

3.8.2   Finance

Another major constraint to having ICT on mobile libraries, suggested during preliminary interviews with Senior Management in the case study authorities, is the financial problems faced by public library services in this country, with core funding being seen as inadequate by the Library Association (in DCMS 2000a[23]). This obviously has a knock-on effect for the mobile library service of each authority and:

"over a long period of time the mobile and community libraries have seen a sustained reduction in their budgets" (Branch & Mobiles Group in DCMS 2000a, Appendix 22). Kenneally (1999) states that funding is also a major constraint in Australia.

There appears to be plenty of funding opportunities for ICT available in this country. Libraries are being connected up to the People's Network, consequently being able to offer Internet access to staff and users alike, through the use of New Opportunities Funding (NOF) money. £100 million has been set aside purely to achieve the aim of connecting all libraries by December 2002 with £77.5 million for England and £6.5 million for Wales (New Opportunities Fund 2001). However this money does not seem to be available for mobile library services to bid for. The only explicit evidence for this omission was an admission by the Government that the Network needed to be extended to mobile libraries (DCMS 2000a). It was also suggested, during the preliminary interviews, that NOF funding was not available for mobile libraries though this is not stated explicitly in the Guidance notes for applicants (New Opportunities Fund 2000) and the situation appears to be confused. There have been recent developments in this area after the Government stated that the People's Network would extend to mobile libraries. The 3rd Special Report-Further Responses, published in 2001(b) pronounces that "Library authorities can also use funds from their NOF allocation for mobile libraries provided all their static libraries are also connected" (DCMS 2001b, paragraph 13). This suggests that for most

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[23] This statement was made in evidence submitted to the DCMS (2000a) for the *Sixth Report.*

library authorities the mobile library service could be waiting a long time for connection to the Network as their figures suggest that, up to June 2001, 62% of libraries had Internet access (People's Network Online 2001b). It is unclear whether this figure includes those mobile libraries with Internet connections or not, but with at least another 38% of libraries to be connected by the end of 2002 it will take time for the money to filter down to mobile services. NOF has also set aside a challenge fund for those library authorities which have "already achieved significant progress in this area" (Eve & Brophy 2001, 16) and have moved on to look at innovative ideas for provision in rural areas.

Funding for public libraries, including mobile libraries, is also available from the DCMS/Wolfson Libraries Challenge Fund, which in 1999-2000 provided just under £3 million for ICT projects (Eve & Brophy 2001). Established in 1997 the Challenge Fund aims:

"to enhance the services and facilities provided by public libraries in England" (People's Network Online 2001, http://www.peoplesnetwork.gov.uk/content/dcms-wolfson.html).

This suggests immediately that the Welsh Unitary authorities are excluded from this source of finance. The administration and payment of the grants is done by Resource, on behalf of the DCMS (People's Network Online 2001). The 1999-2000 Fund welcomed bids, which would build on the DCMS' commitment to the People's Network (DCMS 2000c). The Library Association (in DCMS 2000a) is concerned that because of the nature of this type of funding there is a possibility of authorities missing out.

Grants have also been required to make these services work in other countries. In Australia, for instance, Russ Elwin, of the Wimmera Regional Library Corporation, states how funding was requested from the Victorian Office of Local Government. This funding allowed the mobile vehicle to be equipped with Internet and CD-ROM access (Elwin 1998).

Eve and Brophy (2001) state that the issue of maintenance funding should be taken into account. With the initial start up costs for most authorities developing ICT facilities for their mobile vehicles coming from one-off funding there is an issue of where the money for call charges and maintenance of the soft and hardware will be found. This was also a point of concern for the Library Association (in DCMS 2000a). Whilst providing some opportunities for

financial help with Internet-based projects, the funding outlined above does not appear to cover the provision of other ICT facilities such as offline/online circulation or other non-Internet based services. This is evidenced by the 1999-2000 DCMS/Wolfson Challenge fund inviting bids designed to build on the People's Network (2000c). The NOF funding also appears to be purely for the implementation of the People's Network in libraries and therefore would not provide funding for an authority wishing to implement online circulation for instance.

The Library Campaign, in evidence submitted to the DCMS (2000a) suggest that there are additional costs for the added security and staffing needed to implement ICT services effectively which need to be considered.

3.8.3   Length of Stop

"Mobile libraries by their nature move from one place to another and must of necessity provide much less time for public service at any given time than a fixed agency" (Smith 1961, 296).

The literature does not relate a great deal of information on how ICT provision is effected by this nature of mobile libraries, though the fact that stop duration can be a constraint to providing ICT facilities was supported by comments from Senior Management in both case study authorities. Carpenter and Trohopoulos (1997) outline that one of the main problems with providing ICT facilities on mobile libraries is that of time constraints. With a multiple stop policy a time limit is in place at each one and could have a negative effect on the quality of the traditional service provided. The Library Association (1997) suggest in their *Charter for Public Mobile Library Services* that the minimum stopping time for a vehicle should be 15 minutes. Stringer (2001, 9) therefore states that:

"There is a feeling that halts will become longer to allow Internet access".

The issue of time constraint is discussed in the literature mainly in terms of the effect it would have on a users ability to utilise the service. Any effect of time constraints on online issue and discharge is not outlined in the literature. The author felt that the use of online circulation would perhaps help to negate the effects of having short stops, as more time would be left to help customers with queries.

The use of the ICT equipment provided on the Somerset Chard mobile library varies according to the length of stop with the Internet being accessed at stops of an hour or more duration. At shorter stops only the library catalogue is used (Cawthorne 2000). Hertfordshire state that the requirement for short multiple stops on its rural service means that the service needs to be kept fairly low-tech (Smith 1997a).

Noosa mobile library, in Australia, made their stops longer in order to allow people the maximum time to access their on-board ICT facilities (Osborne 1998). Burlington County Bookmobile, in the USA, provides Internet access but with 53 stops every fortnight there is little opportunity for users to spend a large amount of time surfing (Mendels 1998).

Carpenter and Trohopoulos (1997) offer solutions to the time constraints inherent in providing information services through a mobile library vehicle. For instance they suggest the use of software packages which allow passwords to be stored for Internet sites therefore cutting down on the time needed to access a site. Another solution is the creation of dedicated ICT vehicles with priority groups of their own (Carpenter & Trohopoulos 1997). Some authorities, as detailed in section 2.4, have used this solution.

As this topic was not fully discussed in the literature a specific question on the survey asked the respondent to explain how much of a constraint stop duration was. This question was placed after the general section on constraints so as not to bias people's responses.

3.8.4   Not Required by Users

Carpenter and Trohopoulos (1997) suggest that one of the issues which emerged from the MOBILE project was the redundancy of ICT facilities for the elderly and housebound. Their conclusion is that the current users of the mobile library service, which in the main are the elderly and housebound, will not benefit from, and therefore not require services, such as the Internet and CD-ROMs. The MOBILE project did not include the feasibility of using ICT for issue and discharge for instance and therefore whilst users may not require these services, staff could find them invaluable. Chris Batt, in giving evidence to the DCMS (2000a) stated that retired people were the largest growing group of Internet users, contradicting the view of

Carpenter and Trohopoulos. Other commentators have assumed that the community requires ICT:

"Mobile services should be responsive to community demand and today that responsiveness includes the provision of automated services" (Berry cited in Hyman 1999, http://www.slis.ualberta.ca/cap99/bhyman/ecapping.htm).

The Branch and Mobile Libraries Group (Library Association 1997, 3) state that:

"where appropriate to the needs of any particular … community … the mobile library should provide a range of specifically targeted information and materials".

This suggests that, whilst the Group advocate the use of ICT to allow mobile libraries to access the services of the branch libraries, they feel that the mobile service should be catered for the specific clientele which many services provide for.

3.8.5   The Survey Results

The respondents to the nationwide survey were asked to list the three greatest constraints to utilising ICT on their mobile libraries, in no particular order. This question was designed to gauge the views of authorities and ascertain any correlation with the available literature.

Figure 12 shows that finance is considered the greatest constraint to utilising ICT on mobile libraries. The second largest constraint is space, which was not discussed in the literature. There are more comments from the respondents on this matter in section 3.8.7. Third was the technology needed to connect the vehicle, provide a reliable service and the power needed to run the equipment. As expected stop duration was also a major constraint. Other, less expected constraints included comments about staff training creating difficulties. The priorities of mobile services as compared to static libraries and stock priorities of books over ICT were also noted by certain authorities. Security of the equipment was also mentioned which supported the view of Groom and Drumm (1997) that this should be taken into consideration when planning ICT provision on a mobile vehicle. Three authorities agreed with Carpenter and Trohopoulos (1997) that there was no demand from users for ICT facilities, however this constraint became more apparent during the case study surveys and will be examined in more detail in section 5.4.6. Comments on the four main constraints are included in the relevant sections below.

Constraints Against ICT Provision on Mobile Libraries.
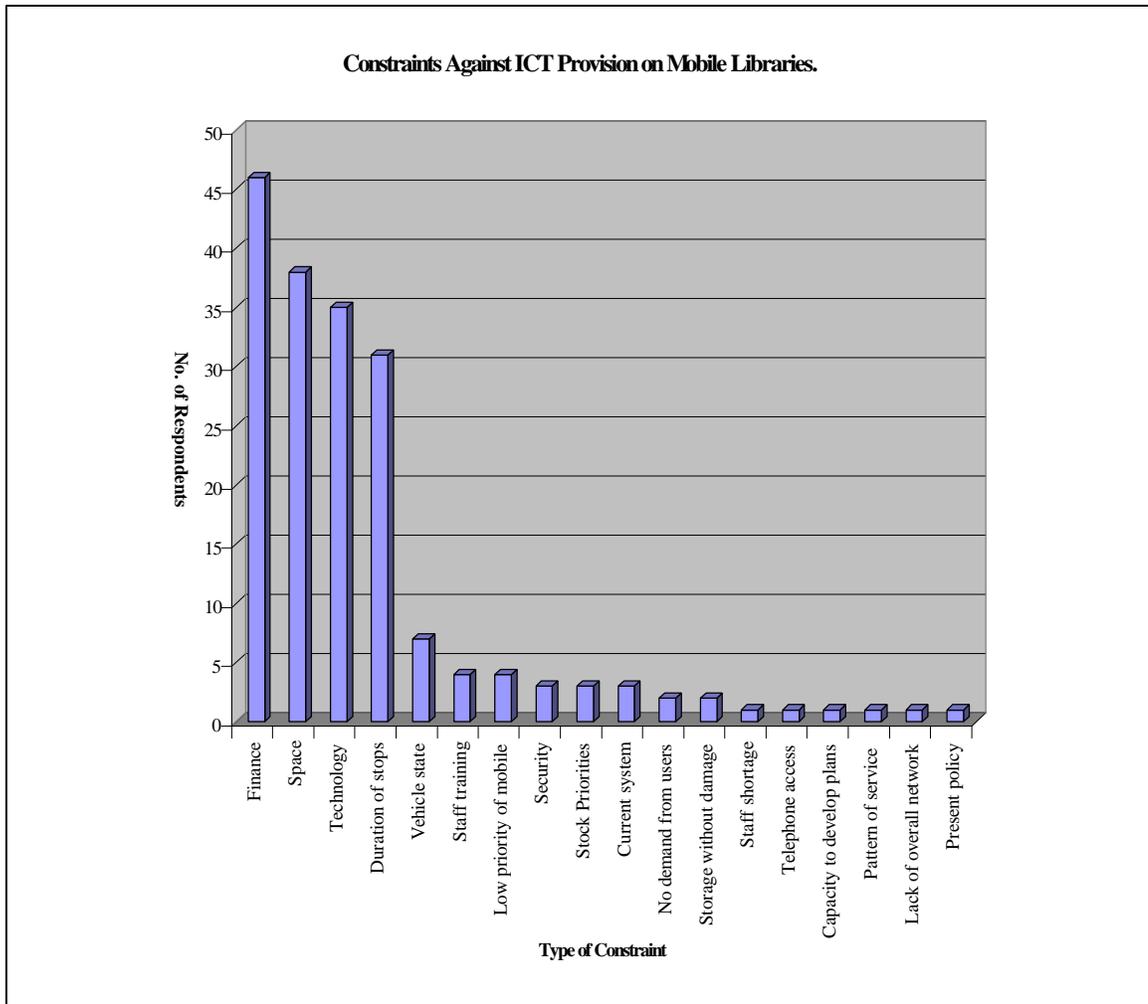
Figure 12. The respondents' views on constraints to utilising and implementing ICT on mobile vehicles.

3.8.6 The Respondents' Views of Financial Constraints

46 authorities (68% of the respondents) stated financial constraints as being one of the three greatest constraints to utilising ICT on mobile libraries. The financial situation as far as funding for projects of this type is concerned has been discussed above and this section relates to that through comments from the responding authorities. Comments included:

"We are keen to develop ICT on mobile libraries but budget constraints preclude any immediate action to introduce ICT" (County Authority P).

Eve and Brophy (2001) state that maintenance costs need to be taken into account when deciding to implement an ICT policy. Funding such as that received from NOF may not cover these costs. This was alluded to by certain authorities:

"Money [is needed] for kit, alterations and running costs" (Metropolitan Authority H).

"The available on-line systems seem to be all based on mobile telephones. This is an expensive option and has an effect on the revenue budget" (London Borough G).

The expense of using mobile phone technology was also outlined by various respondents. Comments include:

"The cost … of using a mobile phone line is off-putting" (Metropolitan Authority J).

"The obvious downside is the high cost of mobile phone calls … [which] have the potential to rise considerably if you make significant use of it" (Unitary Authority I).

This is further demonstrated by comments made by Senior Management in Sheffield.

"The cost of running ICT in static libraries is negligible after the hardware has been set up. For the mobile library service the running costs will be high".

Senior Management in Derbyshire disagreed:

"It costs no more, in fact marginally less, to run DELTA on the MCVs than in a branch library".

However this difference in opinion could be due to the different technological approaches which the two authorities are taking to ICT provision on their mobile vehicles[24].

The evidence from the nationwide survey suggests that the majority of authorities within the responding group that are looking at, or already, providing ICT facilities, are using mobile phone technology. The methods employed by authorities as suggested by the literature is slightly more diverse including Derbyshire and Walsall (Gent 1998, Stringer 2000a) who use of variations on the plug-in method was discussed in section 3.8.1.

Some authorities reported the previously discussed fact that NOF funding was unavailable and difficult to get for mobile library services.

"We have no NOF allocation for providing ICT on mobile" (Unitary Authority R).

However there are plans in this authority to:

> *"seek further funding from NOF in order to provide ICT on [their] mobile".*

Others suggested that this funding was to be used to provide ICT facilities on the mobile libraries**:**

> *"People's Network funding should help to provide live link services on all Mobile Libraries"* (Unitary Authority B).

This could be explained by the NOF revision of the fund, which allows authorities to use their allocation for mobile services once all of their static libraries are connected. Unitary Authority B may have all their static libraries connected.

Financial problems were compounded by the need to develop and purchase technology that overcomes other constraints.

> *"Finance is needed for state of the art provision to overcome space constraints"* (Metropolitan Authority C).

This response suggests that there are additional financial issues to providing ICT on mobile vehicles than providing ICT in a static library.

3.8.7   The Respondents' Views of Space Constraints

Whilst the factor of space was stated by 38 authorities (56%), again further comments on this issue were not forthcoming apart from to indicate whether it concerned ICT taking over shelf space or counter space. Some authorities, such as County Authority Q were worried that the vehicle would have to increase in size to accommodate the ICT and would therefore no longer be able to negotiate county lanes. This issue was not widely discussed in the available literature though the Library Campaign (in DCMS 2000a[25]) pointed out their concern about the amount of space which ICT facilities would occupy. Authority comments were represented by:

> *"Increasing the range of services increases the pressure on already very limited space"* (London Borough M).

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[24] Please see Section 4 for more details.

[25] The Library Campaign submitted evidence to the DCMS (2000a) for the *Sixth Report*.

More detailed concerns were outlined during the case study interviews with staff and management at Sheffield and Derbyshire.   Senior Management in Derbyshire explained how the small nature of the standard mobile vehicles they provide means that the counter size is not adequate for the use of laptops. Whilst offline circulation is being planned, a second counter such as Sheffield use, would reduce the amount of bay space. It was felt that this would limit the range of stock that could be offered. This is a problem that is being considered alongside the factor of funding for the offline provision.

The fact that many authorities, such as Somerset and Brent who have utilised this technology already, and published their findings, use laptops or notebook PCs instead of full-size PCs can be used as evidence in the literature of the constraints of space (Cawthorne 2000/ Palmer 2001)

3.8.8   The Respondents' Views of Technological Constraints

The responses gathered from the survey suggest that many authorities were concerned about the reliability of the technology available, for both reception and connection.

"The fragility of using a mobile phone line is off-putting" (Metropolitan Authority J).

Other authorities were concerned about the strength of mobile phone signals in certain areas, especially those that are rural (County Authority G). This supports the view from Derbyshire that cellular technology is only viable for areas with good signal coverage.

The responses concerning technological and financial constraints are focused on the use of mobile phone technology and the cost of that technology which suggests that this is, presently, the method of choice for connection and transmission of data.

Metropolitan Authority B was amongst those authorities that had tried to utilise the hardware technology but had so far been unsuccessful. Other authorities reported success with the technology which they had employed, including Unitary Authority I, who state that they have an offline circulation system as well as Internet access.

On the whole, however, there were not many further comments provided about technological difficulties, perhaps because the respondents felt that it was self-explanatory.

3.8.9   The Respondents' Views of Stop Duration Constraints

Of the respondents to the survey, 31 (46%) stated that the duration of the mobile library stops was one of the biggest constraints to providing ICT as part of the service. This constraint was mentioned briefly in the literature and authorities with published details of the service that they provide had indicated that it was a problem. As this was a problem inherent to mobile libraries, and not really relevant to static library ICT provision, a further question was included on the survey asking authorities to indicate how much of a constraint the length of mobile library stops is.   The following are a selection of responses that supported the suggestion within the literature and that of Senior Management in Sheffield.

Authorities that already provide ICT facilities outlined the problems which they had faced:

"There will not always be sufficient time for public Internet access" (London Borough B).

Authorities without ICT facilities presently, stated that the constraint of stop duration would perhaps affect the type of facility that could be offered.

"We have a number of 15, 20 or 30 minute stops. It would be difficult to envisage much opportunity for public use of ICT at these stops" (London Borough C).

This statement has not ruled out the use of ICT for staff though, a method also suggested by other authorities:

"It [length of stop] could be a factor depending on the nature of provision - there could be a difference for example between information provision and Internet access" (Welsh Unitary Authority C).

"Not all of our stops would be long enough to provide adequate time for public access to ICT ... We feel that there are positive advantages to ICT in relation to the circulation and control system" (County Authority O).

"Running management systems should not be affected by the time of stops" (Metropolitan Authority H).

Other authorities will plan the type of ICT that they will offer to users around the stop duration.

"Stops are not currently long enough to enable use of Internet and E-mail [therefore] planned laptops will include access to the County Councils' web-site for local information and WebOpac" (County Authority L).

This is also evident in those authorities that plan to offer different levels of ICT dependent on the length of stop.

"Mobiles on short rural stops will concentrate on circulation and catalogue. Vehicles with stops over an hour ... will have online facilities" (County Authority H).

This is fine when separate vehicles are used for different areas but in certain authorities two different vehicles visit the same area and there would be no equity of service if one vehicle were equipped and the other was not.

Other respondents are looking at their timetables and working out how to implement ICT in light of this:

"For most effective use, stops will need to be around 3 hours. At stops of less than an hour ICT will be used by children, by adults using the catalogue or won't be used at all" (County Authority B).

However there is an alternative point of view:

"If we reduced the number of stops to accommodate the length of time needed for Internet and e-mail use, we would lose a large proportion of customers" (County Authority L).

"The present pattern of service in County Authority I (typically fairly short stops) has contributed significantly to the policy of making ICT provision at static locations in communities rather than on the mobile libraries".

"[There is a] huge demand for the two mobile services. In order to satisfy demand, stops have to be limited" (Metropolitan Authority D).

This latter statement demonstrates that this constraint is not just a problem for County authorities.

The provision of dedicated ICT vehicles has also been suggested as an alternative solution to the constraint of stop duration.

"There is not enough time per stop. The timetable would need total reworking or provision of another vehicle especially for ICT equipment" (Unitary Authority B).

The constraint to ICT on mobile libraries provided by stop duration is not limited to a particular class of authority as can be witnessed by the variety of comments, and those authorities making them, outlined above.

3.9   The Effect of ICT on Staffing

This section addresses the effect that the presence of ICT could have on the number of staff present on a mobile vehicle and also the issue of whether ICT has had any other effect on the staff themselves. There was no literature to suggest that either of these issues would be important themes, however there was a suggestion, by Senior Management at Sheffield, of the potential effect of ICT on staff.

3.9.1   The Number of Staff Present on the Mobile Library

It was indicated, in a report by CPI[26] for the Department of National Heritage (1993), that additional work would be required of staff when ICT information services were introduced onto the mobile library service. Stating problems faced by Dorset Libraries and Information Services, it was suggested that there would be no time to answer information queries if the vehicle was single staffed or busy. This suggests that double staffing would be better, not only to serve users more quickly but also to ease the pressure on staff members.

Authorities, with ICT facilities on board or planning such services, were asked to indicate whether they had had to, or were planning to change the number of staff on board the mobile vehicle. The following table (Figure 13.) shows the response of those authorities that replied. It was assumed that those authorities with no current plans for ICT provision may not have given a great deal of thought to this issue and were therefore given the option to leave this

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[26] Capital Planning Information.

question unanswered. Some authorities took this option, whilst others felt that they could offer an opinion.

Class of Authority	Respondents views on whether there will be an effect on staff numbers		
	Yes	No	No Opinion
County	4	11	2
Metropolitan	1	9	1
Unitary	1	11	7
Welsh Unitary	0	4	4
London Borough	1	11	1
TOTAL	7	46	15

Figure 13. The effect of ICT on staff numbers on the mobile library vehicles.

The table shows that the majority of the authorities that responded to this survey felt that there would be no effect on the number of staff on the vehicle. Of these the general comments were:

"[ICT] reaffirmed the need to have two staff on board" (Unitary Authority I).

"The Driver and Assistant will need to work together although there will be no change in numbers" (Metropolitan Authority H).

"We will still retain three staff on each vehicle due to safety reasons" (Metropolitan Authority B).

The cost of making a single staffed mobile double staffed was pointed out by at least one authority.

"Two staff could offer a better service but current financial constraints will not allow this to happen at the moment" (London Borough A).

Seven authorities did believe that there would have to be a change. The majority of these were authorities with single staffed vehicles.

"Double staffing of mobiles is likely to be desirable in order to support ICT access for users" (County Authority K).

One authority, in odds to this opinion, stated that:

"[ICT] would possibly facilitate the introduction of single staffing" (County Authority P).

3.9.2   Other Effects on Members of Staff

Authorities were also asked their views on whether the utilisation of ICT had had, or would have an effect on staff in ways other than the number present on the vehicle. Senior Management at Sheffield had suggested that staff were wary of the emergence of ICT into the mobile library sector. The focus of the comments provided was not so much on any effect on the staff emotionally as had been suggested in the preliminary interviews, but more on the extra training they would need and the effect on their role. The following are a selection of the responses given.

The majority of respondents outlined the fact that their staff would need training in order to work with the ICT.

"[Staff] will need to update their ICT skills" (Unitary Authority J).

"Staff also realise that they will need to be adequately trained" (London Borough A).

"[ICT provision] has raised the issue of lack of staff awareness, confidence and skill in using ICT" (Metropolitan Authority B).

This issue is addressed in more detail in the next section.

Many authorities use a Driver Assistant as the second member of staff on their vehicle who are often able to carry out some library duties. Comments on the changing role of Driver Assistants are outlined below.

"We are planning to ensure drivers are experienced in ICT matters, for example Driver technicians as against a Driver Assistant on the larger vehicles with the maximum ICT" (County Authority D).

"Routines and job descriptions will need to change. The Driver and Assistant will need to work together, rather than have separate responsibilities" (Metropolitan Authority H).

The opinions of some respondents about other factors which may effect staff are as follows:

"There has been some worry about the use of ICT and its attractiveness to troublesome teenagers" (London Borough A).

"Staff have found the onboard use of ICT to be very labour intensive, leaving staff with less time for customers " (County Authority N).

These were offset by more beneficial effects of ICT provision on mobile library staff as detailed by some authorities:

"It will decrease the amount of office time needed at base" (London Borough F).

"Use of the offline laptop saves time issuing and receipting, leaves staff more time to spend with users" (Unitary Authority O).

Staff from each of the case study authorities were asked if they felt that their role would change and how they felt about using ICT on mobile libraries to provide a service. Their views are examined in more detail in section 5.6.

3.9.3   Staff ICT Training

The literature suggested that money was being provided, again by the New Opportunities Fund, for staff training in ICT (New Opportunities Fund 2001). The Library Association in evidence submitted to the DCMS (2000a) stated that £20 million from NOF had been provided to train all public library staff to appropriate standards in ICT skills. It was unclear whether this fund would finance the training of mobile library staff taking into consideration the fact that NOF funding was not originally available for implementing the People's Network on mobile libraries (DCMS 2000a).

"The disadvantage of NOF money is that all authorities will be able to claim a proportionately equal amount for each member of staff' (Library Campaign in DCMS 2000a, evidence para.4.2).

Those with experienced staff in ICT are likely to progress faster and further with the additional money.

Authorities were asked to indicate whether their mobile library staff were taking part in the NOF training. Figure 14 shows the percentage of authorities which mobile library staff taking part in NOF training.

Class of Authority	No. of respondents with staff undertaking NOF training (% in brackets)
County	16 (94)
Metropolitan	10 (91)
Unitary	16 (84)
Welsh Unitary	8 (100)
London Borough	11 (85)
TOTAL	61 (90)

Figure 14. The percentage of authorities with mobile library staff undertaking NOF training.

This table shows that a high proportion (90%) of the authorities which responded are including mobile library staff in the NOF training despite the fact that they may not have the same access to ICT facilities as their peers in the static libraries. Of the Welsh Unitary Authorities that responded all of them are training their staff.

Not all the responding authorities have included their mobile library staff however:

"NOF training is a lower priority for mobile librarians" (County Authority F).

This could be due to the lack of ICT on mobile library vehicles across the country.

3.10 Written ICT policies

As Gallimore (1997, 13) states libraries and other information providers:

"Are becoming dependent on IT for service delivery, … day-to-day management [and] administration."

He goes on to suggest that it is essential to develop an IT strategy and that "each library will produce a different strategy according to its needs[27]" (8). As mobile library services have a

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[27] For more information on IT strategies please refer to Gallimore (1997).

different role to branch libraries it would seem that a separate policy would need to be developed for the service.

Authorities were asked if they had written ICT policies which referred to their mobile library service. London Borough L indicated that a written policy concerning ICT and mobile libraries was included within its general strategy document. Two further authorities stated that mobile libraries could be included under their general ICT policies. The other 65 authorities did not have written ICT policies concerning mobile libraries.

3.11 Summary

The main issues arising within the respondent group from these responses are summarised as follows:

- London Boroughs are ahead of other classes of authority both for current ICT provision on mobile libraries and also in terms of planned facilities.

- Dedicated ICT vehicles are not presently used as a solution against the constraints inherent to providing ICT on mobile libraries.

- 54% of the responding authorities have ICT on a vehicle – those that do, appear to choose Internet access or catalogue access.

- Over 25% of authorities planning ICT for their vehicle are implementing more administrative ICT such as online circulation.

- Only 32% of authorities have definite plans for the end of 2002.

- Finance is the biggest constraint to ICT provision. Space and stop duration appear to be the most inherent to mobile library services.

- Staff numbers on mobile vehicles are unlikely to be affected, however, with 90% undertaking NOF training, roles are liable to change to a degree.

- As of yet there are no specific ICT policies for mobile library services. In some cases mobiles are included under a general ICT strategy.

4 CASE STUDY AUTHORITY PROFILES

The following sections look at the data collected from the case study authorities of Sheffield and Derbyshire in relation to the second and third objectives of this study. These objectives were to establish whether the use of ICT has had an impact on the provision and use of mobile library services. The results of the staff interviews and user survey are addressed below but firstly there is an outline of the two case authorities and the services that they provide. Unless stated the information was provided through interviews.

4.1 Sheffield City Council Libraries, Archives and Information

The library service in Sheffield has a potential user group of 531,000 (Humphries & Lister 2001). There are 27 community libraries open for 750.5 hours a week (Siddall 2000) along with the Central library and the mobile library service. The Southwest and rural areas of Sheffield are served solely by mobile vehicles (Siddall 2000). The Mobile service is comprised of the Mobile Library Service, Housebound and Social Care Homes, all of which are run from a central headquarters. The Mobile Library Service covers large suburban stops, inner city stops, small community stops and rural routes. These stops range in frequency from weekly to monthly with estates, sheltered housing complexes and isolated rural communities targeted. The fleet consists of four large mobile library vehicles, one travelling library, two vans used to deliver the Housebound Library Service and a VW Transporter which provides the Social Care Homes service (Sheffield Libraries and Information Services - Internal Document a). The remainder of this background section will concentrate on the Mobile Library Service.

The aim of the Mobile Library Service, as quoted in their Statement of Intent (Sheffield Libraries and Information Services - Internal Document b) is "to ensure that the mobile library service achieves the following targets:

- **That people with mobility problems in Sheffield have access to all the services available from Sheffield Libraries, through the Mobile Library Service.**

- **That the mobile library service serves those areas of Sheffield not adequately covered by the community library sector**.

- **That developments within the mobile library service reflect community needs and council priorities**.

- **That the mobile library service operates within the department's service strategy**".

The priority groups served by the mobile library service are elderly people with disabilities, people without access to a local community library, people who are unable to make use of a community library and people with a mental or physical illness, or a learning disability. Despite these statements there is a lack of confidence outside of the department about the status and role of the Mobile Library Service (Siddall 2000).

Of the four mobile library vehicles, three are equipped with hydraulic step-lifts and each measures between 33ft and 38ft in length. The vehicles are staffed by Library and Information Assistants and Mobile Library Driver/Assistants (Telfer 1997). The 1998/9 issue figures were 186,111 and expenditure on the mobile service in 2000/2001 was 502,012, less than that spent in each of the regional groups (Siddall 2000). Each vehicle stocks a selection of adult and children's fiction and non-fiction books, videos, spoken word cassettes and compact discs.

4.1.1   Sheffield Libraries and ICT

Sheffield Libraries, Archives and Information state that:

 "ICT is one of the keys to the delivery of the lifelong learning agenda and the vision for the service" (Siddall 2000, 9)

and is seen as one of the most vital areas of development for Sheffield Libraries. There are hopes to fund an ICT infrastructure through the People's Network and corporate funding (Siddall 2000). Unfortunately the Mobile Library Service does not, as yet, qualify for the former outright, though once an authority has connected all of its static libraries to the People's Network any additional funding can be used for mobile provision (DCMS 2001b[28]). In Sheffield, however, Senior Management stated that there are static libraries that have not yet been

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[28] For a full discussion of this matter please see section 3.8.2.

connected, therefore it could be concluded that this NOF funding is currently unavailable for mobile services.

"The focus of ICT development in the Libraries service has been concentrated on the effective running of the service" (Siddall 2000, 62).

To this end the static libraries are all connected to the DYNIX library management system, however, the mobile library vehicles are not connected to this system although access is available at headquarters. Sheffield Libraries, Archives and Information, however, believe that the Mobile Library Service is a core service, and see the potential for the development of DYNIX in this area (Siddall 2000).

4.1.2   Sheffield Mobile Libraries and ICT

Sheffield mobile libraries are planning to introduce DYNIX onto the vehicles during 2001. This resource is considered essential because it will facilitate access to the library catalogue as well as borrower records. The issue system currently employed on the vehicles is Browne issue, a manual card system, for which users need a separate card to that which they would use in a Sheffield static library. DYNIX will be accessed via mobile phone connections using GSM spoofing technology[29]. The introduction of DYNIX has been planned for a long time but it was necessary to wait until the right technology had been developed.

Senior Management, both within mobile services and across the service, see ICT as important for the Mobile Library Service, because it will bring the department's capabilities more in line with the rest of the service, enabling equity of service provision across the Sheffield Library service. The introduction of the DYNIX system will, according to Senior Management, allow for future development of additional ICT facilities, with Internet access being most desirable.

The funding for the laptops and cabling is coming from the library service DYNIX budget which funds these items or equivalent in the static libraries however full funding has yet to be found. New Opportunities Funding (NOF) is not yet available for the mobile library service in Sheffield, therefore the introduction of Internet and CD-ROM facilities depends on

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[29] For more on this technology please see Section 3.8.1.

money which is not accessible at present. If possible Senior Management would like to have Internet and CD-ROM access on all of the mobile library vehicles but are not agreed on whether a separate ICT vehicle is an option.

4.2   Derbyshire County Council Libraries and Heritage

Derbyshire Libraries serve an area of 985 square miles with a population of 737,700 and state in their *Annual Library Plan* that:

"Mobile services [are] of particular importance to the area" (Derbyshire County Council Libraries & Heritage 2000a, 5).

The mobile library service has a central co-ordination centre at Matlock but the vehicles operate from bases around the county and stock is specific to that particular mobile group (Derbyshire County Council Libraries & Heritage 2000a). The current fleet consists of 13 mobile library vehicles and two reserve vehicles. Of these, three are Maximum Capacity Vehicles (MCVs) which spend a whole or half-day at communities with a population of 1500 or above. The 10 standard vehicles provide stops of less duration but of greater number and the timetable is altered regularly in line with user requirements (Derbyshire County Council Libraries & Heritage 2000a). In total these vehicles cover 1800 stops. The mobile library vehicles stock books, spoken word cassettes and in some cases videos. The MCVs carry 4,500 items and could be compared to small branch libraries according to Senior Management. To illustrate this point about 20% of library business is done on the mobile libraries. The aim of the service is to provide a service accessible to users within rural and urban communities, which meets and is responsive to their needs. According to the *Annual Library Plan*,

"Mobile libraries have a crucial role … and are used as gateways to the whole library service, providing indirect access to many other services available elsewhere in the county" (Derbyshire County Council Libraries & Heritage 2000a, 13).

4.2.1 Derbyshire Libraries and ICT

Derbyshire County Council has developed the DELTA[30] service with the aid of the DCMS/Wolfson Public Libraries Challenge Fund. Derbyshire is the only authority to win three consecutive awards from the challenge fund for the same project, due to the different nature of each bid. The final award was used to develop the DELTA service for use on the MCVs (DCMS 2000c). When Chris Smith, the then Secretary of State for Culture, Media and Sport launched DELTA, in 1998, he described it as

"One of the most imaginative and innovative projects of its kind which he had seen" (Gent 1998 http://www.earl.org.uk:80/publications/newsletters/news10/derbyshire.html).

There is now a network of over 80 public access computers in 24 static libraries and the three mobile libraries (Gent 2000). Through the DELTA service users can access the Internet, networked CD-ROMs, Open learning computing facilities and multi-media material as well as video conferencing and specialist software for people with visual impairments (Gent 2000).

"The [DELTA] service is designed to promote lifelong learning and social inclusion, bring information, learning materials and new technology to people who would not otherwise have easy access" (Gent 2000, 5).

The network extends from Glossop to Swadlincote, which is a distance of over 70 miles. The service is free except for a £1.50 charge for Internet access, however there are concessions for the under 11's, people who receive income support and those of retirement age (Gent 2000).

4.2.2 ICT on the Maximum Capacity Vehicles

In 2000 the DELTA service was extended to the three MCVs in order to extend the service to 21 isolated and disadvantaged communities, mostly rural (Gent 2000). This has required the development of cutting edge networking technology. The solution has been to install an ISDN line permanently in a community building close to the mobile library stop. Attached to this ISDN line is a transceiver. Another transceiver is attached to the computer in the vehicle. These transceivers allow the computer to connect to the ISDN line without staff intervention. The use of community buildings has lead to good partnerships being formed

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[30] Derbyshire Learning and Technology Access.

within those communities as none of the buildings used are County Council property and lines have been placed in shops and private homes. It costs no more to run the DELTA system on the MCVs than in the branch libraries according to figures provided by Senior Management.

There is one terminal on each MCV presently, and as Internet usage on the vehicles has been quite slow there have been no conflicts between people wishing to view the catalogue whilst someone else is using the facility. More terminals for each vehicle will be accommodated when new vehicles are constructed.

Senior Management sees Internet access and personal computing as being essential for the MCVs but there are no plans to make these facilities available on the standard vehicles. This is because the process of connecting all of the stops provided by these vehicles is not feasible both in terms of technology and finance. An online library management system, like that being planned in Sheffield, is also currently unfeasible. Both the standard mobiles and the MCVs run the manual Browne issue system. Plans are in place to implement offline catalogue and circulation on mobile library vehicles by September 2003. It is hoped that this will improve access to information about network resources (Derbyshire County Council 2000b).

4.3   The Sample

The results were collected from management, staff (both from mobile library services and also from other areas of the library service) and users of the mobile library service in the two authorities. The staff were interviewed whilst on the vehicle or at headquarters. The users were interviewed whilst using the service on selected routes and the majority of users approached agreed to participate. The routes surveyed were chosen in order to provide a varied and comprehensive picture of the service which each authority provides and three days were spent in each authority. The stops that each authority provides can be characterised as being urban or rural though the distinction between the two is often difficult to determine. The other characteristics focused on are stops over one hour and out of hours stops where people normally at school or work have access to the service. It was felt that the users at each of these different stops may have differing opinions and these distinctions were made to enable easier analysis of the data.

It should be kept in mind that as ICT is only available on the MCVs, much of the data collected from both authorities was speculative in nature, based on what staff thought might would happen when ICT was implemented or what users would require on the vehicles in the future.

4.3.1   The sample in Sheffield

The three Sheffield routes encompassed 23 stops of which 17 had users willing to participate in the survey. A total of 50 responses were collected.

4.3.2   The sample in Derbyshire

As Derbyshire Mobile Library Service is decentralised the routes available for sampling were limited, both by time and location. Two days were spent on standard mobile routes with the third being spent on one of the MCVs. Over the three days 27 stops were visited of which 20 had users prepared to complete the questionnaire. In total there were 45 respondents from Derbyshire.

5 ICT IN RELATION TO THE PROVISION OF THE MOBILE LIBRARY SERVICE IN THE CASE STUDY AUTHORITIES

This section focuses on the results from the data gathered on the issue of whether ICT has had an effect, or will have an effect on the way in which the mobile library service is provided. The relevant literature, which, in part, suggested the themes for this section, is outlined below. Much of the focus of this part of the study, however, was decided upon through preliminary interviews with Senior Management in both case study authorities.

The technological ways in which each authority is providing or plans to provide ICT on their mobile vehicles is outlined in Section 4. In brief, Sheffield is planning to implement an online library management system (DYNIX) and Derbyshire has DELTA, which allows access to the Internet and the library catalogue amongst other facilities, on the MCVs. Offline circulation is currently being discussed for the standard Derbyshire vehicles.

5.1 The Importance of ICT for Mobile Library Service Provision

Senior Management in both authorities were asked to outline why they believed that ICT was important for the provision of their respective services. The view of the Government, more fully outlined in section 1.4, is that ICT is important for Lifelong learning and social inclusion. They have chosen to facilitate ICT provision in public libraries as a way of fulfilling these policies (DCMS 2000a). Senior Management in both authorities focus more on the ways in which ICT can aid service provision, as well as allow access to users. Comments from Sheffield and Derbyshire include:

> *"The mobile library is the provision of the library service within a given community. ICT is a way of providing this service and responding to user needs"* (Senior Management – Derbyshire).

> *"ICT will make the service more efficient and reduce mistakes"* (Senior Management – Sheffield).

> *"ICT will bring the mobile library service up to speed with the rest of the service and allow equity"* (Senior Management – Sheffield).

5.1.1 Bringing Mobile Libraries up to Speed

That latter view is one shared by library staff in both authorities, whether they work for mobile services or not. It was also a view that was stated by authorities responding to the nationwide survey:

"We … feel excluded. We may as well be on another planet" (Metropolitan Authority I).

In both case study authorities mobile services currently issue books using the manual Browne system. Sheffield are hoping to be able to provide online circulation by the end of the year and Derbyshire are looking into providing offline circulation on all of their vehicles. This current lack of circulation ICT, which is present in the branch libraries, was the cause of much comment. The following are a selection of views:

"Why should the mobiles be Browne issue when the rest of the service if offline or online. Mobiles are part of the library service" (Librarian – Derbyshire)

"The mobile library service is a second class service because there is no access to the stock in the static libraries" (Senior Management – Sheffield).

"It will be brilliant to have online issue and discharge because it will ease the feeling of being left behind" (Library & Information Assistant – Sheffield).

"The mobile library service should have had ICT five years ago so that borrowers can get the same service as elsewhere in Sheffield" (Library & Information Assistant – Sheffield).

It was clear from the responses given that staff felt that ICT would enable the mobile library to gain a semblance of equity of service with the branch libraries. Whilst the Government's social inclusion policy involves access to the Internet and other resources, the ability to provide an equal service to the users of the mobile library service, through computerised circulation and access to the library catalogue, could also be seen as combating social exclusion.

5.2　The Literature

The issues suggested by the literature include the increase in efficiency of using ICT for service provision and the increase in the range of services offered to users.

The issue of increased efficiency of service provision stems mainly from the use of library management systems, which allow staff time to be used more productively because most routine tasks are covered by the ICT (Batt 1993). Comments made by mobile librarians in America supplement this theory[31]. One librarian in Virginia compares the length of time it took to issue and discharge items as compared to the speed with which computerised circulation allows staff to do the same tasks. The control of stock is a point made by a librarian from Georgia, who states that whilst the offline issue "is little better than the manual system used previously" there is one exception, which is the update of the bibliographic database every night. This is beneficial for the mobile and branch libraries.

Aligned with the issue of efficiency is that of ease of provision. Librarians report that the use of a computerised issue system has allowed for a more comprehensive reservation system. For instance, one librarian from Seattle states that "it has revolutionised the way we do business!!". The mobile library has the ability to connect to the library mainframe and this allows staff to inform users about reservations immediately instead of waiting until the next visit. This also cuts down on paperwork for the staff.

Cost effectiveness was also an issue that became apparent through the discussion list responses. A librarian in Seattle stated that "we are losing fewer materials because we have a handle on who has what". Not only is computerised stock control more efficient (see above) but with this sort of control less money is needed to replace lost or stolen stock.

There is a wider range of literature available concerning the increased range of services that can be provided to users through the utilisation of ICT. As Batt (1993, 1) states:

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[31] Comments provided through e-mails sent to the discussion list BKMOB-L, managed by Clarion University.

"even the majority of librarians would agree that IT allows the provision of a greater amount of services".

Batt (1993) goes on to point out that library management systems do not greatly increase the range of services provided to the user directly. However, the improvement in the reservation system has been outlined above and users also benefit from the increased efficiency of the service.

The Government has outlined its concerns about the increasing use of ICT in public libraries perhaps impinging on the traditional service provided.

 "The challenge for the library sector is to ensure that the development of information technology in libraries broadens library services and does not take place at the expense of the book" (DCMS 2000a, para. 105).

This suggests that whilst promoting the People's Network as essential, the Government sees it as a supplement to the services which the public library provides, not as a replacement. It is acknowledged however that ICT can increase the range of services provided by the library services. Mobile librarians in Australia felt that online access to applications such as the Internet and CD-ROMs was needed to help improve the quality of the service that they provide (Kenneally 1999).

Hyman (1999) states that the use of ICT on bookmobiles in other countries has already had an effect on the range of services offered. Information provided by librarians through the BKMOB-L discussion list shows that bookmobiles are providing added services such as CD-ROM encyclopedias for basic reference (Georgia and Iowa mobile library services). The mobile library in Seattle uses the Internet for reference queries.

Some commentators have cast doubts on whether ICT provision is required by users. This issue has already been discussed in section 3.8.4, but a brief summary is included here. Carpenter and Trohopoulos (1997) suggest that the current users of the mobile service, mainly the elderly and housebound, will not benefit from and therefore not require facilities such as the Internet and CD-ROMs. However, Chris Batt believes that people of retirement age are

interested in learning about this new technology (in DCMS 2000a[32]). Berry (cited in Hyman 1999) believes that mobile provision should reflect community need and that ICT provision is required.

5.3   ICT, Efficiency and Ease of Service Provision

Senior Management and staff were asked to describe their views on whether ICT had helped efficiency and ease of provision. In Sheffield, due to the planned ICT provision, these questions were directed as the possible outcomes. In Derbyshire, on the standard mobile libraries, the questions were asked in the same way, whereas on the MCV staff were asked what had actually happened since the DELTA system was introduced.

The proposed ICT facilities in Sheffield will allow users to use the electronic cards, which are issued in Sheffield branch libraries, on the mobile library vehicle. Senior Management felt that this would improve the ease of provision of the service, as users would not have to use two different cards and staff would be able to access borrower records from across the system. Comments included:

> *"ICT will make the service more efficient as it will reduce the mistakes from the old-fashioned card issue system"* (Senior Management – Sheffield).

> *"It could be see as a virtually new service … with untold efficiency improvements"* (Senior Management – Sheffield).

An alternative view suggested that the introduction of ICT to the mobile library service would lead to initial problems which would not make provision of the service easier.

> *"Mental hurdles of getting over IT"* (Senior Management – Sheffield).

The implication however is that once these hurdles have been cleared the potential is great.

Staff in Sheffield felt that the use of ICT would make reservations and stock enquiries easier to answer.

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[32] This statement was taken from evidence submitted by Chris Batt for the DCMS (2000) *Sixth Report.*

"ICT will provide a better way of finding things" (Library & Information Assistant – Sheffield).

This view was widespread amongst the staff and appeared to be the service that they were most enthusiastic about being able to supply.

"The vast improvement will come with the better provision of a reservation service. At the moment users have to wait a week or month" (Driver Assistant –Sheffield).

Staff did however reiterate the problems of the use of technology.

"The potential difficulties of the dependence on mobile phones for computer connections is a particular concern" (Library & Information Assistant – Sheffield).

Responses to this question also highlighted the desire of the staff to utilise ICT to provide an equitable service to that of a static service point:

"Service provision will be easier because the mobile library will come in-line with other service points therefore staff will be able to provide instant information" (Library & Information Assistant – Sheffield).

There was very little contrast in the views of the Derbyshire staff and Senior Management. Comments from staff on the standard vehicles include:

"ICT should make the job easier" (Library & Information Assistant – Derbyshire).

"requests online mean that there has been a reduction in the need for paper and the whole process is less longwinded. Users used to have to wait for ages" (Senior Management – Derbyshire).

"ICT will make some administration duties easier" (Librarian – Derbyshire).

The responses also showed similar concerns to those expressed by the staff from Sheffield.

"Computer issuing is great if it will work. If it doesn't work the reliance on back-up will make the job more difficult" (Driver Assistant – Derbyshire).

The views of the staff and management from Sheffield and Derbyshire seem to echo the comments of the librarians in America in that ICT will make the service easier and more efficient to deliver.

5.4 Perspectives on ICT and the Range of Services Provided by the Mobile Library

This section examines the views of staff and users on the range of services that are provided by a mobile library and whether ICT will have, or has had, an effect.

"ICT will enable a better range of services to be accessed ... user will be able to access more than just what is on the shelf" (Senior Management – Sheffield).

Senior Management in Sheffield also felt that ICT would lead to more flexible use of the vehicles.

"ICT can be taken to people with learning disabilities".

Future considerations were also discussed, suggesting that Sheffield had taken the time to reflect on what they wanted the service to deliver over time.

"The introduction of the library management system provides the opportunity to go further and create a gateway to the Internet" (Senior Management – Sheffield).

This view of Senior Management was supported by staff who commented that:

"As the mobile library is limited to providing information from pamphlets then the Internet would be an improvement" (Driver Assistant – Sheffield)

"There is a great potential for use of the Internet to answer queries in isolated areas" (Library & Information Assistant – Sheffield).

Senior Management from Derbyshire focused on the range of services that can be provided on the MCVs.

"Much wider access to different types of information because of the facilities available through DELTA".

These include networked CD-ROMS, Internet access and word processing applications. Despite this, all the staff interviewed in Derbyshire seemed most enthusiastic about the more efficient reservation facility that could be provided.

One concern of the Derbyshire staff on the standard vehicles, was the effect of stop duration.

> *"Time is a big problem...answering a query could make us late to the next stops"* (Library Assistant – Derbyshire).

This is obviously not a problem on the MCVs. The views of users on this matter are outlined in more detail below. Overall, staff seemed enthusiastic about the potential uses of the Internet to provide a greater range of services.

Users, on the other hand, were not so enthusiastic about the presence of ICT on the vehicles. Of the 95 users surveyed, 40 respondents (42%) stated that none of the facilities listed in Figure 15. (see page 76) would be of use to themselves or other people. This is in stark contrast to the number of respondents (79%) who, in answer to a later question, stated that the provision of ICT by public libraries (both static and mobile) was **very important** or **quite important**. This 79% total was made up of 92% of the Sheffield users and 86% of the Derbyshire users who have alternative ICT access. This suggests that those who have ICT facilities at home, work, or school appreciate the benefits it has bought them. The results also suggest other reasons for these user opinions.

> *"ICT provision is quite important but not on a mobile"* (User of an urban stop – Derbyshire).

This statement is telling, in that user appears to believe that the mobile library should not provide the same services as the branch libraries. This could be due to people's perception of the service or because people are happy with the service the way it is.

It should be noted that users were only asked about end-user ICT facilities that would add to the range of services, not facilities such as online circulation. As this question was not specifically about mobile libraries, the remainder of the figures and a discussion of the responses are included as Appendix C.

There is a wide disparity between the number of users in Derbyshire (64%), as compared to Sheffield (22%), who felt that none of the suggested facilities was useful. Space could be a factor with the standard Derbyshire vans, from which 90% of these responses were collected, being smaller than those of Sheffield. Another reason could be that a greater

proportion of users from stops of 30 minutes and under were surveyed in Derbyshire than in Sheffield. Some users, from both authorities, did state that stop duration was their reason for believing that none of the facilities would be useful. Many others, from stops of short duration, may have felt the same yet not stated this explicitly. The other classifications of stop - rural, urban or out of hours - do not appear to have had an effect. User and staff perspectives on these two factors, length of stop and space, are outlined as follows.

5.4.1 Stop Duration

This constraint was also an important one to the respondents in the nationwide survey. Mobile staff, in the case study areas, are also concerned, especially about the limit this could have on the range of services provided through ICT.

"ICT would have to be limited to certain areas of Sheffield because of the number of stops which have to be completed" (Senior Management – Sheffield).

"This could lead to a change in working practices....longer stops may be needed" (Library & Information Assistant – Sheffield).

Users agreed that present stop durations were not adequate for accessing ICT facilities:

"Stops of 10 or 15 minutes mean that ICT would have limited use" (User of an urban stop – Derbyshire).

"ICT … is not very important for mobile libraries … especially due to the length of stop" (User of an urban stop – Derbyshire).

Senior Management in Sheffield outlined how routes would need to be reconsidered if the Internet was ever offered as a service on the vehicle but indicated that they would be prepared to consider this. Derbyshire, on the other hand, see stop duration as a very major constraint to putting user-based ICT services onto their standard mobiles.

5.4.2 Space

The users seemed concerned about the amount of space that ICT would take up on the vehicle, either through the equipment itself or the queues that could form through its popularity.

"I'm not sure about providing computers on the mobile because of the space needed" (User of an urban stop – Sheffield).

"Internet access will lead to queuing and there is not enough space on the mobile vehicle" (User of an urban stop – Sheffield).

"When the kids are on-board the vehicle is full. With ICT as well it would be bedlam" (User of an urban stop – Derbyshire).

The following comment also outlines staff concerns over space:

"There is not enough space therefore queues might stretch and could create health and safety issues" (Library & Information Assistant – Sheffield).

Senior Management in Derbyshire was aware of how the space needed for even a laptop computer could affect the amount of book stock available for users.

"Room would have to be found for laptops without reducing the space for books" (Senior Management –Derbyshire).

5.4.3   Books v ICT

Whilst staff see ICT as a means of supplementing the book stock which they offer, they are also aware, as the previous statement shows, that the range of services which could be provided through ICT should not supplant the importance of the book stock.   This mirrors the concerns and recommendations of the Government (2000a).

The issue of ICT versus books, which many users see as being a real threat, may have accounted for the high proportion of respondents with no desire to see ICT provided on the mobile library (see Figure 15. below). Not only is the amount of space available an issue to users but they are also worried that funding will be diverted from books.

"There is a belief that ICT will mean no books" (Library & Information Assistant – Sheffield).

"I would prefer the money to be spent on books. I'm not being old fashioned but books do have some advantages" (User of an urban stop –Sheffield).

"Computers do not provide anything unavailable in books ... I would rather use Inter Library Loans" (User of an urban stop – Sheffield).

Staff had other concerns about the addition of the mobile library stock to the online library catalogue in Sheffield.

> *"One negative effect of computerised stock rotation may be that mobile stock may become general stock of the library. The mobile serves specific clientele therefore it needs a specific stock"* (Driver Assistant – Sheffield).

This latter point is a very important one and perhaps a reason why mobile services are so varied in the types of ICT facility which are provided across the country. The mobile library clientele is very specific and this is, in part, why it is important to gauge their views on those ICT facilities that could be provided for their use, rather than those that will help staff in their work. The Branch and Mobile Libraries Group (Library Association 1997) state that the specific clientele need to be taken into account when planning which services to provide.

5.4.4   User Views of New Technology

The technological difficulties which staff were concerned about were discussed above but users indicated that they are also wary of the new technology. A number of those who indicated in the survey that certain ICT facilities would be useful stated that this would be for other people instead of themselves. Comments from these respondents and those that felt that none of the facilities would be useful are as follows.

> *"I don't understand computers"* (User of a rural stop – Sheffield)

> *"I can't see how I would use the computer facilities"* (User of an urban stop – Sheffield).

> *"The estate is an elderly one therefore these facilities are not useful"* (User of an urban stop – Derbyshire).

From the responses collected, the majority of users on the mobile library service appear to be of retirement age and whilst a number of these felt that computers would not be useful this view was not limited to users of this particular age group.

5.4.5   The Types of ICT Required by Staff and Users

Senior Management in both authorities were asked to indicate which types of ICT they felt were most essential to provide or utilise on the mobile library. Their responses were as follows:

> *"The DYNIX management system is the number one priority. Internet access is desirable but not essential at the moment"* (Senior Management –Sheffield).

"The catalogue is an essential improvement for staff" (Senior Management –Derbyshire).

"Internet Access is essential … web browsers are the key to everything" (Senior Management – Derbyshire).

"Personal Computing is also vital" (Senior Management – Derbyshire).

Users were asked to indicate which ICT facilities they would find useful for themselves, or others, on the mobile library from a list offered to them (see Figure 15).   The list was based on the types of ICT being offered on mobile vehicles such as the MCV in Derbyshire. For each category, apart from the one indicating that none of the facilities would be useful, the number of Derbyshire users was considerably less than the number of Sheffield users. This is due to the larger number of Derbyshire users stating **none of the above,** the possible reasons for which are outlined above.

ICT Facility	No. of Sheffield users	No. of Derbyshire users	Total
CD-ROM	13	5	18
Online Catalogue	34	13	47
PC	12	5	17
Internet	23	8	31
E-mail	16	5	21
None of the Above	11	29	40

Figure 15. The facilities which users would find useful to have on the mobile vehicle in each authority.

The table shows that the majority of Sheffield users agree with Senior Management in the fact that DYNIX is an essential facility. For the users DYNIX access would mean that they, or the staff, would have access to the online catalogue.

"The online catalogue will make it easier to order things" (User of a rural stop – Sheffield).

"I often think of things I would like and then forget…the online catalogue would be useful" (User of a rural stop – Sheffield).

"Availability of the online catalogue is especially important" (User of an urban stop – Sheffield).

Derbyshire users also felt that the online catalogue was the most useful facility to have on the vehicle. This also mirrors the views of Senior Management, as Derbyshire's online catalogue is accessed on the MCVs through an Internet connection. Comments included:

"It will be nice to be able to see what is available ... I sometimes think I have read everything on the mobile" (User of an urban stop – Derbyshire).

"I could request items myself instead of having to put requests to the staff" (User of an urban stop – Derbyshire).

These opinions were mirrored in a consultation undertaken by County Authority E which found that access to the catalogue was desirable.

Fewer users felt that Internet access would be useful to themselves, or other people, on the mobile library, though it was still relatively popular. The comments below show a positive and negative view of Internet access.

"The Internet would be useful because I do not have access elsewhere" (User of an urban stop – Sheffield).

"The Internet would just be used as a toy" (User of an urban stop –Sheffield).

The number of users who felt that CD-ROM, e-mail or open learning access was important for the mobile library to provide was of a lower proportion. This could be explained by the fact that users have these facilities at home, whereas, in Sheffield especially, the catalogue is only available at a service point indicating why this facility was seen as required. Also these are the facilities that would perhaps require a longer period of time to be fully utilised and again the constraint of stop duration is pertinent.

"The mobile library does not stop long enough for people to utilise these facilities" (User of an urban stop – Derbyshire).

Other users who felt that the provision of all of the listed facilities on the mobile library was important counteracted this view. The majority of respondents with this view either had no access themselves or were thinking of users who may not have this access.

"The provision of computer facilities ... is vital for anybody who hasn't got access to these facilities" (User of an urban stop – Sheffield).

"The online catalogue, PCs, Internet and e-mail are useful for other people because they are necessary to combat social exclusion" (User of an urban stop – Sheffield).

This latter view compares nicely to those of Senior Management when asked why ICT was essential to the service. By using ICT to provide equity of service with the branch libraries mobiles are attempting to combat the second class service currently provided to those excluded through geography or disability. It also suggests that some users view the mobile library service as a means of combating social exclusion through the provision of Internet access.

Amongst the users there was also a general consensus that these facilities were vital for young people.

"Provision of computer facilities ... is very important for younger people" (User of an urban stop – Sheffield).

"Very important ... for the young ... it is part of their lives and a worldwide thing" (User of an urban stop – Derbyshire).

5.4.6   Are Users Requesting ICT for their Mobile Library?

Mobile library staff were asked whether users were requesting ICT facilities in order to ascertain whether users required ICT provision on the mobile vehicles. This gives a slightly different view to the results outlined above as in this case users would have been asking of their own free will instead of having the idea suggested to them by the researcher.

Replies to a message sent to the BKMOB-L discussion list suggested that in some American states, for example Georgia, users had requested access to the online catalogue and reference databases but not to the Internet. In other states, however, that had not been the case. One librarian from Virginia stated that "our customers have not requested Internet or CD-ROM access". This suggests that, in America at least, users are not requesting ICT provision on a large scale.

In Sheffield requests have stemmed from the long-standing plans to change to a computerised system on the mobile vehicles. Users were issued with cards similar to those used

at the branch libraries but have been unable to use them so far. Therefore users continue to ask for updates about the availability of the new system. Staff comments included:

"Occasionally there have been questions about a computerised system. Most users don't see the mobile library potential" (Library & Information Assistant – Sheffield).

"Whilst the users did not request computerised issue originally they are now asking because they were given the plastic tickets" (Library & Information Assistant – Sheffield).

On the issue of whether users were requesting other forms of ICT comments collected from the staff of Sheffield were as follows:

"There have been no requests for ICT access as the service is mainly used by children or the elderly" (Driver Assistant – Sheffield).

"People do not realise what is available at branch libraries because the mobile is their sole contact" (Library & Information Assistant – Sheffield).

This suggests that some users do not realise that they are possibly being provided with an inequitable service and therefore do not ask for added services, through ignorance rather than lack of desire.

The lack of requests from Derbyshire users suggests that this problem is not just confined to Sheffield. Even on the MCVs, which are comparable to small branch libraries, users were not requesting the ICT that was eventually supplied. This supports the evidence from America that users are not requesting ICT facilities in any great amount.

5.5   ICT and Cost Effectiveness

One of the main ways in which ICT will make the provision of mobile library services more efficient is in the saving of staff time.

"It will make a great deal of difference … save on bringing a query back to HQ" (Senior Management – Sheffield).

Other Managers focused on other benefits of ICT.

"ICT has benefits for the collection of management statistics".

Currently, in Sheffield, borrower figures are logged using pen and paper. Senior Management also reiterated the use of an online circulation system to aid stock control.

> *"Less money will need to be spent on replacing lost and stolen stock"*.

The saving of staff time was also an important factor, according to Senior Management in Derbyshire, whose views corresponded closely with those from Sheffield. The issue of cost effectiveness was one on which mobile library staff in both authorities felt unable to comment.

5.6   A Changing Role for Mobile Library Staff?

Management and staff, in both authorities, were asked whether they felt the role of staff would, or had changed with the emergence of ICT on the mobile vehicles and what their reaction had been. Comments included:

> *"At the start some staff were unhappy but this has changed to deep frustration"* (Senior Management – Sheffield).

This frustration is widespread through Sheffield Mobile Services, as DYNIX has been planned for many years without results.

> *"The mobile library should have had ICT five years ago"* (Library & Information Assistant – Sheffield).

However, Senior Management have taken into account the fact that staff would be wary of the technology and therefore have ensured that some exposure to the relevant technology has already occurred:

> *"DYNIX terminals were slowly introduced into the office therefore staff have been able to overcome any fears"* (Senior Management –Sheffield).

The enthusiasm about the change that would be brought about by the implementation of ICT was evident in the responses of the majority of staff from Sheffield.

"Though book knowledge will still be there, there will be computerised back-up" (Library & Information Assistant – Sheffield).

"My role will change through training for Driver Assistants. I will be able to answer more enquiries" (Driver Assistant –Sheffield).

This view was not supported by all of the Driver Assistants in Sheffield.

"My role will not change very much as only one keyboard will be provided" (Driver Assistant – Sheffield).

In Derbyshire staff were less sure that their roles would, or had changed. In both authorities staff and Senior Management outlined one of the major causes of the change.

"Staff have had to learn new skills and new attitudes" (Senior Management – Derbyshire).

5.6.1   Staff Training

Again, this question was asked of authorities through the nationwide survey but the case studies allow an examination of the views of the staff who are to undertake this training.

In Sheffield, Senior Management outlined how three of the mobile library staff are being fully trained in order to provide a first access point for advice concerning software and hardware problems. Staff need training on how to connect the laptop and use DYNIX but at the moment time is taken up by NOF training which does not cover these issues.

Staff seemed quite enthusiastic about training, especially the majority of Driver Assistants in Sheffield, who felt that

"my role will change from purely issuing books to more enquiry work" (Driver Assistant – Sheffield).

Other respondents felt that they were being left behind as far as the NOF training was concerned. It was also apparent from the interviews that staff will probably feel much more comfortable with the technology on the mobile vehicle when it has been fully explained to them and training has been given.

In Derbyshire, MCV staff were given training and on-hand help. All the mobile library staff are being NOF trained but many have not been as yet. The staff did not comment specifically on the training they would be undertaking.

Staff training in ICT is an issue that needs to be addressed. Funding is provided for NOF training but not for training in other facilities such as DYNIX. The NOF training also seemed to be taking up a lot of staff time and the majority seemed wary of undertaking it through lack of prior ICT knowledge.

5.7   Summary

The main issues, arising from the responses of management, staff and users in both case study authorities, with regards to ICT and service provision are as follows:

- The two authorities have approached the use of ICT for service provision from different angles.
- Both authorities believe that ICT can be used to bridge the divide between mobile services and static service points.
- Management and staff in both authorities believe that ICT could aid efficiency, make service provision easier and increase the range of services offered.
- However, both staff and users were aware of the constraints which space and stop duration could place on the implementation of various ICT facilities.
- Staff were most enthusiastic about the improvement to the reservation system.
- 42% of users would not find ICT useful. More users in Derbyshire were of this opinion than users in Sheffield.
- Services provided through the online library management system and Internet are seen as the most essential and useful services by Management and users.
- Staff in Sheffield are enthusiastic about their changing role. Staff on the MCVs in Derbyshire feel that their role had not changed considerably.
- Mobile library staff have not been excluded from NOF training. The provision of specific training for the facilities being provided on the vehicles will alleviate worries about the technology.

6 THE POSSIBLE IMPACT OF ICT ON THE USE OF MOBILE LIBRARY SERVICES IN THE CASE STUDY AUTHORITIES

This section examines the results of the survey and interviews with regards to objective three. This focused on the issue of whether use of the service will, or has been affected by the utilisation of ICT.

There is only a small amount of relevant literature on this particular subject, mainly because the provision of ICT on mobile libraries is a relatively new phenomenon. A comparative survey, to the one carried out for this study, of users and staff with regards to mobile library use has not been conducted.

6.1 The Literature

The fact that users may not require ICT facilities on the mobile vehicle is documented in the literature and has been discussed in relation to provision of the service (see section 5.4.6 above). Carpenter and Trohopoulos' (1997) suggest that users will not utilise the services provided. Batt (in DCMS 2000a) on the other hand suggests that the mobile library's usual clientele will require the facilities.

Examples of users utilising ICT facilities on mobile vehicles are scant but there is evidence, from Somerset, that use varies according to the length of stop. At stops of over an hour the Internet is used, at 10 minute stops there is only time for the catalogue to be checked (Cawthorne 2000). Users are also documented as using Walsall's dedicated ICT vehicle with Stringer (2000a, 6) reporting that "it is being used by residents of the target areas". People are using the Internet to find employment and information. However, this case is different in that tutors are available on-board.

6.2   ICT and Borrower Numbers

The literature gave no indication of whether the presence or lack of ICT on a vehicle would have an effect on borrower numbers but Senior Management in Sheffield suggested that this might be a possibility. In order to investigate this further, mobile library staff were asked for their opinion and the following are a selection of their responses. There was an overall consensus that borrower numbers had dropped over the last few years:

> "*The reduction of borrowers numbers is due to people having more things to do and becoming less interested in reading*" (Library & Information Assistant – Derbyshire).

> "*The presence of ICT has had no effect on the borrower numbers*" (Library & Information Assistant – Derbyshire).

> "*Borrower numbers have dropped off but it is more dependent on the area than on whether there is ICT provision or not*" (Driver Assistant – Sheffield).

> "*Whether the drop in numbers has been due to the lack of ICT on board the vehicle cannot be proved*" (Library & Information Assistant – Sheffield).

> "*Mobile user numbers may have fallen because of the inability to use the computerised cards*" (Driver Assistant – Sheffield).

This latter point suggests that users have become disillusioned with the mobile library in Sheffield for not providing this service sooner. However, as the majority of the staff stated, there has been a drop in borrower numbers across the service therefore the lack of this computerised system may not be to blame.

6.3   Are Users Utilising the ICT Provided

The MCV at North Wingfield is connected to the DELTA system and allowed some surveying and observation to be carried out into whether the ICT facilities provided are used by the library patrons.

Of the 10 people surveyed at the site, only three stated that they used the system. These three were male and under 16 and had been using the Internet. One stated that once school started he would use the word processing packages available to do his homework. All three of these users had access to computer facilities at school and at home. This suggests that they may use the library facilities as a cheaper option than home access whilst school is closed. It also

supports the view that people with alternative ICT access are more likely to see the benefit of public library access.

Whilst on the vehicle no other member of the public was observed using the system. Staff stated that the facilities "were an underused resource", with use at other stops also being low.

Staff were asked whether users were aware of the ICT on the MCVs. The laptop is in full view of users though many may feel it is not for their use. Leaflets on board the vehicle outline the DELTA system and its facilities (see Appendix D) but users still seem to be unaware. Comments included:

> *"some users are and some users aren't aware of the ICT"* (Driver Assistant – Derbyshire).

> *"users are aware that the computer is for them but majority do not like computers"* (Library & Information Assistant – Derbyshire).

This suggests that the lack of use is possibly due more to user attitudes about computers and technology, than a lack of publicity.

6.4   Profile of Potential Users and Non-Users

By using the data collected it is possible to create a profile of potential users by isolating those who felt that any of the facilities listed in Figure 15 would be useful to themselves from those who felt that they would not (43% of the respondents), as the latter were unlikely to be future users of any ICT facilities provided. It is possible that this latter viewpoint would change once presented with the facilities however. As the sample number surveyed in each authority was so small, compared to the number of users these two authorities serve every week, this profile will be very tentative. It must also be kept in mind that due to the number of Derbyshire users who felt that none of the facilities would be useful, possibly due to an over concentration of users surveyed at shorter stops, the profile for this authority may have been distorted. Therefore it is likely to be even more tentative. Profiles have been created for age, gender, availability of other library resources and the type of stop visited. Each of the tables shows the number of potential ICT users, followed by the total number of users surveyed in that category. Percentages are shown in brackets.

6.4.1 Age

Harvey (1999) found, through a survey of six Derbyshire libraries, that the highest level of DELTA use was in the 15-19 age bracket. This is supported by research from the London School of Economics (in the Library Association Record 1999) that found that teenagers preferred non-print material. Harvey went on to state that "one of DELTA's aims is to broaden the appeal of library services to young people".

Age Category	No. of potential users in Sheffield of each age group (% in brackets)		No. of potential users in Derbyshire of each age group (% in brackets)	
Under 16	5/5	(100)	4/5	(80)
16-25	0/1	(0)	n/a*	
26-35	3/4	(75)	n/a*	
36-45	7/8	(88)	4/5	(80)
46-55	5/6	(83)	1/4	(25)
56-65	6/8	(75)	2/6	(25)
Over 65	10/18	(56)	19/23	(17)

Figure 16. The number of potential users from each age category.

* no respondents were questioned from this age category.

Figure 16 shows that in Sheffield, in all age categories apart from one (16-25), users were more likely to use the ICT than not. For the category with the highest number of responses (Over 65) users were evenly split on this issue with only 56% as potential users.

In Derbyshire also the Under 16's and 36-45s are the most likely to be potential users but as age increases users are less likely to be users. Those in the Over 65 category seem more decided, than their peers in Sheffield did, that ICT is not useful. This would support the view of Carpenter and Trohopoulos (1997) that the elderly do not want ICT on the vehicles. However the results from Sheffield do not completely support this view falling somewhere in the middle of the opinions of Carpenter and Trohopoulos and Batt (in DCMS 2000a). It is also worth bearing in mind that more users in Derbyshire were surveyed at short stops, and in fact the data collected suggests that the majority of these were from the older age categories, therefore this could have influenced their decision.

To compare this with Harvey's (1999) results, overall 90% of the Under 16's surveyed appear to be potential users of ICT on mobile vehicles which agrees with the findings of his survey. This study however found that 84% of the 36-45 years olds are also potential users, which was not reflected in Harvey's results. The reasons for this disparity may be that Harvey's study focused solely on Internet use through DELTA whereas this study examines various ICT applications including the online catalogue and CD-ROMs in Sheffield, as well as Derbyshire. The figures suggest that these two age groups are the most likely to be potential users of any ICT facilities provided. Whilst many over 65's are potential users there are also many who are not and the views of all users should be considered equally.

6.4.2   Gender

Harvey's study also focused on how gender affected Internet use though his overall conclusions showed that usage was evenly split. The results of the mobile library user study are shown in Figure 17.

Gender	No. of potential ICT users in Sheffield (% in brackets)	No. of potential ICT users in Derbyshire (% in brackets)
Male	12/16 (75)	6/14 (43)
Female	24/34 (71)	9/31 (29)

Figure 17. Potential users of ICT by gender.

This table again reiterates the difference in views between Sheffield and Derbyshire users. As far as the effects that gender may have on ICT usage goes, in Sheffield there is an even split between male and female potential users. In Derbyshire however there is a suggestion that males would be more interested in ICT provision on the vehicle than females.

6.4.3   Type of Stop Visited

The types of stop visited were divided into two main categories, rural and urban, which were then further subdivided by stop duration and time of day. This was to ensure that a wide variety of stops were visited. Whilst the results do not provide an adequate picture of the impact of rural and urban stops on potential ICT use (see Figure 18) the effects of time of day and length of stop are evidenced in the user responses (see Figure 19).

Type of stop	No. of potential ICT users in Sheffield (% in bracket)		No. of potential ICT users in Derbyshire (% in brackets)	
Rural	3/5	(60)	3/9	(33)
Urban	33/45	(73)	12/36	(33)

Figure 18. The effect of stop type on potential ICT use.

This table shows that users at urban Sheffield stops are most likely to be potential ICT users. It also suggests that the location of a stop had very little or no effect on whether Derbyshire patrons would be potential ICT users. However an insufficient number of responses were collected from users of rural stops in both authorities and these results should therefore be treated with care.

6.4.4 Length of Stop and Time of Day

The effect of stop duration has already been touted as a reason for the high number of Derbyshire users who felt that the ICT facilities listed in Figure 15 would not be useful to have on the mobile library. Nationwide authorities, mobile library staff and users are all in agreement that the length of certain stops limits the type of ICT facility that can be accessed. The following table shows the number of potential ICT users from the total number of users surveyed at each type of stop.

Type of Stop	No. of potential ICT users in Sheffield (% in brackets)		No. of potential ICT users in Derbyshire (% in brackets)	
Out of hours	29/38	(76)	8/14	(57)
Within hours	7/12	(58)	6/31	(19)
Over 1 hour	20/26	(77)	7/10	(70)
Under 1 hour	16/24	(66)	8/35	(23)

Figure 19. The effect of stop duration and time of day on potential ICT users.

These figures suggest that users of out of hours stops, for example late afternoons, evenings and weekends, are more likely to be potential ICT users. This is possibly due to the increased amount of teenagers and employed people who are able to access the service on these stops.

The figures also demonstrate the low number of potential users from stops of less than one hour, in Derbyshire. This does not seem to be such a big constraint in Sheffield with 66% of users from stops of less than an hour being potential ICT users. This could be due to the fact that more of the stops visited in Sheffield were greater in length than the minimum duration suggested by the Library Association (1997) of 20 minutes, whereas fewer in Derbyshire were.

6.4.5   Other Library Service Availability

Users were asked whether the mobile library service was their only contact with a library service within that particular authority. It was found that many users in both authorities used the main libraries, Sheffield and Chesterfield, as alternatives to the mobile library service. Figure 20 shows the number of potential ICT users from each authority and the effect of a presence or lack of alternative services.

Service Availability	No. of potential ICT users in Sheffield (% in brackets)	No. of potential ICT users in Derbyshire (% in brackets)
Alternative service point available	24/28 (86)	8/21 (38)
No alternative service point available	12/22 (55)	7/24 (29)

Figure 20. Effect of service availability on the number of potential ICT users.

The table shows that the availability of an alternative service point, such as Chesterfield, has very little effect on whether users will utilise ICT facilities on the mobile vehicle. A high proportion of users in Sheffield, with access to a static library, are still potential ICT users on the vehicle, whereas those without are less interested. This could be due to previous exposure to the technology lessening the worry of using new technology. In Derbyshire this pattern is also in evidence though to a lesser extent.

6.4.6 Potential User Profile for Sheffield

The results suggest that the potential users of Sheffield's ICT will be of any age, though more likely under 16 or 36-45 and any gender. They will frequent out of hours stops of over one hour in length and have access to library services at a static branch.

In Derbyshire, the suggested profile of potential users indicates that they will also be under 16 or 36-45 and male. They will frequent out of hours stops of over one hour in length and may or may not have access to another service point.

6.5 Staff Views on the Potential Impact of ICT on the Service

Staff were asked if they felt that the service would be used differently when ICT was present on board. The following are a selection of their views:

"The use of computers to provide services may help attract more young people" (Library and Information Assistant – Sheffield).

"kids might spread the word that ICT is on the library and therefore it might bring people in" (Library & Information Assistant – Derbyshire).

"The presence of ICT may change the type of people who use the service" (Library & Information Assistant – Sheffield).

The results of the user survey suggested that young people are the potential users of ICT on board the vehicle. Other members of staff hoped that by using ICT to provide a wider range of services the mobile library might be better used and a lot busier.

The potential to increase borrower numbers was not the only factor that was an issue to the staff in both authorities:

"Current users of the mobile will not use the services any differently with ICT" (Driver Assistant – Sheffield).

"The presence of ICT has not really effected use of the service provided by the MCV" (Library & Information Assistant – Derbyshire).

"Any effect on the use of the service is reliant on whether people want to change" (Library and Information Assistant – Sheffield).

6.6 Summary

The main issues relating to ICT and service use, ascertained from the responses of users and staff are as follows:

- Borrower numbers, while decreasing, are not proven to be affected by the presence or lack of ICT on a vehicle

- Only a small percentage of users are utilising the ICT provided on the MCVs. Staff believe that this is not due to lack of promotion

- Potential users of the service are likely to be under 16 or 36-45 and frequent stops of over one hour in duration which are available outside of school and work hours.

- Staff are eager to attract new users to the service without alienating present customers.

7   CONCLUSIONS

This chapter reviews the results of the previous two sections and draws overall conclusions relating to the objectives outlined in the Introduction. Using the data collected from the nationwide respondents, supplemented by the results from the case study authorities, tentative conclusions can be made about the situation concerning ICT and mobile libraries in England and Wales. The function of the second part of the study was to describe the possible impact of ICT on service provision and use and the conclusions relating to these issues are also drawn from nationwide and case study data. A number of issues became apparent as the data was being analysed and these have been highlighted separately. All mobile services are different, therefore these conclusions cannot be proved to be representative of the situation in other authorities.

7.1   The Situation in England and Wales

The results of the survey suggest that whilst ICT is being investigated as a way to provide a service on mobile library vehicles the current implementation levels are patchy. Certain authorities are considerably ahead of their peers and even classes of authority, the London Boroughs for example, have made a great deal more progress than others. This is in part due to the number of mobile vehicles that need to be accounted for, in terms of cost especially, when considering this type of provision. Overall 54% of authorities have some form of ICT (exclusive of mobile telephones) and this number is likely to increase. However, unlike static libraries, the vehicles will usually have only one or two ICT facilities instead of all of them.

The literature and results from both the survey and the case studies suggest that authorities are examining the provision of ICT facilities for staff firstly, though public Internet access seems to be a priority. There are no set patterns of order for adoption of these services.

It can also be concluded that some authorities have decided that the provision of ICT to rural communities is not encompassed within the role of their mobile library service whilst others feel that this is the perfect solution to the exclusion of geographical isolation. This suggests that there will never be a standard level of ICT provision across England and Wales and that the varieties in the services provided by individual authorities will remain.

The responses also indicated that whilst financial and technological constraints, as suggested by the literature, are important considerations, those of space and stop duration are more inherent to mobile library services. Authorities appear to be planning the extent of ICT they can feasibly provide around these.

7.2   The Potential Impact of ICT on Service Provision

Both Sheffield and Derbyshire are committed to using ICT to improve their service provision. Staff from both authorities appear to agree on the majority of issues especially that of using ICT to achieve equity of service. This was also evident in the responses to the nationwide survey, which suggests that this is an issue that is important to many authorities in England and Wales. This suggests that ICT is required by staff in order to make their roles easier and enable a more effective and efficient service to be provided.

Some users, on the other hand, appear to be unsure about the potential for improvement of the service through ICT, though the provision of an online catalogue does appear to be a service that the majority of the sample agreed upon. User concerns, which support those of staff and authorities, are space and stop duration alongside the possible replacement of books by computers. Whilst ICT can improve the range of services which the service provides, as the situation in Derbyshire shows, authorities need to be aware that the main user priority, according to the results of this study, is the provision of books.

Users are split as to whether they would find ICT useful on the vehicles. Those in Sheffield appear more enthusiastic about the prospect of ICT provision whilst users of Derbyshire's standard mobiles remain unconvinced, perhaps because of stop duration. The concern of authorities about this constraint suggests that this situation would be similar in many

areas of the country. The presence of the DELTA service on the Derbyshire MCVs has made little impression on the users of that service, despite publicity.   This would suggest that users are wary of change, or that the specific clientele groups that the mobile library serves are not interested in these types of facility.

7.3   The Potential Impact of ICT on Mobile Library Use

Overall, ascertaining whether ICT will have an effect on use of the service is very difficult as firstly, it has not been present for long on the MCVs and secondly, on the other mobiles, staff and users could only speculate about whether they would use the facilities provided.

The majority of mobile library staff are optimistic that ICT will bring in new users. In Sheffield especially, the use of a computerised card system across the library service will allow users who are registered at branch libraries to borrow and return books to the mobile library. Perhaps promotion of the service will be necessary in order to attract new users to the mobile and the library service in general. In Derbyshire, because the standard mobiles do not have equivalent plans, it was very difficult for staff to imagine the impact of ICT.

The potential user profiles for both authorities were extremely similar suggesting that the profile may also be appropriate in other authorities. Whilst these ICT facilities may not be used by the elderly as much, in years to come, later generations will perhaps require, and use this technology on the mobile vehicle.

7.4   Mobile libraries and Social Exclusion

One of the main factors, which emerged from this study, is that authorities feel that ICT will aid them in the provision of an equal service to that provided by branch libraries within the authority. This view was evident in responses to the nationwide survey and from interviews with staff from the case study authorities.   It could be concluded that authorities are working on

developing more effective means of providing the traditional service, through online circulation and the library catalogue to be followed by the provision of additional services through ICT.

It could also be concluded that with a variety of authorities developing these ICT based services, mobile libraries are being seen by many of those in the Library sector as a means of providing ICT access to the socially excluded. This is in contrast to the development of access points in village post offices advocated by the Local Government Association (in DCMS 2000a[33]) and the Government (DCMS 2001a). After observing the nature of many rural and urban mobile stops, mobile vehicles allow the service to be delivered direct to the user and are especially valuable when users are unable to leave their location. Whilst ICT access points in post offices are a viable option, it is concluded that mobile libraries can make a valuable contribution to combating social exclusion.

7.5   Communication

The lack of published material about successful ICT projects has meant that many authorities are unaware of how the various constraints to ICT provision on mobile vehicles have been solved by other authorities. A number of participants asked for information about authorities that had successfully utilised ICT on their vehicles. This suggests that by utilising e-mail discussion lists and appropriate publications, such as Service Point, those in charge of mobile library services can exchange valuable ideas and information.

7.6   Considerations for Implementing and Utilising ICT

As each mobile library service responds to different community needs the Branch and Mobile Libraries Group (Library Association 1997) is perhaps correct in its decision not to set a minimum standard for ICT provision on the vehicle. Despite this a series of inter-linking factors have emerged from the collected data which seem to have dictated the course taken by certain

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[33] The Local Government Association stated this opinion whilst giving evidence to the DCMS (2000a) for the *Sixth Report*.

authorities who either have, or have not, utilised ICT in order to provide a service to their users. The main factors are outlined as follows:

- **The role which the mobile library fulfils within library services**:

  The case study authorities have both implemented ICT in order to better fulfil their objectives for the mobile library service. Other authorities have identified the role of their mobile vehicles as not encompassing ICT provision. Authorities are obviously considering the role which their mobile vehicles play within the service and adapting ICT to fit this role.

- **Stop Duration**

  It is apparent from authorities such as Derbyshire and Somerset that stop duration is taken into consideration before pans are made to implement ICT on mobile vehicles. Many authorities are will to contemplate changing routes and stop durations in order to accommodate ICT provision. Other authorities, upon looking at the service they provide, have decided that ICT should only be used as long as it does not impinge on current routes. The fact that both of these situations emerged from the study suggests that it is a factor which needs to be seriously considered before ICT is utilised.

- **User Requirements**:

  One of the most important criteria when investigating the potential of utilising ICT appears to be the view of the users of the service. The responses of the sample in the case study areas suggest that current users may feel excluded by the emergence of the new technology on the vehicle. Low use and interest in the facilities provided by Derbyshire are counteracted by the benefits that the ICT brings to staff. Authorities need to balance the requirements of their current users with the provision of services in order to attract new users.

7.7   To Sum up - Is ICT a Priority for Mobile Library Services?

The results of this study suggest that ICT should be a priority for mobile libraries to the extent that the role of mobile staff is made easier, in terms of the provision of applications such as the online catalogue and automated circulation. However, in terms of the provision of end-user ICT applications, such as the Internet and CD-ROMs, authorities need to balance their desire to attract new users to the mobile library service with the needs of the specific clientele, which many mobile vehicles cater for.

7.8   Recommendations for Further Study

As ICT provision on mobile libraries is an ever-changing situation, a further study of this type, perhaps after the 2002 deadline for static libraries, would be interesting to assess how the current situation had changed. A study focused on the provision of one of the ICT facilities discussed as part of this dissertation would provide a clearer picture of the views of authorities and users towards that facility.

Both Sheffield and Derbyshire stated that they hoped to attract new users to the mobile library. Due to time constraints and the scope of this study there was not an opportunity to survey non-users. However the views of these members of the public may lead authorities to understand which facilities would attract new users.

One outcome of this study was the view of authorities, staff and users towards ICT on mobile vehicles as a way to aid the Government policy of social inclusion. A study focusing on this issue, as compared to the other methods suggested by the Government, would be very informative.

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Appendix A: The Questionnaire sent to Library Authorities in England and Wales.

ICT on Mobile Libraries

Dear Sir/Madam,

I am undertaking some research for the Department of Information Studies at the University of Sheffield, which investigates the impact of Information and Communications Technology (ICT) on Mobile Library service and provision. This questionnaire is designed to create a nationwide picture of the current status of ICT provision in the mobile library service and asks questions about the types of ICT used by mobile library services and issues surrounding this use.

I would be grateful if you could give a small amount of your time to fill in my questionnaire.

Notes:
* Mobile library vehicles include **all** mobile vehicles from which a service is offered directly to the public, including maximum capacity vehicles, bus and trailer libraries but excluding delivery vehicles.

* In this research ICT refers to a range of information and communications technology which includes the applications stated in Q2.1.

Section 1: Background Information

Q1.1 Name of Library Authority:

Q1.2 What type of authority *(please tick)

County	[ ]	Metropolitan District	[ ]
Unitary	[ ]	Welsh Unitary	[ ]
London Borough	[ ]		

Q1.3 Total number of static service points

Q1.4 Total number of mobile library vehicles (including trailer, bus, maximum capacity vehicles)

Section 2: ICT Provision in static and mobile libraries

Q2.1 Please indicate which of the following you have, are planning to have, think are desirable or do not require in your authority's **STATIC** service points and **MOBILE** library vehicles.

	Have		Planning to have		Desirable but not		Do not require	
	Static	Mobile	Static	Mobile	Static	Mobile	Static	Mobile
Library catalogue (Staff)								
Library catalogue (Public)								
Offline circulation								
Online circulation								
Fax machine								
Mobile/telephone								
Databases (Staff)								
Databases (Public)								
PC's								
CD-ROM (Staff)								
CD-ROM (Public)								
Internet (Staff)								
Internet (Public)								
E-mail (Staff)								
E-mail (Public)								
Other – please state								

Q2.3 How many of your mobile library vehicles have one or more of the ICT applications stated in Q2.1 on board

Q2.4 Do you have any mobile library vehicles dedicated solely to ICT provision for the public (e.g. CD-ROM, Internet Access, Open Learning PC's)
Yes [ ] No [ ]

If Yes how many:

Q2.5 Could you please describe any definite plans for ICT development for your mobile library vehicles, which you plan to implement by the end of 2002.

Q2.6 If you run an online system on your mobile library vehicle which system are you connected to? (e.g. Dynix, ELAN, DS)

Section 3: Constraints

Q3.1 Could you please identify the three greatest constraints to using and providing ICT on your mobile library vehicles.

1)

2)

3)

Section 4: Staffing

Q4.1 Please answer the most appropriate section with regards to ICT provision for staff and/or public use on your mobile library vehicles:

a) To what extent has the presence of ICT on the mobile library vehicle affected the number of staff present on the vehicle?

b) If you are planning to, but do not yet, provide ICT facilities on your mobile library vehicle, to what extent do you think this will affect the number of staff on the vehicle?

c) If there are no plans for ICT provision on the mobile library vehicle please tick [ ]

Q4.2 Aside from the number present on the vehicle, has the provision, or the proposed provision, of ICT on the mobile library vehicle affected staff?
Yes [ ] No [ ]

If Yes please explain:

Q4.3 Are your mobile library staff taking part in NOF (New Opportunities Fund) training for ICT?

Section 5: Length of stops

Q5.1 To what extent do you consider length of stop to be a constraint on public ICT provision on the mobile library vehicle?

Section 6: And Finally……..

Q6.1 Are there any other comments, on this topic, which you would like to make?

Q6.2 Do you have a written policy concerning ICT and Mobile libraries?
Yes [ ]   No [ ]
If yes would you please include an electronic version where possible.

Q6.3 I am interested in talking to a sample of respondents by telephone. Would you be willing to discuss this topic further? YES [ ] NO [ ]

If yes whom should I contact for further clarification?
Name:
Telephone:
Email:

Please return this questionnaire as an e-mail attachment to the following address by
WEDNESDAY 20th JUNE:

lip00hst@sheffield.ac.uk

MANY THANKS FOR TAKING THE TIME TO FILL IN THIS QUESTIONNAIRE.

Appendix B: The User Questionnaire

Stop:
Length:
Time of day:

1. How often do you use the mobile library, on average: (please tick one)

    less than once a month   ☐   once a month   ☐
    once every two weeks   ☐   once a week   ☐

2. Is the mobile library vehicle your only contact with the library service of this authority?
    Yes   ☐ go to 5
    No   ☐ go to 3

3. Do you use the Internet, CD-ROM or online catalogue facilities at your local public library?
    Yes   ☐   No   ☐

4. How often do you use these computer facilities? (please tick one)

    once or twice a week   ☐   once every two weeks   ☐
    once a month   ☐   less than once a month ☐

5. What is your main use of the mobile library?
    Information gathering   ☐   Leisure – reading/videos   ☐
    Learning   ☐   Social   ☐
    Other   ☐…..please specify….

6. Which of the following do you use on the library?
    Books   ☐   Videos   ☐   CDs   ☐
    Internet   ☐   CD-ROMs   ☐   Open-learning ☐
    Other   ☐

7. Which of the following facilities do you think would be useful to you, or other people, on a mobile library?

CD-ROM   ☐   Online Catalogue   ☐
PC's for open learning   ☐   Internet access   ☐
E-mail access   ☐   none   ☐ go to Q8.

8. Please explain your choice/If none of the above then why not?

9. Do you have access to/use computer facilities elsewhere, please say where:
   (please tick all that apply)

Home	☐	School/college/university	☐
Cybercafé	☐	Work	☐
Other (please say where)	☐	No	☐

10. How important do you think it is for public libraries to provide computer facilities?

Very important	☐	Quite important	☐
Not very important	☐	Not at all important	☐
Not sure	☐		

11. Are you:
    Male ☐   Female ☐

12. Are you:

Full-time employed	☐	Part-time employed	☐
Self-employed	☐	Unemployed	☐
Student	☐	Retired	☐
Other (please say what)	☐		

13. Are you:

Under 16	☐	16-25	☐
26-35	☐	36-45	☐
46-55	☐	56-65	☐
over 65	☐		

14. How would you describe your ethnic background?

White	☐	Black Caribbean	☐	Black African	☐
Black Other	☐	Indian	☐	Pakistani	☐
Bangladeshi	☐	Chinese	☐	Other, please specify	☐

Appendix C: User Views on the Provision of ICT by Public Libraries

This has been included as an Appendix because, whilst the responses were used in the results section of the study, overall the responses gathered were felt to outside the remit of the topic. However these responses are worthwhile and may be interesting to members of the public library sector.

Users were asked to indicate their views on the importance of public libraries (mobile and static) providing ICT for public use. This was felt necessary in order to gauge general opinions about this topic amongst the respondents. The following table shows the responses.

Rating	The number of Sheffield Users (% of total in brackets)	The number of Derbyshire users (%of total in brackets)	Total
Very Important	24 (65)	13 (35)	37 (39)
Quite Important	15 (39)	23 (61)	38 (40)
Not very Important	2 (40)	3 (60)	5 (5)
Not Important	1 (50)	1 (50)	2 (2)
Not sure	8 (62)	5 (38)	13 (14)
TOTAL	50	45	95

The views of users from each authority about the importance of ICT provision by public libraries.

The table shows that the majority of users (79% in total) felt that it was quite important or very important for public libraries to provide ICT facilities for the public.

This 79% total was made up of 92% of the Sheffield users who have alternative ICT access and 86% of Derbyshire users who have alternative ICT access. This suggests that those who have ICT facilities at home, work, or school appreciate the benefits it has bought them. The following are a selection of positive comments from users in both authorities:

"Computer facilities in public libraries would be useful for people wanting to do research" (User of a rural stop – Sheffield).

"The provision of computer facilities by public libraries is vital for anybody who hasn't got access to these facilities" (User of an urban stop – Sheffield).

"The provision of computer facilities by public libraries is a must" (User of an urban stop – Sheffield).

"The provision of computer facilities by the public library service is very important for younger people" (User of an urban stop – Sheffield).

"ICT provision by public libraries is a wonderful idea" (User of an urban stop –Derbyshire).

"It is quite important because not everyone can afford or knows how to use these things" (User of an urban stop – Derbyshire).

Not all the users were so positive:

"The provision of computer facilities by the public library is a low priority" (User of an urban stop – Sheffield).

"The Internet does not provide anything unavailable elsewhere. I would rather use Inter Library Loans to get books … I don't want to spend time crouched at a computer" (User of an urban stop – Sheffield).

"I don't expect the library to provide computers" (User of an urban stop – Derbyshire).

"I personally don't see the need for computers" (User of an urban stop – Derbyshire).

Overall user comments focus on the importance of ICT provision by public libraries and many of them emphasised the fact that it was very important for people who had no alternative access. These opinions would appear to support the policy of the Government to provide access and combat social exclusion through the public library service. However many users also commented that provision in public libraries would mean that help was available when required. This is a particular concern of CPLUG, who in a memorandum submitted to the DCMS (2000a), state that librarians are now expected to provide computer support as well as more traditional services. Whilst library staff are there for general queries and help, the suggestion is that their role should not change to that of ICT educator or support.

Appendix D: Publicity for DELTA from Derbyshire Libraries and Heritage
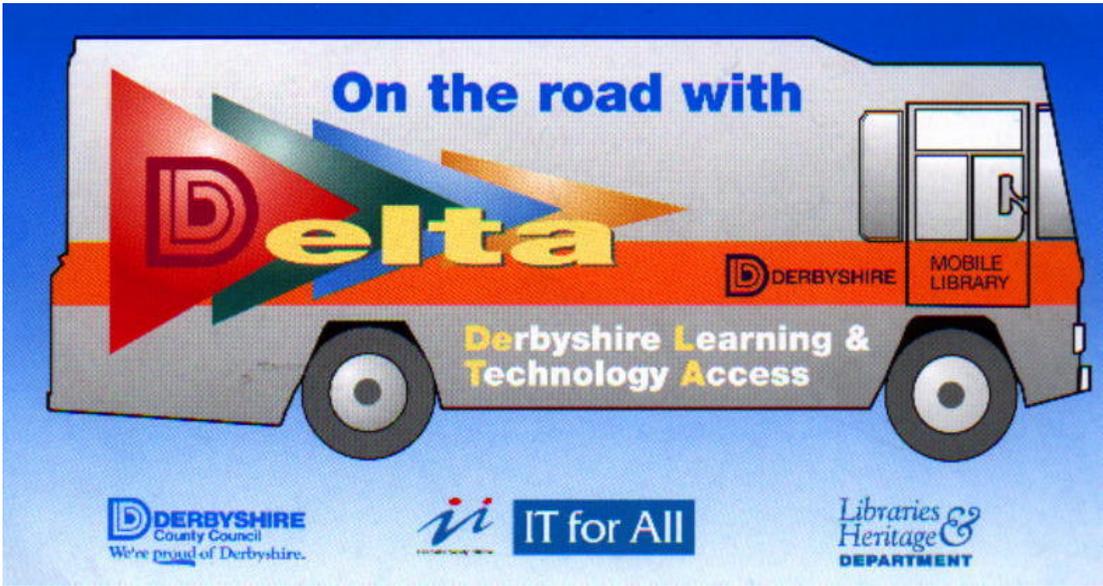
The award - winning **DELTA**

Derbyshire Learning & Technology Access

is on the road!

Now you can use computers on mobile libraries to :

Surf the Net - Internet access for only £1.50 per half hour session (you can book up to two sessions in advance)

Look up information - from our wide range of CD Roms (there's no charge for this service!)

Get connected - with our state of the art video conferencing service (it's free!)

Create your own work - with free access to word processing and spreadsheets.

Catch up with the new service at :

Tibshelf	Pilsley	Newhall
Barlborough	Grassmoor	Bradwell
North Wingfield	Darley Dale	Kilburn
Codnor	Chinley	Castleton
Aston on Trent	Hathersage	Youlgreave
Hasland		