



Office of the
Deputy Prime Minister

Creating sustainable communities

*Final report for signage and
wayfinding for people with
learning difficulties*

Building Research Technical Report 6/2005

February 2006



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Contents

Executive summary	5
Introduction	6
Project objectives	6
Literature review	7
Learning disabilities	7
Signage and communication	8
Signage and design	10
Wayfinding	11
Conclusions from the literature review	13
Methodology	14
General principle: inclusiveness	14
Consultation with user representatives	14
Sample workshop sessions	15
Practical Issues	15
Payment	16
Informed consent	16
Workshops	16
Case studies	18
Bonnington Symbol System	18
The Eden Project	21
Case study conclusions	22
Consultation with user representatives	23
Telephone interviews	23
Focus groups	25
Conclusions from the consultation with user representatives.	28
Workshop sessions	29
Workshop format	29
Conclusions from the workshop sessions	31
Conclusions and recommendations	32
Review and future work	34
References	35
Bibliography	37
Appendix 1: Consultation with user representatives	39
Appendix 2: Consultation with users	41

Executive summary

This final report is output number 213472 of the ODPM project, “Signage and wayfinding for people with learning difficulties”, contract reference BD 2440, part of the ODPM Framework Agreement CI 1/40/5 “Building Occupant Interaction”.

Often the only way of knowing where you are in public buildings, or how to get to where you want to go, is through signs and wayfinding information. Most people have some difficulty in eliciting the right information from some signs, but people with learning difficulties have an even harder time understanding the information contained in these signs.

The purpose of this project was to carry out a scoping study to identify the issues involved in wayfinding for people with learning disabilities. In order to do this, existing research in this area has been reviewed and collated and two case studies have been identified and analysed. In addition, interviews and discussions have been held with staff from organisations that represent people with learning disabilities and workshops have been carried out with end users themselves.

The key finding is that there is no simple answer. The wide range of abilities of people with learning difficulties, and also the range of signage and communication systems already in use, suggest that it is unlikely that there is any single system that could be developed that would be equally effective for all. In addition, it is apparent that signage is only one aspect in a whole range of techniques and methods that people with learning difficulties use in order to wayfind.

Current Best Practice guidance for signage provided by the Disability Rights Commission report Good Signs, and the Sign Design Guide published by the Joint Mobility Unit and the Sign Design Society, both provide effective guidance on signage requirements for people with learning difficulties. In addition, further recommendations have been made with regard to the design of buildings and staff training issues.

Introduction

This is a report responding to the request from ODPM Building Regulations Division for a project examining the area of Signage and Wayfinding for those with learning difficulties. The project was commissioned under the ODPM BOI Framework Agreement with the BRE-led consortium with Joint Mobility Unit (JMU) Access Partnership, University of Reading, Buro Happold and the University of Nottingham as partners. The content of this project considers this issue in the form of a scoping study as agreed with ODPM at a meeting on the 8 July 2003.

This project builds on work undertaken by JMU Access Partnership for the Disability Rights Commission (DRC) and their report “Good Signs Improving Signs for People with a Learning Disability”. In addition it acknowledges the place that the Sign Design Guide, produced by JMU Access Partnership and the Sign Design Society, has in the design of inclusive signage.

Project objectives

The overall aim of this project is to enhance the ease-of-use and access to buildings.

The specific objectives are to:

- enhance ODPM’s understanding of the problems encountered by people with learning difficulties in navigating around public buildings;
- identify the need for further work in improving signage and wayfinding for those with learning difficulties.

The project has built on previous work in this area, including that carried out by Neil Crowther for JMU Access Partnership, and Sian Evans for Mencap, who carried out the research used in the DRC reports on improving signs for people with a learning disability. It extended the assessment of the problems that people with learning difficulties have in wayfinding into other built environments that were not previously considered, such as the transport infrastructure. In order to do this, we have aimed to enhance understanding of the process of wayfinding for people with learning difficulties, something which occurs in relationship to, but which is not exclusively controlled by, signage.

The programme of work followed a pattern of identifying the issues involved and obtaining information from appropriate sources. This included a literature search to ensure that the research team took account of any recent work in this area. Following the literature review, the project team used a mixture of case studies, interviews and workshops to gain more information on the current issues related to signage and wayfinding for people with learning difficulties. Both individual users with learning difficulties and members of the organisations that represent them have been involved in this study.

Literature review

A literature review was undertaken to find existing research in the field of signage and wayfinding for people with learning difficulties. This review was extended to include information on wayfinding, travel training and related problems for people with learning difficulties. The major themes are reported in sections below covering learning disabilities, signage and communication, signage and design, and wayfinding.

Learning disabilities

There is a lack of reliable official statistics to determine the number of people in the UK who have learning disabilities. Government departments currently do not collect this information and any statistics would be unlikely to include those people with mild learning disabilities who do not use specialist learning disability services and who live more or less independently in the community*.

The Royal National Institute of the Blind further supports this fact and says that the term ‘people with learning difficulties’ “covers a wide range of people. It could be someone who has a serious mental impairment or it may be someone who has poor literacy, a low level of skill using a computer, having to use the web in a second language, or someone who has problems understanding information”†.

Arthur and Passini¹ also identify the issue of accurately determining the number of people there are with learning disabilities. They say this is very difficult to obtain “due to the lack of recognition concerning the definition of a learning disability”.

However despite this lack of official data, reviews of prevalence studies in Europe, North America and Australia have produced broadly consistent results. These studies included only those people with learning disabilities known to service providers and have found that there are 3-4 people with severe learning disabilities in every 1,000 of the general population. Studies that have screened whole populations have found somewhat higher rates: suggesting 6 per 1,000 of the overall population have some degree of learning disability.

Using the above figures, it can be estimated that in the UK there are

- 230,000-350,000 people with severe learning disabilities
- 580,000-1,750,000 people with mild learning disabilities*

The Learning Disabilities Organisation goes on to state that the “overall numbers of people with learning disabilities varies according to gender, age, ethnic background and socio-economic circumstances”‡.

* <http://www.learningdisabilities.org.uk/page.cfm?pagecode=ISBISTMT>

† http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_typesofdisability.hcsp#P16_1403

‡ <http://www.learningdisabilities.org.uk/page.cfm?pagecode=ISBISTMT>

A further breakdown of this showed that:

“In the UK severe learning disabilities are more common among:

- boys and men (possibly because of gender-linked genetic factors);
- younger people (because of above-average mortality rates for older people)

And mild learning disabilities are more common among:

- boys and men;
- younger people (because mortality rates are higher than the general population);
- people who live in poverty;
- people from adverse or unstable backgrounds”[‡].

Many people with a learning disability will also have other additional disabilities.

Approximately 30% have a sight impairment and 40% have a significant degree of hearing loss. This was highlighted in the Department of Health White Paper Valuing People a New Strategy for Learning Disability in the 21st Century 2001[§].

In addition many people with a learning disability may have mobility difficulties or use a wheelchair. The effects of an ageing population and increased life expectancy of people will also lead to an increasing number of people with learning disabilities who may also develop dementia. This will have an additional effect on how people identify and use signs and negotiate their way around the external and built environments.

Signage and communication

The work² by JMU Access Partnership for the DRC, found that many organisations had produced guidance into providing clear methods of communication. This included the British Dyslexia Associations “Plain Facts” publications which were produced by the Norah Fry Research Centre, and the Central Office of Information, which produces the “Informability Manual”.

A group that includes the Mental Health Foundation, the Department for Health, People First and the Joseph Rowntree Foundation, has also carried out further work in this area. They have worked together to publish a guide³, which gives practical help into how to produce written information for people with learning difficulties. As well as promoting the principals of clear, simple, jargon free writing, this guide also promotes the findings of RNIB’s See It Right Campaign, which seeks to give practical advice on the design and production of accessible information.

There are a range of symbols and signs that have been developed to aid in communication.

[‡] <http://www.learningdisabilities.org.uk/page.cfm?pagecode=ISBISTMT>

[§] <http://www.archive.official-documents.co.uk/document/cm50/5086/5086.pdf>

Signalong is a sign supporting system⁴, which has been developed to help both children and adults to acquire language skills, and to aid where there are communication difficulties. Under this system the spoken word should accompany every sign.



publications

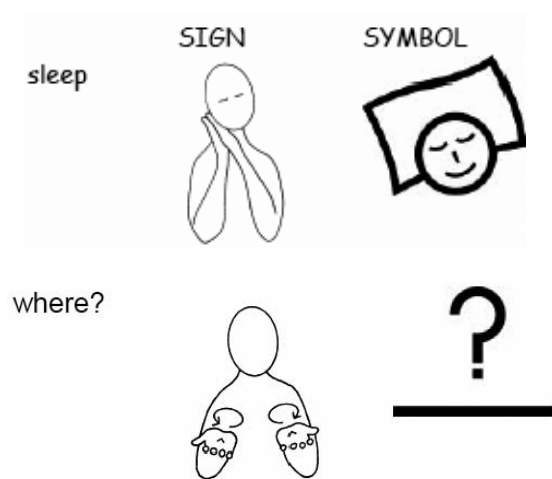


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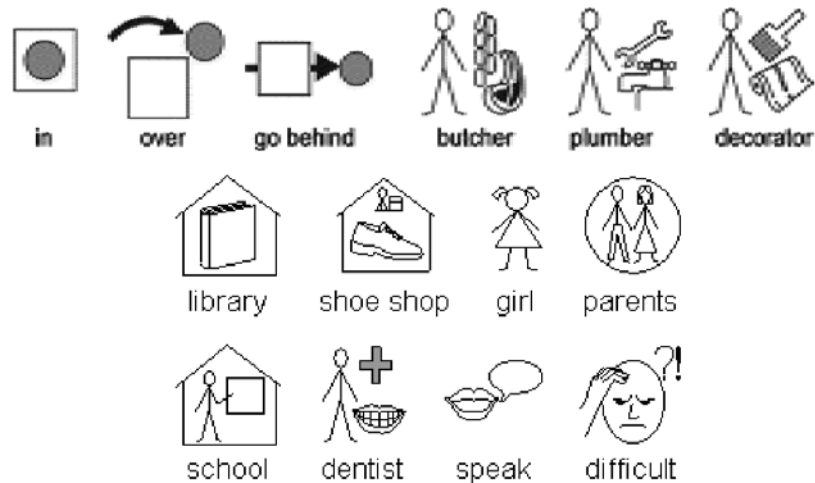
help

Makaton is a language programme, which comprises of a developmentally based core vocabulary taught with speech and signs or symbols, or in some instances a combination of all of these⁵.



Widget is also a language programme, which is used to develop literacy, using pictures, symbols and words, (<http://www.widgit.com>).





In addition the **Picture Exchange Communication System** (PECS) which was developed in the USA has been trialled in several schools in the UK including Priors Court School where it is used for communication, instructions identifying rooms and means of escape⁶.

The **Bonnington Symbol System** was devised by staff at a resource centre in Edinburgh. They created a set of symbols to help with room identification within the resource centre itself. This set of symbols was then expanded and used to help create programmes for the clients. The City of Edinburgh's Social Work Department acknowledged the system's success, and recommended that all resource centres that provided a service to adults with a learning disability, should adopt the system for signage and timetables. A pack containing the symbols most commonly requested by centre users was produced. The Bonnington Symbol System has also been used by two further education colleges and by local providers of residential accommodation as part of their Person Centred Planning approach to service provision**.

The Better Days Group produced a factsheet⁷, which aims to make it easier for people with learning disabilities to get out and about, by giving guidelines for those who provide information to them. They suggested that the most effective way of providing information was to have 'Someone to help' with the user to provide one-to-one help, with information provided by video, someone reading out the information, by telephone, and by tapes and CDs. Printed information, and information available via a computer, were seen as the least effective methods, as the person may not be able to read, or may have problems using a computer.

Signage and design

The Sign Design Guide⁸, sets out principles for inclusive signage and states that "a successful sign system should minimise anxiety and confusion and prevent people from getting lost." It also recommends that signs be clear, concise and consistent. The guidance set out in it concerning the planning, design and practicalities of sign systems, holds true for people with a learning disability². For example, signs that use large print in a clear typeface, with good contrast and low glare, were found to help those with limited reading skills. It was also found that people who were more independently mobile were more likely to recognize and be able to make use of, common signs and sign symbols. This showed the importance of having

** <http://www.modemoperandi.co.uk/symbols>

consistency across sign types. The report also suggests that travel training may be beneficial to those who are not familiar with signs².

The research carried out for this publication suggested that an increased use of pictures on signs would be beneficial to people with learning disabilities. This could include symbols, pictograms or “story-board” style pictures. It was found that common symbols should be used wherever possible, as they were shown to be more recognisable to people with a learning disability, and could also be recognised without accompanying words making them useful for non-readers. The report also shows that extra consideration needs to be given concerning the use of pictures on a sign that indicates something that is specific to a particular environment as new and unfamiliar symbols or pictures could be confusing.

Consistency of colour across each sign type was discovered to be very important in aiding their recognition by people with learning disabilities, as well as colour used in directional signs, for example different coloured signs used for different departments in a hospital².

These clear signage principles are promoted in BS 8300:2001⁹. This states that the use of plain English and pictograms together should be used to assist people with learning difficulties. BS 8300 also recommends that universally recognised symbols should also be used to replace text, wherever possible. “Other symbols should supplement text, but should not be used in isolation”⁹.

The involvement of people with a learning disability in designing signs was advocated in the Good Signs research², which suggested that the British Standards Institute should ensure that people with a learning disability are included in the consultation during the development of a new British Standard for sign symbols.

A number of publications^{2,9,10} promote the use of a clear, uniform signage strategy to be provided throughout a building. In addition, a clear and well-developed signage system has been found to be of greater benefit than the often seen ‘you are here’ style maps in identifying where people are in complex buildings¹¹.

Simplicity in signage design is also recognised to help everyone but particularly people with learning disabilities in the Department for Transport’s Inclusive Mobility publication¹².

It must be noted that providing symbols, however recognisable, on their own without accompanying text may not always be adequate. “Someone may be able to read but not understand symbols or even pictograms, and so a wheelchair symbol on a door to indicate a lavatory may just mean to them a room where there may be people in wheelchairs; the label ‘toilet’ would need to be added”¹³.

It is also highlighted that for people who cannot recognise conventional signage, the use of talking signs would be beneficial¹⁴. BS 8300 also states that visual and tactile information is often reinforced by audible information⁹.

Wayfinding

A number of information sources on wayfinding for people with a learning disability were identified. Several publications on wayfinding, whilst not solely focused on learning disabilities, either have sections that relate directly to people with learning disabilities, or the principles detailed in them supports evidence gathered from other publications¹.

Evidence has shown that the primary way of learning a route for people with mild or moderate learning disabilities is one-dimensional. People will learn a route in only one direction and not in reverse¹⁵. The use of help and guidance from other people in this travel training has been identified as a method used by people with learning disabilities to learn new routes².

The use of features, landmarks, varied materials and textures along a route or in a building have also been identified as a key means of wayfinding^{15, 2, 16}. Golledge¹⁵ also goes on to state that when route learning takes place, “on route” information is dominant and takes precedence over all off route information. The use of sounds has been identified by RNIB¹⁷ as a valuable source of locational and directional information for both people with visual or learning disabilities.

The Good Signs report² found that people with learning disabilities utilise various methods, as well as using signs, to help them find their way. These include: being accompanied until the journey becomes familiar, noting familiar landmarks, asking people for directions, finding out where there are reception or information points, utilising simple maps or written directions or using photographs to remind them of certain key features on their journey.

Arthur and Passini¹ also state that “to facilitate wayfinding, the design of a setting should include clearly defined paths to destinations and should incorporate striking landmarks, and to make wayfinding easier, the number of decisions that can be made when travelling on a path should be kept to a minimum”.

The approach towards a building, or how it is laid out or constructed, can also have a contributing effect as to how people find their way. Signs are not a substitute for good logical and intuitive design of buildings¹⁸. This also has a bearing on how people with dementia access public buildings and environments. “Many outdoor environments such as shopping centres or parks may be inhospitable for people with dementia because they are disorientating, difficult to interpret and navigate, threatening or distressing”¹⁴. This is further supported by Mitchell et al in their work¹⁹ that identified that “Familiarity, legibility, distinctiveness, accessibility, comfort, and safety all appear to have a major influence. Small street blocks with direct, connected routes and good visual access, varied urban form, architectural features, and distinctive, unambiguous environmental cues could enhance successful orientation and wayfinding”. The ease at which people can identify facilities such as reception areas and other information points in a building was also found to be a benefit in wayfinding².

The use of colour has been identified as a general method of assisting wayfinding, not just for people with learning disabilities¹⁸. This is advocated by the NHS as a useful way of identifying different buildings and routes around a complex site²⁰. In addition colour has been used to good effect. For example, in Priors Court School for children with learning disabilities, separate areas of the school are identified by different colours⁶. Others have identified the benefits of doors to similar services such as toilets being painted a single colour. However there are potential problems to consider when using colour to assist in wayfinding. Around 8% of men and 1% of women have colour impaired vision and would gain limited benefit from a colour coded system. In addition, research has shown that people can remember no more than 5 colours before they find it difficult to differentiate between the colours²⁰.

At the time of writing this report some additional information about another on-going project became available. The Merseyside Passenger Transport Authority and Executive have a project called “MAPLE: Improving Mobility and Accessibility for People with Learning Difficulties in Europe”. The main aim and outputs are to promote the mobility and encourage the social inclusion of people with learning difficulties and people with health problems. Whilst there are

no published outcomes available at the time of writing, it is understood that the early thoughts indicate 3 key aspects; staff awareness training, improving 'travel training' for people with learning disabilities and the provision of a simple to use built environment.

Conclusions from the literature review

There is no generally accepted definition that clearly defines different forms or degrees of learning disabilities, and as such it is difficult to make comparisons between different pieces of research. This lack of an accepted definition means that it is also difficult to produce accurate figures as to the numbers of people affected by such conditions, although general figures indicate somewhere between 3-6 people per 1,000 of the population have some degree of learning difficulty.

A range of symbol systems to help people with learning difficulties have been developed and are in use across the UK. Most people with a learning difficulty will learn only one of these systems, any more than that may be too confusing. Which system they are taught will often depend on where they go to school, or which one is the preferred system in their local area. As such it is difficult to analyse differences between the different systems as there is limited potential for crossover research. In addition, some of the systems currently used are more appropriate to communication systems than signage and are not always transferable to a wayfinding scenario. There is no co-ordinated approach by organisations representing those with learning disabilities to standardise a single system across the country.

There is evidence that the use of pictures and symbols on signage are of help to people with learning difficulties, as often they are more intuitive than text. However, where images relate to something non-standard, or specific to a particular location then extra consideration is needed to avoid confusion. There is also evidence that people with learning difficulties use both symbols and words on signs and so both should be used to convey information effectively.

There is strong evidence that signage is only a part of the process of wayfinding for people with learning difficulties. Many will use building or environmental features, landmarks or materials along a route. Travel training with support workers is another important method of learning a route, as is being able to identify a reception or information point where they can ask for directions. Recent research shows that building layout, sight lines and clearly defined paths are also critical in helping people with learning difficulties to wayfind.

Finally research shows that whilst the logistics of involving end users with learning difficulties can be more difficult than other groups of end users, it is important to have their input as it strengthens the research and the results that are established.

Methodology

The project brief detailed a programme of work that included a literature search, to ensure that the research team takes account of any recent work in this area. Having collected this information, the project team used a mixture of interviews and workshops to gain more information on the current issues relating to signage and wayfinding for people with learning difficulties by consulting users and the organisations representing them.

In carrying out the literature review two case studies were identified, in which the needs of people with learning difficulties were considered as part of a signage and wayfinding strategy. The project also required the involvement of representatives of organisations that represent people with learning disabilities along with some users themselves. Building on the methodology used for Good Signs, and the requirements of the project brief, it was decided that consultation with user representatives would be carried out in the form of a short telephone interview, followed by focus group discussions. It was felt critical that end users with learning disabilities were also involved in the research, but due to the wide range of levels of ability and the nature of learning disabilities, it was felt that a few workshops with individuals would be the most useful method of acquiring useful data.

In order to determine the most appropriate manner in which to carry out the research, some underlying principles were followed:

General principle: inclusiveness

This project had to follow inclusive research principles.

- Research must address issues which really matter to people with learning difficulties, and which ultimately leads to improved lives for them.
- It must access and represent their views and experience.
- People with learning difficulties need to be treated with respect by the research community.²¹

Consultation with user representatives

The aims of the telephone interviews and focus groups with the user representatives were the following.

- Ensure that the issues identified in the literature review are relevant.
- Identify any gaps in key areas.
- Consider how improved signage and wayfinding should be investigated.
- Identify what problems with wayfinding and signage, people with learning disabilities encounter.

- Obtain user samples for workshop sessions.
- Help inform development of procedures for workshop sessions.

Six organisations that had carried out research, or published guidance, in the area of wayfinding for people with learning difficulties were identified via the literature review and took part in the telephone interviews. The same organisations were represented at two focus group meetings held in Edinburgh to discuss the issues in more depth.

Sample workshop sessions

It was identified that the involvement of individuals with learning disabilities was important to the research, and workshops sessions were chosen to be a more appropriate method to achieve this due to difficulties in eliciting this from a questionnaire. Only small groups could be considered for the workshops due to the nature of the target group of users.

Practical Issues

The issue of inviting participation that is inclusive²¹, is seen to be dependent more on the style and commitment of the researcher, rather than the use of any particular method. Making sure that people are clear about their participation, that there are opportunities for accountability, and that the participation is meaningful rather than tokenistic, are important steps for involving people in inclusive research.

Due to these technical constraints and the sensitivity of the consultation group, it was recognised that access to them may need to be restricted via 'gatekeepers'. It was therefore felt that it would be more appropriate to contact people via organisations of, and for, people with learning disabilities. Purposive sampling of a mix of self-advocacy groups and representative organisations proved unachievable as there was no definitive list of these organisations, and there were a large number of different types of organisations even within the stated categorisations. Determining consultation samples based on any categorisation of types of learning disability organisations was dismissed as too complex for this particular project, although it would warrant further investigation for future work.

The method of finding a sample of users for the workshop sessions was therefore to contact well established groups of both self advocacy and representative organisations who had experience of consultation and involvement in research. This in itself raised some issues, for example exclusion of people with learning difficulties who do not belong to any formal groups and also of 'research fatigue' for group members. By approaching an organisation with a pool of volunteers for this type of work, one of the issues (relating to ethical issues of consent and not coercion) is removed, as free choice is allowed. 'Gatekeepers' therefore control the selection of the focus groups.

Payment

Experienced researchers in the field recommend that the way to approach the issue of payment is to air the issue with the users and advocates as practically as possible, considering the effect on benefits and also in terms of inclusivity. Those taking part can then make informed decisions on how they wish to be rewarded²¹.

It was felt important to make clear from the outset, when and what payment could be expected. Payments, particularly expenses, will need to be made promptly, or in some cases in advance. This is particularly important to people on low incomes. Although participants in this project did not accept payment, this cannot be assumed to be the case in other circumstances.

Informed consent

It is vital that the participants must be fully aware of the issues surrounding the choices they are making including the expectations, consequences, potential pitfalls and benefits, and the alternative choices and courses of action available to them before deciding to become actively involved in the research. They must be informed in a way that they understand²².

It is therefore vital to ensure that informed consent is achieved and this can be particularly difficult considering the participants' ability to grasp what the project is about. Following advice from the members of organisations representing people with learning disabilities, and particularly from People First who hosted the workshop sessions, it was decided that this would be approached on a verbal basis with the help of the advocate/support worker for each of the users who were involved.

Informed consent also means continual consent so that users understand what is happening throughout the workshop. As such, provision had to be made at all stages to ensure that the participants were kept aware of what was happening and why, and to ensure that they are happy to continue. What is more difficult is ensuring that the participants actually understand the informed consent. It was felt that the use of advocates alongside the participants, and the provision of information in their preferred communication would help to ensure that it is achieved.

Workshops

This project is a scoping study with limited resources, so whilst end users involvement was considered important, it was not possible to carry out any in depth work in this area.

Following advice from the focus groups and information gained from the literature review it was felt the most appropriate format would consist of an unstructured guide, delivered through the use of individuals preferred communication formats. An interactive, informal style of workshop was assumed to be the most appropriate and was designed to include use of different mediums, for example signage samples and photographs. Workshops were expected to be of up to 2 hours in length to allow for extra time that may be required for communication needs. Regular breaks for participants were also required throughout.

Communication problems within group interviews can be negated in part by using facilitators who are skilled in working with groups of people with learning difficulties and who do not provide 'over-guidance' which can lead to bias. Whilst it is recommended in both generic qualitative and many emancipatory research methods, that the interviewer should be matched to the interviewee, it was felt that this would not be possible within the scope of this research, partly due to the extra dimension this would place on already complex communication dynamics.

People First guidelines for consultation with people with learning difficulties, produced by people with learning difficulties, state that “Someone to give you support, someone you know and trust” should be present. In practice this would usually mean using advocates or support workers for participants. Emancipatory research methodology questions whether this is an inclusive approach as users are not using their own ‘voice’ and not communicating in their own way but through language determined by the researcher. Having explored these issues in the literature review and consulted with leading people in the field of inclusive research with disabled people, the consensus seems to be that advocates have a role to play as they support from the sidelines²³. It is the role of the researcher to ensure that support workers do not speak for the disabled person and not to direct questions or comments to the support worker unless the participant specifically asks the researcher to work in that manner²³.

The dependability of information which could be obtained from users is a problem at this point due to the complex communication requirements. While mindful of the risk of not obtaining actual users comments, we felt confident that meaningful information could be obtained if participants are approached sensitively. If it is not possible to assess the information from the workshop group then it would be viable to undertake a one-to-one interview with users and their representatives.

A workshop format was developed that included a mixture of samples and discussion topics. Three such workshops were held, each with three people with learning difficulties along with their support worker. Following the group discussion on their experiences with wayfinding, each end user was escorted along a journey to two locations (a tube station and a library) in order to further describe their feelings and requirements in negotiating a range of environments.

Case studies

As explained in the methodology, the aim of the case studies was to identify projects where the needs of people with learning disabilities had been taken into consideration as part of the signage and wayfinding strategy for the environment. Following on from the literature review, two case studies were identified in which the signage and wayfinding needs of people with a learning difficulty had been considered as part of a more general wayfinding strategy. The first case study looks at the work done by Bonnington Symbol Systems in Edinburgh. This is an established system which has been in use for 14 years and is used in a wide range of public access buildings across the area. The second case study examines the work being carried out at the Eden project in Cornwall, which is a more recent study and has been in place since summer of 2004.

Bonnington Symbol System

BACKGROUND

Work on the Bonnington Symbol System (BSS) began 14 years ago as an initiative of the City of Edinburgh Council Social Work department and was based on a style developed in Tokyo. The system was specifically devised to meet the communication and information access and environmental access to people with learning disabilities. However, the means by which it does this can make information and environments accessible to other excluded groups as well.

A day centre officer and a speech and language therapist at Bonnington Resource Centre in Edinburgh originally devised BSS. They created a set of symbols to put on the doors of the centre so that users could tell the rooms apart. The symbols that were created were then added to timetables and other information systems within the centre. The Social Work Department noted the success of the system at Bonnington and recommended that all day centres providing a service to adults with a learning disability adopt it for signage and timetables. A pack was produced containing a set of some 240 symbols all of which had been requested by centre users.

The symbol system is now supported by Edinburgh City Council and has been developed into a system that complements signage and assists in wayfinding in a wide range of public buildings. Over 600 symbols have now been developed covering a wide variety of standard and most specialised situations.

DESIGN

The BSS is a stand-alone system that can be taught to people before they encounter it within the built environment. It seeks to have design agreement with British Standard BS 8501:2002²⁴ as far as possible.

When developing the design of the symbols to be used in the centre, the team working on BSS identified that there were issues with other existing symbol systems. For example some systems such as PEC Symbols can be of poor quality when they are enlarged for use on larger signs. Other symbol systems are word associated and therefore more suited to aiding in direct communication rather than signage.

The Bonnington Symbol System does not set out to replace other systems, but to augment them. Some of the symbol sets were not specifically designed for signage, but for other common uses of symbols. However, as BSS has been developed to follow British Standard symbols this can be a positive factor when making a case for the deployment of symbols in buildings where such signage is already used.

METHODOLOGY AND APPROACH

In developing a strategy for a new project, the staff from BSS will start by consulting with the various parties involved in the project, including the client and end users of the system. This consultation is carried out on a project by project basis to ensure that any specific signs that are unique to that particular project and environment are developed with the end users needs in mind. This consultation is an ongoing process and continues throughout the life of the project. Once the signage and wayfinding project has been completed and installed, there is also a need for monitoring and reviewing of the work to determine its effectiveness, and identify any potential gaps or changes to the signage strategy that may be identified once it is installed.

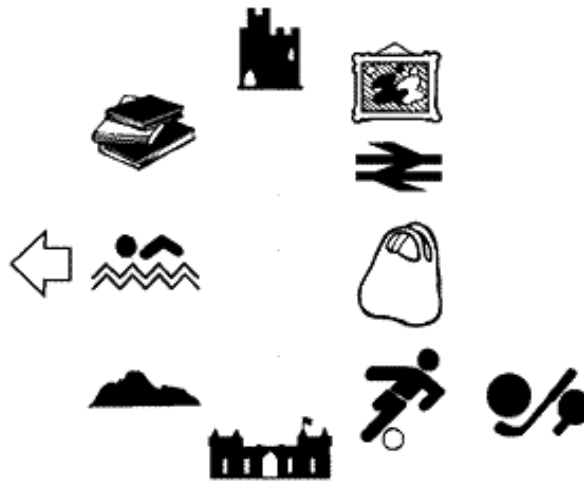
The BSS team can be brought in at a strategic level to develop a system for an organisation. Alternatively, they can develop a bottom up system where they will work with an individual, or group of individuals, to develop a signage and wayfinding system that is specific to their needs and requirements.

EXAMPLES OF PROJECTS TO DATE

An example of the bottom up approach can be seen in the design of a symbol system to incorporate into the signage strategy of Telford College. A new cooking class for people with learning disabilities, and a desire to increase skills in communication, led to the development of a system for a specific part of the building. This has since been developed into a wider strategy to incorporate the BSS in other areas of the building.

In order to implement the system effectively it was found to be necessary to work with key staff within the building, including lecturers, to raise awareness of what the system was and how it worked. This would ensure that they accepted the reasoning behind it, and did not remove or alter the signs in any way once they were installed.

The BSS can be used for the benefit of a wider audience than simply people with learning difficulties. The city of Edinburgh attracts visitors that will include people who have difficulties understanding written or spoken English. The population of the city also has communities of people who may have difficulties understanding information presented in written English, such as people from ethnic and minority backgrounds, people with dementia, pre-school children, people with limited literacy skills and people with acquired head injuries for example. As such, BSS is being implemented in 18 centres for elderly people, particularly with an emphasis on those with visual problems and dementia. It has also been used to add intuitive symbols to a map of the High St. This can be used to aid people who do not understand written English in reaching various locations within the city centre. An example of the signage is given below.



The Social Inclusions Group within the City of Edinburgh Council asked the Recreation Department to test methods of improving access to a range of council services as part of a pilot in the council's response to the requirements of the Disability Discrimination Act. The department identified three very different sites for the project, the City Art Centre, Cammo Estate, which is a wilderness park on the outskirts of Edinburgh, and Leith Library. The team from BSS and the Recreation Department carried out a number of consultation days with local user groups at each location. BSS's own focus groups were involved in further detailed consultation on symbol design. The Social Inclusion Group then commissioned BSS to provide both symbols signage and accessible information systems for all three sites, each of which had very different requirements.

The City Art Centre is a listed art facility within the centre of Edinburgh that had limited space for signage without compromising the wall spaces used for exhibitions. Signage had to be developed that was in keeping with the listed status of the building and additionally was acceptable to building and conservation managers. BSS provided a set of floor plans and signs at strategic points on each floor to improve wayfinding throughout. Cammo Estate has a policy of avoiding the use of signage within its boundaries, and so as an alternative, a leaflet was produced that assisted in wayfinding. The key issue at Leith Library was to produce a set of symbols that effectively represented the varied collections and services available to users of the library. An example of the signage that was used within the library is given below.



The Eden Project

BACKGROUND

The Eden project near St Austell in Cornwall opened in March 2001 after three years of development. The Millennium Commission had earmarked it as the 'landmark' project of the far South West. Work in developing this site and improving its facilities is continually ongoing.

One of the areas which the Eden project is currently developing is to improve its facilities in the area of signage. They have identified that there is a need to provide signage and other wayfinding information in a format that will be accessible to as many people as possible, including people with learning difficulties.

DESIGN

The Eden project, working in conjunction with the Sensory Trust, identified that the signage within the Eden project could be enhanced through the use of symbols to reach as many people as possible. The incorporation of symbol languages used widely by people with learning difficulties have been designed into the main on-site interpretation. The symbol system that is being used is the Widgit system.

Widgit Software was founded in 1981 and is the longest running Special Educational Needs software company in the UK. The aim of its products is to develop literacy using pictures, symbols and words. This aim is further enhanced by the reputation it has for meeting the real needs of its clients. Widgit software is used by many organisations both in the UK and abroad. Widgit symbols were identified as the symbol system that would be incorporated into the signage strategy for this project. This system was chosen due to it being a recognised and well established symbol system and one that is used by many people with learning difficulties. These symbols were then incorporated into the signage, and are being rolled out across the project.

METHODOLOGY AND APPROACH

In seeking to develop this ongoing signage strategy the Eden project is working in partnership with the Sensory Trust. The Sensory Trust is a national charity based in Cornwall which is involved in the field of social inclusion and accessible and inclusive environmental design, and provides a range of consultancy services. The work they do ranges from physical site design through to interpretation and policy issues. These services include promoting and implementing inclusive environmental design, promoting environmental participation and learning for people typically excluded by age or disability. They also consult with the end users of any proposal, involving them in all levels of environmental planning, design and management.

The site of the Eden project is a physically challenging area and Eden identified that working with the Sensory Trust gave them the opportunity to trial new inclusive techniques and advise on all aspects of access on the site. As well as the work on providing more accessible signage and information including Widgits, wider work onsite includes advice on exhibit design, information design (including Braille and audio), access volunteers and awareness training. In all of these areas the involvement of end users in testing the proposals is a crucial part of the process.

Case study conclusions

The two case studies that were examined used very different systems for signage and wayfinding, and hence there was no standardisation of the symbols used. However, it was clear that both systems have had positive feedback from end users as to their usefulness in aiding people to wayfind.

Symbols and signage seem to be the most common means of trying to assist people with learning difficulties to wayfind. It was also clear that symbols and signage were only part of the wayfinding process that people with learning difficulties use. The methodology behind both case studies included a focus on, and a high level of involvement with, people with learning difficulties whilst developing the signage. Time was also given for consideration of the aims of the proposed signage, and what would be the best way to incorporate the symbols into the signage. In addition, in the projects detailed above, the use of signage and symbols was not looked at in isolation, but was seen as part of a wider focus on wayfinding and also of involving users in designing and implementing such systems.

It was also shown that an increased awareness in the reasons behind, and the use of, such systems are necessary to ensure that they are not altered and remain consistent after installation. This is particularly important for staff who work in the building that are not involved in the project, as they may not be aware of the intentions behind the use of the symbols. It was also noted that there can be a potential conflict with such signage and conservation and building management bodies.

Consultation with user representatives

The next stage of the project was to seek the views of people who represent people with learning difficulties. User representative organisations were identified through the literature review. This consultation was carried out in two phases. Firstly a series of six short telephone interviews were carried out, this was followed by two focus group meetings that were held with the representatives of these organisations.

The organisations that were involved in the user representative consultation were People First, Mencap, Leonard Cheshire, RNIB Multiple Disability Services, Capability Scotland and The Foundation for People with Learning Disabilities.

Telephone interviews

A short questionnaire was developed and this was used as a framework to undertake a series of six interviews with people who represent people with learning difficulties. The purpose of these interviews was to determine what problems people with learning difficulties have when navigating around public buildings, and what may be the solutions to these problems. In addition, the interviews addressed the issue of how people with learning difficulties could be involved in identifying these problems and identifying solutions.

The key themes picked up from the interview questions are detailed below:

HOW DO PEOPLE WITH LEARNING DIFFICULTIES NAVIGATE AROUND BUILDINGS?

Most of the user representatives explained that people with learning difficulties use many methods of navigating around public buildings and each person may have their own individual way of how they navigate. As has been identified earlier in this report, many people with learning difficulties may also have other disabilities and this can also affect how they navigate buildings, for example someone who is also blind or partially sighted may have additional wayfinding requirements.

WHAT ARE THE PROBLEMS ENCOUNTERED BY PEOPLE WITH LEARNING DIFFICULTIES IN NAVIGATING AROUND BUILDINGS?

It was identified that there is a great deal of inconsistency in the built environment in general, and this lack of consistency causes confusion for people with learning disabilities and other associated sensory disabilities.

There is also a lack of consistency in signage, with signs being different in style and layout from one building to another. There are also many types of symbols used on signs and whilst in many instances these can provide a useful tool, they can also be confusing, particularly where someone is familiar with one style of system and another is in use.

With no standard for symbol systems, different people will have experience of different types of systems and as such may be confused by a system that may be slightly, or widely, different from that which they are familiar with.

This lack of consistency in the signage within a building is further exacerbated by the use of temporary signs. Temporary signs can be moved from day to day, which can cause confusion over their meaning for people with learning difficulties. For example a shop which has a sign outside which says that the shop is open may be there one day but may not be there on another day, even though the shop is open. This can cause confusion not just about the opening hours of the shop, as its very presence may be part of someone's wayfinding process. It was also identified that the signage should be located at the correct height for the information given on it and that the location of the signs should also be consistent. These principles are developed in Barker and Fraser's guide to inclusive signage⁸.

It was also considered that wayfinding around the building was more difficult if there were fewer navigational prompts. Examples of prompts include the use of landmark features within the environment, or the use of colour to assist in identifying different areas or functions of the building.

In addition, it was reported that many people with learning difficulties would find it difficult to ask for assistance if the wayfinding within a building was not intuitive. In some cases this can be due to an experience of discrimination in the past, which can lead to uncertainty and possibly to upset and distress. Consequently the attitudes of the staff in the building was seen as being crucial in whether people will ask for assistance.

WHAT TOOLS DO PEOPLE WITH LEARNING DIFFICULTIES USE TO ASSIST THEM IN NAVIGATING AROUND PUBLIC BUILDINGS?

The input of the work of support workers and personal assistants was seen as critical for people with learning difficulties. For many people this support is essential to enable them to navigate around a difficult environment. Difficult environments may require a lot of support and guidance. The involvement of support workers and personal assistants may take place prior to any visit to a building, and may involve many hours of work identifying what may be found in that building or environment. This could involve the use of photographs of what may be encountered on route to, and then within, that particular building. It may also involve the use of simple maps and the identification of any landmarks along the route. Support workers and personal assistants may also assist people with learning difficulties in mapping any new environments by going to the relevant building and assisting people to map that environment prior to any future independent or supported visit.

The use of symbols on signs that may be encountered within the building was seen to be a helpful tool to aid in wayfinding. It was acknowledged that this would be further strengthened if these symbols were consistent throughout the environment, as then work could be done beforehand with the individual on identifying the symbols. This would further aid people's ability to wayfind when out in the pedestrian and built environment.

Familiarity with the buildings was also seen as a tool that people used to help navigate. People may need to ask for directions in unfamiliar buildings. The involvement of support/care workers prior to, and during a visit to an unfamiliar building, is often very important in developing their familiarity with the building.

It was identified that many people with a learning difficulty make use of photographs or pictures in addition to, or instead of, using symbols. This use of photographs may assist people in identifying a particular feature that they are looking for. Landmark features assist people in identifying where they are along a particular route. There is some evidence that particular routes marked out on the floor within a building can be of assistance to people with learning difficulties, such as coloured trails to follow. However the use of this type of system to identify multiple routes can create additional confusion.

Staff awareness of the issues that people with learning difficulties may face in wayfinding around buildings was seen as the most crucial element in assisting people. If staff are more aware of the issues facing people with learning difficulties in finding their way around, then they will be better placed to be approached and able to offer wayfinding advice in a way that is easily understandable.

HOW CAN PEOPLE WITH LEARNING DIFFICULTIES BE INVOLVED IN THE PROCESS OF INVESTIGATING IMPROVED SIGNAGE AND WAYFINDING?

A common theme from the user representatives in response to this question was that there is a need to have the involvement of both people with learning difficulties and also their support workers or personal assistants if appropriate.

It was seen as both desirable and important to gain the view point of people with learning difficulties as to what may be the areas that they would like to change within buildings. This should be carried out by asking people with learning difficulties and the people who support them, and should be carried out in the context of supporting people to be as independent as possible. It was suggested that this could be done in the context of service users' forums or user involvement groups. It was also felt that this could further enable people with learning difficulties by helping them to find out the information themselves about what are the issues in regard to signage and wayfinding within the built environment.

Focus groups

Following on from the telephone interviews a focus group format was developed and two focus groups tackled the same issues as the telephone interviews, the key themes being detailed below:

WHAT ARE THE ISSUES/PROBLEMS THAT PEOPLE ENCOUNTER IN FINDING THEIR WAY AROUND PUBLIC BUILDINGS?

It was identified that there are issues prior to people entering buildings, as a building has to be set in its context and this means that there are clear strong links with the pedestrian and external environment. Although the scope of this project was to look at signage and wayfinding within public buildings, the links with the external environment should not be dismissed. The building should be set in its context and location, as people have to be able to find it before they can access the building. The ease of how this happens may determine how people then use the building once they are there.

Following on from the point above, it was seen as particularly important that the entrances to buildings should be designed to appear straightforward and logical to use. Many entrances are not obvious and can create confusion. People, including people with learning disabilities, may feel uneasy and apprehensive if they have difficulty in accessing the building in the first place.

There is a need for a clear signage strategy at the entrance to the building to help identify where you are and how to get around the building. A clear corporate identity across an organisation can also provide consistency across all their buildings. This helps people to identify what they may expect within buildings belonging to the same organisation and can reduce confusion.

The design and architectural philosophy of the building was also identified as posing problems for people with learning difficulties. In a similar manner to people with visual problems, those with learning difficulties may find it difficult to identify the entrance to a building when all the walls and doors are glazed.

Buildings and access to services that are not intuitive, such as the layout of some banks with multiple counters for different services, may also cause problems for people with learning difficulties.

Many people with learning difficulties have spent several years of their lives in large-scale institutions. This can lead to a degree of institutionalisation, and this can affect how people view certain buildings. Some austere buildings can give an unwelcoming aura and this can affect how people perceive and thus use that building. This can also be true of the buildings of a certain size and scale. In addition, if people have had a bad experience in certain types of buildings, for example a hospital, this again can affect how they might use and navigate around similar buildings, especially if they bring back particular memories and feelings.

A lack of consistency, or changes within the building can also be an issue in how people wayfind. This can be especially true if a person has had travel training within a particular building identifying landmarks and a route within the building. If elements change within the building, which become inconsistent with the training they have had, then this can lead to confusion and possibly discouragement or a lack of confidence.

For people who have learning difficulties or other disabilities there is an increased need to be reassured as to where they are within the building. An example was given that someone who has a visual impairment needs to be able to identify that they have passed through a doorway in a corridor.

There is also a lack of awareness of the issues affecting people with learning difficulties, which can affect how people react to being asked to assist people in wayfinding, and may give a false impression of the ethos of a service provider.

It was also identified that some people with learning difficulties can have a problem with identifying right from left, and this can potentially be a problem if assistance is sought and a member of staff within the building gives directions.

Signage within buildings can also be confusing and does not always convey full information to someone with a learning difficulty, as it is in a form that they may not fully understand. For example a sign which indicates the direction to 'Rooms 36-40' may not convey to some people with learning difficulties that this also includes rooms 37, 38 and 39.

Within a transport environment there is sometimes an overload of signage and information which is further complicated by the fact that there are often frequent last minute changes, which are not always effectively communicated in a manner that everybody can clearly understand. It was agreed that a transport environment, such as a station, provides very specific problems due to the rapidly changing information.

WHAT CAN BE THE SOLUTIONS TO THESE PROBLEMS TO HELP PEOPLE FIND THEIR WAY AROUND THE BUILDING?

The use of colour coding within a building was felt to be of assistance. In addition, the use of colour and tonal contrast to identify key critical features within the building such as doorways will also help people navigate around the building.

Audible signage or providing recognised assistance buttons within large buildings could also be a benefit to many people with a learning disability, particularly if they were consistent from building to building. These could provide people with an easy reference point at which they could identify that they would be able to gain more information about where they are and where they want to go. The group acknowledged that this would not be useful for everybody, as some people with a hearing impairment may not be able to access these facilities. Thus, whilst any such facilities should be designed to make them as accessible as possible, they can only be part of the wayfinding tools that people would be able to use within a building.

The user representatives agreed that clear signage within the building should be provided. These signs should incorporate colour and tonal contrast and the use of symbols as well as text. However, they felt that some people with learning difficulties will learn how to navigate to or through a building first, and will then use signs as a backup or to reinforce what has been learnt on their travel training.

Travel training was seen as a key element in assisting people with learning difficulties in navigating around public buildings. Travel training can include support workers or personal assistants checking the route beforehand, taking photographs of the route and of specific places where the person will be going. Linking different wayfinding aids, such as signs, photographs and landmarks, can further help people identify where they are within a building as it gives multiple clues as to where they are. It was noted that learning how to navigate the route from A to B would be different from navigating the route from B to A, as most people with learning difficulties are unable to simply reverse a route.

Contact with people in the building can assist in wayfinding. However, there is evidence to support the need for staff training in this area, as there is a general lack of awareness of people's needs and how to meet them appropriately. It was suggested that this could include staff giving people a tour of the building to familiarise them with it, or to allow people to wander around a building to get their bearings.

Staff members should understand the need to give people information and time to practice travel training within the building prior to someone coming to the building independently. This can be something that may be of great assistance but may not be something that front line staff may think of, since it is not a service they would offer to everybody. Additional training for customer-facing-staff in dealing with people who may have speech or hearing difficulties was also suggested.

HOW CAN PEOPLE WITH LEARNING DIFFICULTIES BE INVOLVED IN THE PROCESS OF INVESTIGATING IMPROVED SIGNAGE AND WAYFINDING?

The focus groups then looked at the issue of how people with learning difficulties could be involved in identifying the issues and the solutions to these issues.

It was again recommended that there is a need to have the involvement of people with learning difficulties alongside their support workers or personal assistants if appropriate. It was suggested that this could be achieved by asking people with learning difficulties what buildings and environments they disliked going into, and what were the reasons for this. This method was also seen as a way of identifying what people with learning difficulties liked about buildings, and again what were the underlying causes and reasons behind this. Whilst positive and negative feelings would not be solely linked to their wayfinding experiences, this was felt to be a good way in developing a dialogue with individuals about how they viewed different environments.

Carrying out workshops with people with learning difficulties, discussing how people manage when in the built environment was suggested. By doing this individuals would be able to contribute his or her own particular experiences of navigating around the built environment. A further suggestion was to accompany people with learning difficulties within environments where they may not be familiar. This would help to clarify how people identify where they may be within a building and how they begin to wayfind around that environment.

Conclusions from the consultation with user representatives

Good staff awareness and attitudes from people who work in public buildings can greatly assist people with learning difficulties in their ability to navigate around buildings. An ability to explain and give directions clearly is very helpful, but also the attitude of staff when approached by someone with learning difficulties can make a major difference to their experience of the building.

People with learning difficulties are individual people with individual needs, but consistency in the built environment will enable people to transfer their wayfinding skills from building to building. There was also evidence that the design of the building could enhance or hinder wayfinding on the basis of how logically it was laid out.

Although the scope of this project was to look at signage and wayfinding within public buildings, it has been clearly identified that the links with the external environment should not be dismissed.

Workshop sessions^{††}

The final task for the project was to carry out a series of three workshop sessions. These were developed and carried out with three people with learning difficulties and a support worker or advocate in each session. These sessions aimed to pick up on the main themes of the project that had been identified to date, and to incorporate the views and opinions of people with learning difficulties.

Workshop format

The workshop sessions included samples of symbols used in signage for discussion. Both of the symbol systems that had been identified through the case studies, the Bonnington symbol signage and the Widgit system, were used, along with some from the British Standard on symbols BS 8501:2002²⁴.

In addition to the discussion, some time was spent visiting a local tube station and library, to identify what may be the key issues within those particular buildings that helped or hindered wayfinding.

The consultation with user representatives suggested an approach in which people with learning difficulties are asked what their favourite buildings to visit were, and which ones they disliked, and why they felt that way. Where users liked a building it often indicated a level of confidence in using and moving around the building.

The method of getting a sample for the workshop sessions was to contact well established groups of both self advocacy and representative organisations. As detailed previously, there were some issues relating to the selection of members and so it was decided the best method was to approach an organisation with a pool of volunteers for this type of work, such as People First and People Choice. Criteria for selection was that participants had a degree of independent or assisted mobility, as it is likely that these people will have the greatest need for accessible signage.

HOW DO PEOPLE FIND THEIR WAY AROUND BUILDINGS?

It was evident from the discussions that people used many ways to find their way around buildings, and that members of the workshops visited a wide range of public buildings both on their own, with friends or family, or with support workers or personal assistants. This evidence from the workshops backed up the findings from both the literature review and the consultation with the user representatives that people have a wide range of wayfinding strategies.

Familiarity with certain symbols and signs such as the sign for the London Underground, which is a well established sign and one which is consistent across London, was something that several of the participants found useful in wayfinding. This enabled them to feel confident of what the building was, and what service they would be able to access in that building.

^{††} Thanks are due to the team at People First who provided the location, the support workers and identified users for the workshops.

A very popular way of finding their way around buildings was to have a previous visit with other people and to have had a look around. This was felt to be a way to help identify what was in the building and where the things that people wanted were located within the building.

It was also a common theme that people would ask for assistance from somebody who worked in the building. However, this was identified as sometimes being difficult as it was not always clear to the users who worked within the building, as they may not be wearing a badge or a uniform. Some people felt that they might not want to ask people for help as they did not know who might be the right person to ask. It was stated by a few participants that having a well identified reception or help desk would be very useful in identifying where they could go to ask for assistance.

WHAT ARE THE THINGS THAT MAKE GETTING AROUND BUILDINGS DIFFICULT?

A common theme from the workshop sessions was the fact that sometimes it is difficult to get to the building in the first place. This can be due to the lack of accessible transport, not being able to find the building because it is not well signed, and also it may be physically difficult to get into.

In some buildings it was identified that it was difficult to see where to go as there were no signs that could be easily interpreted, and that some people would feel lost in this kind of environment.

Having clear signs that are easy to find can help. When visiting the local library there were areas where it was identified that the signs were not easy to locate because they were mixed up with the other information that was on the walls. Participants also mentioned that having signs that are the same throughout the building is helpful, as where signs are different it makes it difficult to see what is a sign. This was said to be something that does not help people find things in a building.

WHAT ARE THE THINGS THAT HELP PEOPLE GET AROUND BUILDINGS?

Some people identified that they did not use symbols to communicate and that while some of the symbols shown were clear and readily identifiable this was not the case for all. It was therefore noted that as many of the participants could read, having text on signs to accompany the symbols further aided their understanding of the sign.

Having been to the building before with someone who could help explain the building, and where to go, was again seen to be very helpful. This could be with a support worker or personal assistant.

Being able to identify where to go for assistance and having recognisable members of staff within buildings will help people to be able to feel they can go and ask for assistance.

Buildings that were easy to get around, and where you could see where you were going and how to get back to the entrance, were well designed. Buildings like this were considered to be good places to visit.

Conclusions from the workshop sessions

Again a key point was that everybody is an individual, and while there may be common tools used in how people wayfind around public buildings, most people will have their own individual way of navigating around buildings and the wider environment.

Participants felt that having people, for example members of staff, that they could ask for assistance, helped them in finding their way around buildings. Staff who were friendly was also seen as a positive thing. This reinforced the comments from the user representatives who had emphasised the importance of staff training and awareness of the issues that people with learning difficulties encounter.

People with learning difficulties also use their support workers or personal assistants to help them wayfind around buildings and familiarisation visits were seen by several users as beneficial.

The use of both text and symbols or pictures on signs was seen as a good idea to help people who could not read as well as people who could. Consistency of signage, so people were able to easily find and identify signs, was also considered important.

Once again, signage was seen to be only one part of a wayfinding package, other key elements were being able to clearly identify the entrance and the facilities within buildings. Orientation clues or landmarks were also useful in helping people locate where they were within a building, and simply being able to see where you are made people feel much more comfortable.

Conclusions and recommendations

Evidence from the literature review, the consultation with user representatives, and the end users themselves, all proved that people with learning difficulties have a very wide range of abilities and use an assortment of strategies for wayfinding. Signage is a useful part of wayfinding and can help a great deal, but it is by no means the most important for many people.

The user representatives and the people involved in the workshops backed up the research reviewed which detailed a list of other methods and tactics that people may use to navigate buildings. The layout of the building, use of landmarks, familiarity with the environment, travel training, clear sight lines, assistance from staff or others, and the support of family, friends or a personal assistant were all considered to be important tools in aiding people with learning difficulties.

Travel training and the use of some form of support worker were seen as the most important. Many people with learning difficulties will learn a route by rote, and whilst signage may be used as part of that process, many other features such as landmarks or other materials may be just as important.

The attitude and awareness of staff asked for directions by people with learning difficulties was seen as very important by the user representatives. This was backed up by the users themselves, who reported that they felt more comfortable where they were able to ask for help and could easily identify where help could be found.

Whilst signage was not the only method of navigating, good signage could provide many benefits to people with learning difficulties. Evidence showed that clear and simple signage, using both symbols or pictures along with text, was found to be beneficial by many people. Key issues were the consistency of signs throughout the environment, and the ease of identifying the signs in the first place. Guidance found in *Good Signs*² and the *Sign Design Guide*⁸ is recommended as being relevant and in keeping with all of the results that have come from this study.

There is no single symbol system that could be recommended, and in fact there appears little scope for a single system whilst there is such limited research on the needs of people with different levels of learning difficulties, see the next section on future work.

A key recommendation from the case studies is that people with learning difficulties should be consulted and involved in the implementation of any signage or symbols system, particularly where there are unusual or unique requirements for a particular site. Other research also shows that whilst the logistics of involving such a group in research can be difficult, their input strengthens and reinforces the results and so this should be incorporated into future research projects as far as possible.

It is recommended that building designers and managers are encouraged to create simple layouts with good sight lines making buildings easier to navigate. Clearly defined routes with limited numbers of choices, landmark features and easy to find key facilities such as reception desks, will make wayfinding easier for everyone. Following good practice in logical building design and layout will mean there is less need for a complex system of signage.

It is also recommended that building managers ensure that staff are clearly identifiable to those who may request assistance, and that staff awareness training is provided to ensure that front line staff are able to understand the requirements of people with learning difficulties and can respond in an appropriate manner.

Review and future work

The project has produced a report that explains the current standing of research into the problems encountered by people with learning difficulties in navigating around public buildings. In detailing their problems it hopes to show a range of tactics and methods by which such users wayfind, and thus a range of strategies that can be used within public access buildings to enhance their ability to navigate them successfully.

It has also fulfilled the terms of the scoping study and identified that current best practice sign design guidance is directly relevant to many people with learning difficulties. It has also provided recommendations on other tactics that can also be adopted to further improve access to the built environment for people with learning difficulties.

The lack of any standard definitions or “groupings” of levels of ability for people with learning difficulties means that it is very difficult to compare or contrast the results from different research projects or case studies. As such, most ‘stand alone’ as individual pieces of work and it is not possible to extrapolate data about which style or system of symbols is most effective.

It was also difficult and time consuming to identify a cross section of user representatives that covered a range of experience. We wanted to ensure that we did not speak either solely to those who responded on the basis of personal experience with specific individuals, or at the other extreme those who responded from a purely strategic or ‘overview’ standpoint.

We would suggest that the lack of wide ranging research in the field of people with learning difficulties and their interaction with the environment, means that taking forward work in this area may not be possible until a wider study identifies some form of standard banding of levels of ability. This is necessary so that realistic comparisons can be made across different projects. The nature of the individuals concerned means that it would be very difficult to teach individual participants multiple symbol systems or techniques of wayfinding. Without a method of identifying ‘levels’ of learning difficulty it will be very difficult to carry out any detailed research on the effectiveness of different systems.

The literature review and case studies have shown that there is a range of symbol systems available and used by people with learning difficulties. Further research on which are most appropriate for the built environment is needed, however without some form of definition of different levels of ability of end users, it is difficult to suggest how such a study could be carried out.

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Appendix 1: Consultation with user representatives

Interview questions

The following are the main questions that were asked in the telephone interviews. Subsequent follow up questions were developed in the course of each discussion to clarify or expand on any points made.

1. In your experience, how do people with learning difficulties navigate around buildings?
2. What are the problems encountered by people with learning difficulties in navigating around buildings?
3. What aspects of signage do people with learning difficulties use to assist them in getting around buildings?
4. What methods apart from signage do people with learning difficulties use to assist them in navigating around public buildings?
5. How do you think the issue of improving signage and wayfinding for people with learning difficulties could be investigated?
6. How can people with learning difficulties be involved in the process of investigating improved signage and wayfinding?

Format for the focus groups

The focus groups carried out their discussions under the following three main headings.

WHAT ARE THE ISSUES/PROBLEMS THAT PEOPLE ENCOUNTER IN FINDING THEIR WAY AROUND PUBLIC BUILDINGS?

Prompts

- Buildings that people are familiar with
- Visiting a building for the first time
- Transport infrastructure

WHAT CAN BE THE SOLUTIONS TO THESE PROBLEMS TO HELP PEOPLE FIND THEIR WAY AROUND THE BUILDING?

Prompts

- Signs with or without symbols
- Landmarks
- Intuitive and logical design of the building
- Colour coding
- Asking people
- Travel training

HOW CAN PEOPLE WITH LEARNING DISABILITIES BE INVOLVED IN IDENTIFYING THE ISSUES AND THE THINGS THAT WORK?

Appendix 2: Consultation with users

Workshop format and questions

The following is an overview of the format of the workshop sessions and includes the main areas that were discussed.

- Start with introducing myself and finding out the participants names.
- Explain what we are going to do, and explain any ground rules in conjunction with the advocate or support worker.
- Clarify any points of confusion and ask if anyone has any questions.
- Ask how do people get to buildings that they want to go to.
- Open discussion on what buildings people like and why. Move onto a discussion on what do people not like about buildings.
- Open discussion about signage using as prompts examples of symbols from Bonnington Symbol System, Widgit and BS 8501:2002.
- Visit the local library and underground station asking for comments on what helps them identify where they are and how they get about and find things within the building.
- Thank people for their participation and explain what will be happening with the information they have provided.