

Chapter 2

Inclusive Bus Travel - A Psychosocial Approach

F. Nickpour, P.W. Jordan and H. Dong

2.1 Introduction

2.1.1 Public Transport - The New Climate

Public transport is facing major challenges in the current economic and social climate; a considerable rise in demand for public transport and an ageing population that is mainly dependant on public transport and is increasingly in need of specialised and door-to-door services. The above challenges double when one considers the raised public awareness and the pressure from user organisations to improve the equality and quality of public transport for all.

Public transport providers need to respond to increasing demand for service provision, both in terms of volume and diversity of service users. Transport for London (TfL), a major public transport provider in UK, is currently facing over-subscribed door-to-door services and an increasing demand for accessible and usable public transport by conventionally marginalised groups such as older people and people with disabilities. Issues of accessibility, reliability and quality of service are key indicators that are sometimes in conflict and need to be revisited. There is a need to keep the quality of service consistent and at the same time redefine and prioritise the areas of focus and improvement.

2.1.2 Public Bus Services

Buses will continue to be - probably for many years - the main and only form of public transport that can be accessible to almost all (London TravelWatch, 2010). There is also evidence that bus services are often more frequently used by disadvantaged or vulnerable sections of society, therefore poor performance is more likely to impact on these groups (London TravelWatch, 2009). Thus, the bus

service proves to be the single most powerful transport tool in terms of inclusivity and equality potential and provision in a mega-city like London.

There have been great improvements in terms of making buses fully accessible. In London, all buses are now low-floor vehicles and have a space for one wheelchair (Transport for London, 2011). However, an ‘accessible bus’ does not necessarily guarantee an ‘accessible bus service’. An accessible bus service requires not only an accessible bus and an accessible bus stop but also an empathic well-trained driver and a user-friendly environment. As well as improving inclusivity, making local bus services more accessible brings wider benefits including facilitating social inclusion in the local community, making bus travel easier and more pleasurable for every member of the local community and reducing the need for dedicated services (e.g. Dial a Ride) which are not cost-effective.

2.1.3 The Project

Commissioned by Transport for London and one local London borough, a research project was conducted in order to address issues associated with bus travel in London. The aim of the project was to produce recommendations for improving the accessibility of bus travel through investigating barriers to a diverse range of people using (or not using) public buses and what makes a journey either pleasant or unpleasant. A variety of approaches and techniques were used in order to understand the barriers to accessibility and inclusivity and how these could be overcome. The research project aimed to assess and improve the accessibility of public buses through a holistic and comprehensive service-oriented approach, focusing on an accessible bus service as a whole rather than focusing on segments of the whole service such as bus or bus-stop.

2.1.3.1 Bus Service - Key Stakeholders

Broadly, with respect to bus services, three major stakeholders were defined:

- Service user - mobility challenged people
- Service provider - bus drivers
- Service operator - bus companies

Addressing accessibility and inclusivity issues, the project focused on mobility challenged people as the critical bus service users. For the purpose of this project, a mobility-challenged person was defined:

‘A mobility challenged person is someone whose mobility has been challenged due to age, physical or mental impairment, or an external physical condition; each of the above could have substantial and long-term adverse effect on the person’s ability to use public transport.’

(Nickpour and Jordan, 2011)

This definition includes, but is not limited to, wheelchair users and those with other impairments that affect mobility. Other major groups with other mobility

restrictions that may make it more difficult to use public transport are: older people, blind or visually-impaired people, deaf people or people with hearing difficulties, those with learning difficulties or social phobias, and guardians with buggies.

2.1.3.2 Bus Service - Stakeholder Issues

Key issues concerning each stakeholder included:

- For bus passengers: Positive experience from start to finish - every stage of the journey should be efficient, enjoyable and smooth, and the user should be and feel safe at all times.
- For bus drivers: Pleasant working environment - drivers should be treated politely and respectfully by all passengers. They should be equipped with the skills needed to carry out all aspects of their duties competently and receive the full support of both bus users and their employers in doing so.
- For bus operators: Profitable business - operators should be encouraged and enabled to fulfil the service requirements against suitable performance targets in a manner which is commercially viable.

2.2 Methodology and Methods

2.2.1 Methodology

The research project followed a combined primary and secondary research methodology, with a heavy focus on primary research conducted through a diverse range of field research methods. A major focus for the project was consultation with people who had a wide range of mobility challenges. Many other stakeholders were also included in the consultation process. This included bus drivers and representatives from bus operating companies, TfL, police and advocacy groups representing mobility-challenged people.

In addition to this consultation process, members of the project team gained first-hand experience of some of the issues faced by mobility-challenged people by taking bus trips while using wheelchairs. Information was also collected through observing mobility-challenged people travelling on buses and asking mobility-challenged residents of London Borough of Hillingdon - where the study was conducted - to take bus journeys and report their experiences.

2.2.2 Methods

A wide range of methods were used in order to collect first-hand information regarding the existing barriers and issues regarding accessibility and inclusiveness of bus services. All primary research was undertaken in the local London borough. In some cases, similar services were observed in other London boroughs as well. Due to space limitation, specific details in terms of participants' process of

selection, age, demographics, position, *etc.* are not included here. More detail on the above is provided in a technical report (Nickpour and Jordan, 2011).

2.2.2.1 Focus Groups

Three focus group sessions with different focuses were run in order to provide a holistic understanding of the existing issues. Each session focused on one stakeholder group. Firstly, a focus group session was held with nine representatives of service providers and a cross-section of other stakeholders aiming to look at organisational and big-picture issues. The participants included representatives from TfL, the local Council, bus companies, Dial a Ride, Age UK, Metropolitan Police, Hillingdon Community Transport and Access and Mobility Forum. Then, one session was held with a diverse group of service users with a focus on mobility-challenged passengers. This included nine participants; one blind person, one person with learning difficulties, one wheelchair user and six older people. Finally, a session was held with service non-users including seven mobility-challenged members of the public who did not use currently public buses for a variety of reasons. These included previous negative experience with using public buses and lack of trust and confidence in the service.

2.2.2.2 Access Audits

Two sets of access audits were planned and carried out. The emphasis was on both immersion (Moore and Conn, 1985) and direct observation (Dray, 1997). The first series of audits included eight local bus journeys and were carried out by the project research team, role-playing by using a wheelchair, aiming to look at specific mobility issues. Each observation session was attended by two members of the research team. The second series of access audits were carried out by a diverse group including five local participants with mobility impairments. Participants included one male older person aged 72, and two wheelchair users, one with an electric wheelchair and one with a normal wheelchair. Also, one person with learning difficulty aged 21 and one blind person aged 42 carried out the access audits. All audit sessions were documented through various applicable audio, visual and textual formats.

2.2.2.3 Interviews and Meetings

A number of meetings and interviews were held with individuals from various organisations and groups in order to look into a number of issues in more detail. Altogether, five interview sessions were held; these included interviews with three bus drivers, meetings with Hillingdon Community Transport general manager, the accessibility officer of Hillingdon Council, two officers from the Disablement Association of Hillingdon and six members of the local Youth Council.

2.2.2.4 Observations

Two major observation sessions were held. One session focused on special services aimed at mobility-challenged passengers; the project team spent a day working with the Dial-a-Ride service that provided door to door transport for mobility-challenged people. Another observation session took place at Bus Mentoring Day -

a training day aimed at helping those who assist mobility challenged people with their travels.

2.2.2.5 Literature Review

The literature review drew on a number of sources, reports and documents including reports by the Disabled Persons Transport Advisory Committee (DPTAC), Direct Gov, The Department of Transport and London TravelWatch.

The main source for the literature review was the new report by the Greater London Authority (GLA), titled “Accessibility of Transport” (GLA, 2010) which looked at the accessibility of all public transport within the capital including buses. The report drew on inputs from a wide variety of advocacy groups representing mobility challenged people as well as on a wide array of statistics quantifying accessibility of buses and other modes of transport.

2.3 Findings

Based on the access audits conducted, the journey was broken down into the stages shown in Figure 2.1.

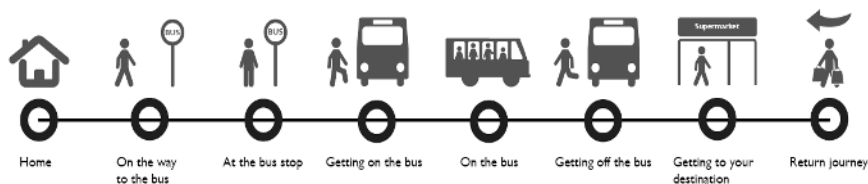


Figure 2.1. Key stages of a bus journey

The findings are presented under three key categories; physical, psychosocial and operational issues. Due to the length available for this paper, only a summary of findings is presented here. Detailed breakdown and analysis of findings can be found in the ‘Inclusive Bus Travel in Hillingdon: Assessing Accessibility’ report (Nickpour and Jordan, 2011).

2.3.1 Physical Issues

From a physical accessibility point of view, users tended to find the most problematic part of the journey was getting from home to the bus stop and getting from the bus to their final destination. Examples of problems here included: narrow pavements, loose paving stones, steep roads and difficult crossings. There were also accessibility difficulties at some bus stops - for example, the positioning of litter bins and other street furniture sometimes made deploying and using the ramp somewhat inconvenient.

However, despite such difficulties, it was possible for mobility challenged people to board the bus at all of the stops examined in the audit. Improvements in the design of buses meant that, in general, once the user had reached the stop, the bus could be accessed OK and the on-board part of the journey completed.

2.3.2 Psychosocial Issues

Various observational and immersive methods used also uncovered a number of other difficulties - mostly psychological and social - that users faced. These included:

2.3.2.1 *Uncertainties*

There were many aspects to this including uncertainties as to whether users would be able to get on and off the bus OK, whether they would have a long wait at the stop and whether their interactions with others would be positive.

2.3.2.2 *Overcrowding*

The start and end of the school day are times when the bus gets particularly crowded. This can sometimes mean that the bus is too crowded to let a wheelchair on. Even if it is possible to board, overcrowding can make it difficult for wheelchair users to get to the wheelchair bay and to move their chair into the proper position within it. Overcrowding is becoming an increasingly problematic issue as more and more people are using buses. This is due in part to the difficult economic conditions that we have had recently (bus travel tends to increase in times of financial hardship) and in part to the issuing of free bus passes to schoolchildren and older people.

2.3.2.3 *Negative Experiences with Drivers*

Many users had also mentioned that they had had problems with the drivers. This could be because of inconsiderate driving - for example pulling away too quickly - or because they were perceived as having an unfriendly or surly attitude towards the user. Indeed, during the access audits there were a number of incidents of drivers not stopping at bus stops when they saw a wheelchair user waiting to get on. Bus drivers mentioned that there were often problems with ramps failing to deploy and cited this as a reason why they could not always pick up wheelchair users.

2.3.2.4 *Negative Behaviour of Other Passengers*

A number of participants reported being annoyed or intimidated by the behaviour of other passengers. In particular they mentioned teenagers who they said could be very loud and often used foul language. A number of participants also mentioned that they also found it annoying when people had loud conversations on mobile phones or played music so loudly that it could be heard through their headphones.

The behaviour of other passengers when getting on and off the bus was also a source of annoyance and intimidation. In particular they mentioned pushing and

shoving and people not waiting their turn in the queue. Other users had reported that they are wary of using buses in the evening or night because of the risk of encountering drunk or threatening people.

2.3.2.5 Off-putting Stories

In some cases, participants were put off using the bus because of stories they heard about other people having bad experiences, in particular stories of violent or frightening incidents. These stories may have been told to them by friends or they may have read or heard about them in the media.

2.3.3 Operational Issues

An issue that may be a contributory factor is the key performance indicators (KPIs) used to measure the performance of the bus operators. Currently, emphasis is mostly on reliability - that has to do with timeliness of the bus service. There are no measures in place to monitor either the number of mobility challenged people using buses or the quality of their experience as one performance indicator.

It was observed that it can take some time for a mobility challenged person, such as a wheelchair user, to board the bus. This may lead to the bus running behind schedule with the consequence that it affects reliability. As reliability is the basis on which the bus companies are judged and the pressure is for them to run on time, drivers sometimes feel unenthusiastic about picking up mobility challenged passengers and hence may have a hostile attitude towards mobility challenged them or may try to avoid picking them up altogether.

2.4 Discussion

2.4.1 Physical Versus Psychosocial Issues

Overall the research suggested that good progress had been made in terms of addressing the physical issues. There could be problems getting to and from the bus stop and sometimes there were problems with ramps and small wheelchair spaces. However, it was generally the case that it was physically possible to complete a journey without excessive difficulties.

Perhaps the most striking issue to emerge from the research was the role that psycho-social factors played in affecting mobility-challenged people's quality of experience of using public buses, in particular, the impact of the attitudes and behaviour of the driver and of other passengers.

Bad experiences of this nature were the most frequently cited reasons for not enjoying a bus journey or for not using the bus at all. Previously, the emphasis of accessibility research and improvements schemes has been on the physical elements of accessibility. While these are certainly extremely important, the outcomes of our research suggest that psychosocial issues are equally, perhaps

even more, so. This observation mirrors those within the field of design generally where there has been increasing attention in recent years on psychosocial issues and their emotional consequences (Norman, 2005).

2.4.2 Special Service Versus Public Service

As part of this research we also looked at people's experiences with door to door transportation schemes for mobility challenged people within London. These included Dial-a-Ride, a minibus-based service which picks up passengers at their home and takes them to a pre-requested destination. This service was very popular with users. In particular they enjoyed the friendly atmosphere on the minibus and the friendly, attentive and considerate behaviour of the driver.

Mobility-challenged users praised the drivers for their empathy and understanding, for their cheerfulness and for making them feel valued and welcome whenever they used the service. They mentioned how much they looked forward to the social aspects of using the service and for the enjoyable conversations with other passengers. A challenge is to try and recreate some of these benefits on public buses and to put into place approaches and schemes that will help to foster a positive ambience.

2.4.3 Negative Interactions

It should be emphasised that the picture is not entirely negative; Field research supported the fact that many of the drivers have an excellent approach to interacting with mobility-challenged people. They are friendly, welcoming, informative and help make the journey a great experience. Similarly, many teenagers are polite, well-behaved and kind towards other passengers. However, this was mainly the result of each individual's intrinsic motivation and personal codes of conduct.

Nevertheless, it is also important to recognise that there are genuine problems with some bus drivers' and teenagers' attitudes and behaviours. Negative drivers' attitudes were observed and reported, such as being rude and uncommunicative towards mobility challenged people. Also, in some cases, some teenagers' behaviour appeared inconsiderate and liable to make people feel uncomfortable.

The effects of this negative behaviour tend to extend beyond the specific incidents that occur. When service users encounter a bad experience, they will remember this and will have a doubt in their minds about the quality of their experience next time.

This uncertainty can have a very powerful and negative effect. Even if people subsequently have positive experiences, the memory of the previous bad experience can create a sense of doubt - will this happen again? This doubt can make people question whether they want to use the bus again and leave them with some negative feeling for the duration of their travel. Moving forward, the

challenge is to find effective ways of improving the ambience on board and tackling some of the psychosocial issues that have been identified.

2.5 Conclusions and Recommendations

There is need for a 'Mentality Shift' when addressing accessibility in public transport. This study suggests and highlights 'psycho-social' inclusion as the key area of focus. The findings suggest accessibility and inclusivity issues affecting public bus services fall into three broad categories: Physical, Psycho-social and Operational.

Physical issues are to do with the design of the bus and the built environment and are the 'typical' issues considered when looking at accessibility. Findings suggest the key physical barriers identified include *Getting to bus-stop*, *Space availability and priority on bus* and *Ramp technology & reliability*.

Psycho-Social issues are the 'soft' issues associated with the quality of people's travel experience. Findings suggest the key psycho-social barriers identified are *Ambience*, *Awareness and empathy* and *Communication*.

Operational issues concern the running of the service and cross-organisational strategies and regulations. The key identified operational barriers are Key Performance Indicators. Public bus service KPIs currently appear to focus only on efficiency rather than quality, inclusivity and pleasurability of service.

The results indicate that it is the psycho-social issues that seem to be proving the biggest barrier to using public buses, in particular for mobility-challenged people. Addressing these issues requires a focus on people. It involves making them aware of the effect that their behaviour is having, convincing them to change it and giving them the skills and insights needed to do so. It also involves creating a desirable ambience throughout the bus journey, making the public transport experience not only efficient but also pleasurable.

Overall - including both physical and psychosocial factors - the following nine recommendations are proposed as key principles for improving mobility challenged passengers' experience of public bus travel.

Create an inviting and friendly experience of the bus service. Perceptions about bus travel influence people's decisions about whether to take the bus and the emotions associated with anticipating using it. Mobility challenged people should be confident that their bus journey will be a positive experience.

Make bus stops reachable. Getting to and from the bus stop is, generally, the biggest physical barrier to bus travel for mobility challenged people. Making bus stops more reachable would significantly increase the numbers of people who could access public buses.

Make all bus stops fully accessible. Once at the stop, mobility challenged people should be accurately informed about when the bus will arrive. The design of the stop should also facilitate quick and easy ingress for them.

Promote and facilitate positive behaviour amongst passengers. Interactions with other passengers should be positive and friendly throughout the bus journey.

Ensure that key aspects of the bus are fully operational. The aspects of the bus that affect accessibility should be fully operational at all times. Mobility challenged people should be confident that their journey will run smoothly and efficiently.

Ensure that all users have a safe and comfortable space. All mobility challenged users should have a safe and comfortable space in which to complete their journey. They should be able to move into and out of this space easily.

Welcome mobility challenged people aboard. Drivers should warmly welcome mobility challenged people aboard the bus. They should communicate clearly and cheerfully with them throughout the journey.

Set off and drive smoothly. Ensure that mobility challenged people are settled before moving off. Make sure that this is done smoothly and that the drive is smooth and controlled throughout the journey.

Provide information clearly through multiple channels throughout the journey. Mobility challenged people should be clear about when the bus is approaching their stop and have plenty of time to prepare to exit.

2.6 Acknowledgements

This research project was commissioned by London Borough of Hillingdon and Transport for London. The authors would like to thank all local participants in the project and the user research team including Murtaza Abidi, Penelope Bamford, Thomas Wade and Jennifer McCormack.

2.7 References

- Dray SM (1997) Structured observation: Practical methods for understanding users and their work in context. In: Proceedings of CHI 97 Workshop on Human Factors in Computer Systems, SIGCHI, Atlanta, GA, US
- GLA (2010) Accessibility of the transport network. Greater London Authority, London, UK
- London TravelWatch (2009) TfL performance report. London TravelWatch, London, UK
- London TravelWatch (2010) Bus passengers' priorities for improvement in London. London TravelWatch, London, UK
- Moore P, Conn CP (1985) Disguised: A true story. Word Books, Waco, TX, US
- Nickpour F, Jordan PW (2011) Inclusive bus travel in Hillingdon: Assessing accessibility. Technical Report, Brunel University, Brunel, UK
- Norman DA (2004) Emotional design: Why we love (or hate) everyday things. Basic Books, Basic Books, NY, US
- Transport for London (2011) TfL accessibility guide. Available at: <http://www.tfl.gov.uk/gettingaround/transportaccessibility/1171.aspx> (Accessed 13 August 2011)