





The Open University



Knowledge Exchange Seminar Series (KESS)

Including all: Improving arts accessibility for people with varying visual and hearing ability

Sarah Eardley-Weaver, Queen's University Belfast

s.eardley-weaver@qub.ac.uk

KEY POINTS

- There is an urgent need to support a continual process of systematic reappraisal and training in up-to-date and inclusive arts accessibility in Northern Ireland. This call to action responds to the Northern Ireland Disability Strategy 2012-2015 and the EU Disability Strategy 2010-2020.
- There is a growing number of people with sight and hearing loss in an ageing population.
- Internationally arts accessibility facilities for people with varying visual and hearing disabilities and abilities are increasing in range and number due to rapid technological advancements.
- However, progress towards inclusive arts accessibility is inhibited by a lack of public awareness and availability of these facilities.
- The ongoing project presented in this briefing aims to raise awareness about arts accessibility through further public engagement, education, training, research and dialogue.
- This project advocates recognition of the collective audience whilst also acknowledging its diversity. It addresses attitudinal barriers regarding disability and accessibility, and segregated access provisions.
- This briefing explores strategies leading to more cost-effective, inclusive, integrated access solutions.

1. Introduction

Accessibility to the arts and media is a prominent concern in the multicultural society of today given the power of arts to promote social cohesion. Accordingly, international, European and UK legislation supports the increasing recognition of social inclusion. Moreover, the UN requirement to monitor implementation of the United Nations Convention on the Rights of Persons with Disabilities (United Nations 2008) has propelled the need for a continual process of systematic reappraisal of accessibility to the forefront of current political and social debate. Furthermore, the impact of rapidly developing technological advances on access facilities accentuates this need for ongoing assessment in the arts and media. Therefore, this briefing aims to contribute to the monitoring operation supporting the commitment to the UN Convention affirmed in the Northern Ireland Disability Strategy 'A strategy to improve the lives of people with disabilities: 2012 to 2015'.

This briefing presents a summary of an ongoing research project investigating arts accessibility, and the focus in this paper is on access provisions for people with varying visual and hearing abilities and disabilities. The discussion will include reflection on accessibility as a human right and consideration of current access

facilities. Problem areas in arts accessibility provision are addressed through key project findings and action points towards a more inclusive form of access are suggested. This paper aims to explore prevailing mentalities towards disability and accessibility and to aid the ongoing process of raising public awareness.

2. Accessibility as a human right

Both legal and social recognition of accessibility as a human right are pivotal to the development of inclusive arts access. In legislation, accessibility is increasingly acknowledged as a human right at international, European and national level. For instance, see:

- The Universal Declaration of Human Rights (United Nations, 1948), which first set out an all-encompassing expression of fundamental, globally protected human rights, states that 'everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits' (Article 27 (1)).
- The International Covenant on Economic, Social and Cultural Rights (1966)
- The European Audiovisual Media Services Directive (European Parliament, 2010), [renaming and amending the 1989 Television Without Frontiers directive] which specifically encourages media access for 'people with a visual or hearing disability' (Article 7).
- The Broadcasting Act (1996)
- The Disability Discrimination Act (2005)
- The Equality Act (2010)
- The Northern Ireland Act, Section 75 (1998).

However, as a whole, society's response to accessibility implementation remains slow (see for example Byrne et al. 2014 and Harper et al. 2012 regarding Northern Ireland). Legislation demands further advancements in accessibility within society to overcome current linguistic, sensory, and socio-cultural barriers, and the arts are no exception. Moreover, as numbers of people with sight and hearing loss are rising in ageing populations in Europe and North America amongst others (Díaz-Cintas and Anderman, 2009: 5-6; Neves, 2005: 79), the vital importance of accelerating the progression towards inclusive accessibility for this growing minority is highlighted in the following projections:

- 'Action on Hearing Loss' (formerly known as the 'Royal National Institute for the Deaf', a.k.a. RNID) reports a dramatic future increase in numbers of people with hearing loss in the UK, stating: 'hearing loss is a major public health issue affecting over 10 million people in the UK one in six of the population. As our society ages this number is set to grow and by 2031 there will be more than 14.5 million people with hearing loss in the UK' (Action on Hearing Loss, 2011: 11).
- The 'Royal National Institute for the Blind' (RNIB) reports 'more than a doubling (115% increase over 2010) in the numbers of people with partial sight and blindness in the UK, to nearly 4 million people by 2050' (Access Economics, 2009: 44).

Therefore, we need to pursue the following lines of questioning:

- 1) How can we review our approach to accessibility to empower people with varying visual and hearing abilities and disabilities so that they can fully enjoy their rights as citizens?
- 2) How do we endorse equitable access and good practice in the implementation of legislation?
- 3) How can we ensure that arts venues are proactively reaching out to include everyone, to share our rich culture and heritage, and achieve greater equality of opportunity?

A starting point for responding to these questions is investigating the production and reception of current arts accessibility provisions by assessing contemporary developments and future requirements.

3. Arts accessibility facilities: current international developments and status in NI

Internationally, arts accessibility is experiencing rapid growth in the number, variety and modes of delivery of innovative access facilities for people with different visual and hearing ability (Díaz-Cintas et al 2007; Díaz-Cintas & Neves 2015). Technological advancements are driving this rapid expansion of access facilities. For

instance, mobile and haptic technology offer pioneering access options (Oncins et al. 2013, Van der Linden et al 2010, 2011). Moreover, society's increased exposure to multimedia in general has raised public expectations for inclusive, interactive, multisensory experiences of the arts. Consequently there is an urgent need for the development of a dynamic model for continual systematic evaluation and training in the provision of contemporary and inclusive arts accessibility facilities. An important initial phase in this process is increasing awareness about the widening range of methods for facilitating access. For people with varying visual ability, these facilities include the following (see Eardley-Weaver 2014 for definitions and details of these facilities):

- Audio description
- Touch tour
- Braille provisions (programme notes, exhibition guide, libretti, seat numbers, seating guide, signage)
- Audiosubtitling
- Large-print materials
- Provisions for guide dogs
- Thermoforms (e.g. tactile 3D prints of artwork)
- Haptic technology solutions (mobile phones, haptic navigation devices, PenFriend)

At present these facilities are primarily targeted at the blind and partially-sighted and are not usually available for everyone in the audience. For instance, at present in the UK, audio description (the narration and description of visual features in audio format) is most commonly broadcast via wireless headphones provided for blind and partially-sighted patrons by the venues. However, experiments with new modes of delivery via mobile phones provide the opportunity to offer facilities such as audio description and audiosubtitling to a wider audience including sighted patrons (Oncins et al 2013). Mobile phone apps and subtitle glasses can also be used in the delivery of access facilities for people with varying hearing ability which include the following (see Eardley-Weaver 2014 for definitions and details of these facilities):

- Sign language interpreting
- Subtitles/surtitles
- Captioning for the deaf and the hard-of-hearing
- Hearing loop
- Provisions for hearing dogs
- Assistive technologies e.g. smart glasses

These facilities are generally more open to use by all patrons at any given event than audio description and touch tours due to their visibility. For instance, a theatre sign language interpreter usually stands at the periphery of the stage in clear view of the audience (Rocks 2011). Similarly, theatre subtitles, surtitles or captioning are typically projected onto screens in close proximity to the stage (Eardley-Weaver 2015). In this way these facilities are more inclusive than those targeted at the blind and partially-sighted. However, they are only provided at a limited number of events per year (as shown in Figure 1) thus restricting inclusion.

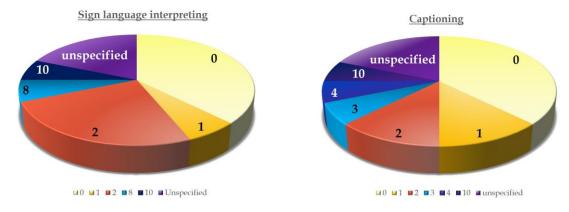


Figure 1: Pie charts showing the number of events per year at which sign language interpreting and captioning are available at the venues.

The pie charts in Figure 1 demonstrate the high proportion of arts venues at which only 1 or 2 or even no sign language interpreted or captioned events are available per year. Only 1 out of the 16 participating venues offers 10 signed and captioned events per year and another offers 4 captioned and 8 signed events per year. Therefore, at the majority of venues patrons wishing to use these facilities to access the arts have very little or no choice regarding the events they can attend.

The data discussed here form part of an ongoing research project investigating the provision of arts accessibility facilities in Northern Ireland. Various arts venues across the 20 local government districts were contacted to request information via questionnaire and follow-up discussion as required. In order to find out the availability of accessibility facilities in these venues and with the aim of raising awareness of lesser known access methods, a list was provided (similarly to above) and definitions were given as necessary. The following graph shows the distribution of the percentage of venues at which each access facility is available for at least one event per year i.e. the first column indicates that 56% of venues have no audio described events.

Availability of access facilities

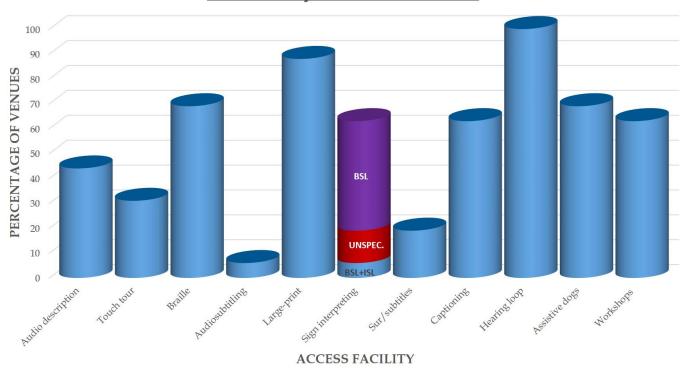


Figure 2: Bar graph showing the percentages of venues at which the access facilities are available.

This graph demonstrates that audio description, touch tours, audiosubtitling and sur/subtitles are available in less than half of the participating venues, in most cases considerably less than 50%. Audiosubtitling is not widely available in the UK at present and therefore this result is not surprising. However, the limited availability of audio description and sur/subtitles which are well established access facilities is an unexpected finding and confirms the need for action to improve arts access in Northern Ireland. This is highlighted by comparison with English National Opera which provides surtitles for all performances, and with Opera North and Welsh National Opera which usually provide one audio described performance at each of the tour venues per production, and therefore between three and five audio described performances per production (Eardley-Weaver 2014: 34).

Many of the facilities referred to in the graph are complementary and no single access facility provides a complete solution. Therefore, although hearing loops are available in all venues for example, the availability of sign language interpreting, sur/subtitles and captioning needs to be increased to ensure inclusion of people

with varying hearing and linguistic ability. The graph in Figure 2 shows that sign language interpreting and captioning are available at 63% of the venues, although Figure 1 highlights the limited number of events at which these are on offer at the majority of venues. The restricted availability of audio description and touch tours is reiterated by the charts in Figure 2 which show that the majority of venues have no events with audio description or touch tours per year, with only a small proportion offering between 1 and 3 audio described events per year, and only 6% of the venues offer 10 audio described events and 6 touch tours per year. In view of the proven benefits of these access facilities both individually and in combination (Eardley-Weaver 2013), this deficit requires attention to prevent the exclusion of a growing number of people with sight loss as well as other potential sighted patrons.

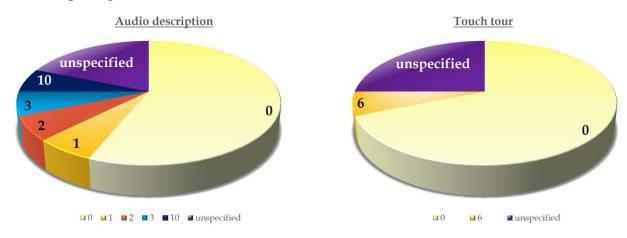


Figure 3: Pie charts showing the number of events per year at which audio description and touch tours are available at the venues.

Although the availability of some access facilities is limited, comments from participating arts venues expressed a clear desire to improve and explore new access solutions, suggesting a positive outlook on condition that external support is endorsed and the action points enumerated in section 3 are pursued. The availability of workshops for the disabled in 63% of the venues, as shown in Figure 2, reiterates the desire to provide access and whilst such facilities are a valuable provision, they are segregated.

There is some resistance to increased visibility and integration of access facilities. For instance, there are some concerns regarding the potential distraction of additional information about audio details such as sound effects being integrated into subtitles or captioning projected on screens for the entire audience (Eardley-Weaver 2015). However, as people are becoming more accustomed to multimedia environments and to filtering out information they require and do not require access to, the call is raised for a different approach to arts accessibility which includes all, rather than providing special access to certain patrons with specific requirements (ibid: 93, 267). By incorporating access concepts from the design stage or by using access methods which allow all patrons to choose options to suit them, rather than solely providing separate access to certain audience members with specific requirements a more inclusive arts experience can be achieved. For instance, Google Glass and other smart glasses are being developed to provide new access solutions which may offer methods for communicating sign language interpreting or surtitles to the audience, giving patrons an element of choice in the amount of detail included in the surtitles (Jain et al 2015; Rhodes and Allen 2014; Eardley-Weaver 2015). Therefore, from a technological perspective the prospect of achieving the goal of inclusive arts accessibility is increasingly feasible, but attitudinal barriers to progress remain.

4. Key findings: problem areas and action points

To bridge the gap between the limited availability of arts accessibility facilities and the rapidly expanding access options offered by pioneering technology, it is our collective responsibility to accelerate the implementation of accessibility legislation. Moreover, to ensure its successful implementation we need to clarify the practical changes required in the day-to-day operations in the arts. The project findings highlighted

three problem areas requiring action: (1) attitudes to disability and accessibility; (2) financial considerations; (3) accessibility training.

4.1 Changing attitudes and raising awareness

The catalyst for the progression towards inclusive accessibility is a change in mentalities regarding disability. This progression is hindered by the perception of a dichotomous distinction between disabled and ablebodied people, viewing disabled people as a separate group with special needs rather than considering society as a collective whole with a spectrum of varying disabilities and abilities. Such attitudes are manifested in the current provision of access facilities in arts venues, which often remains divisive (e.g. segregated seating allocations, limited numbers of performances with access facilities which restricts the freedom of choice, constraints regarding users of the access facilities). For instance, blind and partially-sighted audio description users are sometimes seated in a certain area of the auditorium, and audio description or touch tours are rarely open to use by sighted audience members. This approach of compartmentalizing people into disabled and able-bodied, blind and sighted etc. is linked to the perception of accessibility as an afterthought, a supplementary provision, rather than as integral to the production and design process. The outcome of such attitudes is exclusion.

To prevent exclusion and to ensure equitable access to the arts according to legislative demands, it is crucial to take action:

- 1) To provide further opportunities for public engagement with accessibility facilities by making them more widely available for everyone rather than segregated provisions at a limited number of events.
- 2) To raise awareness amongst young people about accessibility and disability through education and engagement with arts access facilities. For instance, endorsing school trips to arts events with access facilities and talks or workshops about access facilities led by access experts in schools with a view to further integrating accessibility awareness into the curriculum.
- 3) To promote interaction and dialogue between: a) people with varying abilities and disabilities rather than segregated provisions; b) between the diverse audience and the people involved in the production and design of the arts; c) researchers and the various parties involved in the production and reception of arts access facilities.
- 4) To provide continued support for collaborative research into arts accessibility (between academics, arts access providers, charities and organisations advocating arts accessibility, arts venues, audiences) which facilitate dialogue, engagement, education, and the ongoing process of raising collective awareness.

The project findings suggested that increased visibility and marketing of accessibility facilities is needed to promote collective awareness. Although at present access is advertised on the venue webpages, this information is often difficult to find due to its location, for instance by a blind person using a screen reader. Moreover, this project and other related reception research suggests that access information can be elusive and prior knowledge of access is needed; 'you have to ask' (Eardley-Weaver 2014: 183).

Another important issue to address in the process of raising collective awareness concerns the diversity of the target audience. There are numerous different types and degrees of visual and hearing abilities and disabilities including sighted, totally blind, partially-sighted, with or without light perception; hearing, profoundly deaf, hard-of-hearing etc. (see World Health Organisation n.d.; Access Economics 2009: 2-3; Action on Hearing Loss 2011). A lack of appreciation of this diversity can lead to misunderstandings about the attraction and benefits of the arts for people with sight or hearing loss. The inherent capacity of the arts to engage multiple senses lends them to inclusion and increases their appeal for audiences with varying types and degrees of visual and hearing ability. Furthermore, provisions such as audio description and touch tours facilitate access to a multisensory experience (Weaver 2010). For instance, music and sound can be experienced through touch and sight as well as hearing, and access facilities such as surtitles or sign language interpreting can aid this process (Eardley-Weaver 2015). Moreover, the arts are a social activity and whether a person is totally blind or profoundly deaf he or she may wish to visit an art gallery or attend an opera to share this with a friend for example. Therefore, advocating an approach which recognises the collective audience

whilst also acknowledging its diversity is vital in achieving equitable inclusive accessibility. This approach which helps to prevent the exclusion of certain patrons with specific access requirements will also bring financial benefits by widening the audience base.

4.2 Financial issues

Given the growing numbers of people with sight and hearing loss in an ageing society (see section 2), it is imprudent to exclude (even unintentionally) this audience from the arts. In fact, according to a consultation paper on Arts and Disability Policy, Beyond Barriers, published by the Arts Council of England in March 1998 (statistics updated to 2002), in the UK as a whole in 2001 'it was estimated that the spending power of disabled people (14% of the population) was over £45 billion. The economy suffers from excluding a market of 10.2 million people and 7 million carers in the UK, representing 1 in 4 households' (Holdsworth-Wild et al 2003: 2). From a financial perspective, in addition to responding to the requirements of the blind and partially-sighted and deaf and hard-of-hearing, it may be lucrative to consider the benefits of access facilities for sighted and hearing patrons. Providing improved inclusive access facilities for all audiences with varying visual and hearing ability 'may result in more customers, more ticket sales and higher profits' (ibid). For instance, innovative technological access solutions such as Google Glass and mobile phone apps may attract larger audiences to the arts. Such methods are already being experimented with in the cinema industry which 'is an example of how accessibility can be transformed into attractive options which benefit all. As a result of the digitalisation of content, digital copies of films can have additional tracks - for audio descriptions, hearing assistance, subtitles and foreign language versions' (Knigge and Erkau 2014: 421). These solutions which offer benefits for users with and without disabilities can also be implemented in the arts to widen audiences and 'create significant economic opportunities' (ibid).

In the short-term, some existing access facilities can easily be made available for all. For example, audio introductions (audio notes which are usually pre-recorded, designed to be listened to prior to an arts event and may be based on programme notes to include details such as a synopsis, cast list, background, interview with the designer) which may appeal to sighted audiences can be made available in a simple format such as CD or mp3 to download from the venue or access provider website. This method is already practiced by the audio description company VocalEyes but could be more widely adopted by all arts venues for all events. At present VocalEyes audio introductions can be downloaded free of charge but in future it may be possible to charge a small fee if an increasing number of sighted audience members use this facility. Whilst audio introductions alone do not offer a complete solution, and must be complemented by other access facilities, they do offer a cost-effective method which can promote the move towards inclusive access and have the potential for financial benefits. The development and promotion of complementary inclusive access facilities requires an initial injection of funds with the prospect of reaping financial and social benefits in the long-term. Furthermore, in support of these developments training and the systematic assessment of up-to-date access facilities is fundamental.

4.3 Training and quality assessment

At present there is no certified training for arts accessibility. To fill this lacuna, researchers in Translation and Interpreting at Queen's University are working with other leading institutions to propose a collaborative EU project ACT (Access to Culture and Training) which aims to develop a certified training course for arts managers and other interested parties. The research presented in this briefing contributes to the first phase of this larger scale project, informing the development of a training course which combines online and face-to-face teaching and promotes engagement with access users. Collaboration with local access associations such as the Arts Disability Forum is central to this project and has already been established. Government support is also fundamental to the project's success, for example in encouraging arts management to complete the access training course. In association with the proposed training course, the project aims to develop a system of quality assessment for up-to-date access facilities working from existing frameworks such as the Arts and Disability Equality Charter, and taking into account reception research into changing audience expectations.

5. Concluding remarks

With the advancement of pioneering access solutions, the prospect of achieving inclusive arts accessibility is in sight. However, access provisions for patrons with varying visual and hearing ability are currently limited and often segregated. Therefore, in order to achieve this goal in compliance with legislation and to facilitate successful implementation of the Northern Ireland Disability Strategy, much work is needed in developing sustainable, cost-effective access facilities as well as training and assessment systems which ensure quality is maintained. The driving force for such progress is raising awareness of access through increased dialogue and changing attitudes to move towards a holistic approach which benefits all, with and without disabilities. This approach may bring financial benefits as technological advancements offer new access solutions with appeal to all, with and without sight or hearing loss. Furthermore, the promotion of social cohesion is advocated by this outlook. Indeed, this shift in mentalities within the arts to consider society as a cohesive whole whilst also acknowledging its diversity may impact on discussions and policy in other sectors to encourage full integration of inclusive accessibility into the health, cultural and educational agenda. Ultimately, if we are to respect the human right of accessibility to all aspects of life, we must embrace our communal responsibility to weave inclusive access into the fabric of our society, to share our rich culture and heritage with all.

6. References

- Access Economics (2009): "Future Sight Loss UK (1): The economic impact of partial sight and blindness in the UK adult population", RNIB, http://www.rnib.org.uk/aboutus/Research/reports/2009andearlier/FSUK_Report.pdf.
- Action on Hearing Loss (2011): "Hearing Matters", Action on Hearing Loss,
 - http://www.actiononhearingloss.org.uk/supporting-you/policy-research-and-influencing/research/hearing-matters.aspx.
- Byrne, B., Harper, C., Shea Irvine, R., Russell, H. & Fitzpatrick, B. (2014): "UNCRPD: Shortfalls in public policy and programme delivery in Northern Ireland relative to the Articles of the UNCRPD", http://www.equalityni.org/Publications.
- Díaz-Cintas, Jorge & Anderman, Gunilla, eds. (2009): Audiovisual Translation: Language Transfer on Screen, Basingstoke: Palgrave Macmillan.
- Díaz-Cintas, Jorge, Orero, Pilar & Remael, Aline, eds. (2007): *Media for All: Subtitling for the Deaf, Audio Description and Sign Language*. Amsterdam/New York: Rodopi.
- Jain, Dhruv, Leah Findlater, Jamie Gilkeson, Benjamin Holland, Ramani Duraiswami, Dmitry Zotkin, Christian Vogler & Jon Froehlich (2015): "Head-Mounted Display Visualizations to Support Sound Awareness for the Deaf and Hard of Hearing", in ACM Conference on Human Factors in Computing Systems (CHI), http://dhruvjain.info/me/project-glass-ear.html.
- Jorge Díaz Cintas, Jorge & Neves, Josélia eds. (2015): *Audiovisual Translation: Taking Stock*, Newcastle upon Tyne: Cambridge Scholars Publishing.
- Eardley-Weaver, Sarah (2013): "Opening Eyes to Opera: the process of translation for blind and partially-sighted audiences", Describing Cognitive Processes in Translation: Acts and Events. Special Issue of Translation and Interpreting Studies, 8:2, 272-292, Amsterdam: John Benjamins.
- (2014): "Lifting the Curtain on Opera Translation and Accessibility: Translating Opera for Audiences with Varying Sensory Ability", Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/10590/
- (2015): "Opera (Sur)titles for the Deaf and Hard-of-Hearing" in Jorge Díaz Cintas & Josélia Neves eds. (2015):
 Audiovisual Translation: Taking Stock, Newcastle upon Tyne: Cambridge Scholars Publishing.
- European Parliament, Council (2007): *Audiovisual Media Services Without Frontiers, Directive* 2007/65/EC, European Parliament, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007L0065:EN:NOT.
- (2010): Audiovisual Media Services Directive 2010/13/EU, European Parliament, http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32010L0013:EN:NOT.
- Great Britain Parliament (1996): *The Broadcasting Act 1996*, London: The Stationery Office, http://www.legislation.gov.uk/ukpga/1996/55/contents.
- (2005): Disability Discrimination Act 2005: Chapter 13, London: The Stationery Office, http://www.legislation.gov.uk/ukpga/2005/13.

- Harper, C, McClenahan, S, Byrne, B & Russell, H. (2012): "Disability Programmes and Policies: How Does Northern Ireland Measure Up?", Belfast: Equality Commission for Northern Ireland, http://www.equalityni.org/Publications?subject=Disability&type=Reports&year=2012
- Holdsworth-Wild, Andrew, Jayne Earnscliffe, & Jo Verrent (2003): 'Disability Access: A good practice guide for arts', Arts Council England, http://www.artscouncil.org.uk/media/uploads/documents/publications/1529.pdf
- Knigge, Mathias & Jörn Erkau (2014): "Cinema and theatre: accessible entertainment, with benefits for all", in *Universal Design* 2014: Three Days of Creativity and Diversity, Assistive Technology Research Series, 35: 421 422, Netherlands: IOS Press.
- Neves, Josélia (2005): "Audiovisual Translation: Subtitling for the Deaf and Hard-of-Hearing", PhD thesis, University of Surrey-Roehampton.
- Office of the United Nations High Commissioner for Human Rights (1966): *International Covenant on Economic, Social and Cultural Rights*, OHCHR, http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx.
- Orero, Pilar (2007): "Audiosubtitling: A Possible Solution for Opera Accessibility in Catalonia" in Eliana P.C. Franco & Santiago Araújo Vera, orgs., *TradTerm* 13, São Paulo: Universidade Estadual de São Paolo, pp. 135-149.
- Ranck, Jody. (2012) "The wearable computing market: a global analysis", Gigaom Pro.
- Rhodes, T., & Allen, S. (2014). Through the Looking Glass: How Google Glass Will Change the Performing Arts. *Arts Management and Technology Laboratory*.
- Rocks, Siobhán (2011): "The Theatre SL interpreter and the Competing Visual Narrative: the Translation and Interpretation of Theatrical Texts in to British Sign Language" in Roger Baines, Cristina Marinetti & Manuela Perteghella eds. (2011): Staging and Performing Translation: Text and Theatre Practice, Basingstoke: Palgrave Macmillan.
- United Nations (1948): *Universal Declaration of Human Rights*, United Nations, http://www.un.org/en/documents/udhr/.
- United Nations (2008): Convention on the Rights of Persons with Disabilities, United Nations, http://www.un.org/disabilities/convention/conventionfull.shtml
- Van der Linden, J., Rogers, Y., Oshodi, M., Spiers, A., Mcgoran, D., Cronin, R. and O'Dowd, P. (2011): "Haptic reassurance in the pitch black for an immersive theatre experience", ACM Ubicomp Conference, Beijing.
- Van der Linden, Janet; Spiers, Adam; Oshodi, Maria; Rogers, Yvonne and O'Dowd, Paul (2010): "In the dark designing navigation for a haptic theatre experience", in: Mobile HCI Workshop on Using Audio and Haptics for Delivering Spatial Information via Mobile Devices, Lisbon, Portugal.
- Weaver, Sarah (2010): "Opening Doors to Opera: the strategies, challenges and general role of the translator", *InTralinea*, 12, http://www.intralinea.org/archive/article/Opening_doors_to_opera_.