

# Co-creating an Accessible, Multi-sensory Exhibition with the National Centre for Craft & Design and Blind and Partially Sighted Participants

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**Abstract:** Visually impairment people often visit exhibitions and museums in the UK. Older people are increasingly likely to experience sight loss and they are the fastest growing visitor group to UK museums and galleries. They favour regional and local venues. Museums are beginning to incorporate open-accessible facilities, but multi-sensory approaches tend to be small additions rather than a central feature. More could be achieved if curators built inclusive intellectual access for this visitor group into their exhibitions. This participatory design research project explores how the National Centre for Craft & Design (Sleaford, UK) can cost effectively design and curate non-permanent exhibitions that bring outstanding intellectual access to visitors with sight loss. This involved exploring the following research question: How can co-creation processes that involves blind and partially participants effectively facilitate the cross transfer of experience and skills to generate valid information?

**Keywords:** Co-creation, inclusive exhibition design, blind and partially sighted visitors, participatory design

## 1. Context: Blind and partially sighted people often visit UK exhibitions

People with a visually impairment (VIP) often visit visual art exhibitions (RNIB, 2003) and museums in the UK (Salgado and Kellokoski, 2005; Mesquita and Carneiro, 2016). Academics and arts professionals continue to argue publically funded museums and galleries need to rethink their notions of accessibility for VIP (Cachia, 2013; Candlin, 2008; Walters, 2008, 2009; Hyder and Tissot. 2013; Richards *et al.*, 2010; Small *et al.*, 2012). Sight loss affects people of all ages, but older people are increasingly likely to experience it. Since 2005 this age group has been the fastest growing visitor group (65-74 years) to UK museums and galleries (DCMS, 2016).

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There are approximately two million people in the UK who are registered blind or partially sighted (RNIB, 2016). The majority has partial sight or has lived with vision, so have a visual memory and engage with visual culture (Access Economics, 2009). VIP in the UK favour regional and local venues rather than larger national museums and galleries because they are close to home and less crowded and intimidating (Partington-Sollinger & Morgan, 2011; RNIB, 2003).

The education and access officers in large UK publically funded museums and galleries normally attend to accessibility matters (Cachia, 2013; Candlin, 2008). To address the 1995 UK Disability Discrimination Act (DDA) they are trying to increase accessibility in two key areas: the venue and the interpretation of exhibits (Mesquita and Carneiro, 2016). An increasing number of national venues are providing access to exhibits for VIP via pre-booked visits and guided tours including touch tours (Krantz, 2013; Hoyt, 2013). UK regional and national museums are beginning to incorporate open-access tactile and/or auditory facilities within a minor number of their permanent collections (Ginley, 2013; Hirose, 2013; Museums Association, 2017). These types of multisensory exhibits tend to be small additions to the main collections rather than a central feature. VIP and campaigners often comment that this provision is inadequate (RNIB, 2003; Hirose, 2013). Much more could be achieved if curators built intellectual access for blind and partially sighted visitors into the curatorship and design of their permanent and non-permanent exhibitions.

There is acknowledgement that a key barrier to provision of intellectual access for VIP is curators are not sufficiently considering inclusive design and curatorship principles at the start of the exhibition process (Partington-Sollinger & Morgan, 2011; Ginley, 2013; Hirose, 2013). It is even more problematic for local and regional venues due to the lack of resources and awareness of accessibility issues (Partington-Sollinger & Morgan, 2011). The area that museums and galleries could significantly improve upon, especially local and regional venues is intellectual access to exhibits (Cachia, 2013; Candlin, 2008; Partington-Sollinger & Morgan, 2011).

Interest in accessibility for VIP in museums and galleries has increased over the past two decades, but research in this field is still scarce (Mesquita and Carneiro, 2016). Participatory design research into how local and regional museums and galleries can cost effectively design and curate an exhibition that brings outstanding intellectual access to visitors with sight loss is rare (Cachia, 2013; Candlin, 2008; Partington-Sollinger & Morgan, 2011).

## **2. Improving ‘multi-sensorial’ intellectual access for blind and visually impaired visitors at the National Centre for Craft & Design**

Following extensive discussions with the National Centre for Craft & Design’s (NCCD) senior management concerning their accessibility provision for visitors with sight loss, the author collaborated with them to firstly investigate how to improve intellectual access to this visitor group in their Main Gallery. This resulted in intellectual access for blind and partially sighted visitors becomes a central feature of exhibition design and curatorship for their Main Gallery. NCCD has approximately 12,500 visitors per exhibition and 63% are over 65 years old (Chick, 2016). They have up to 20 non-permanent exhibitions every year and approximately 150,000 people benefitted from their activities in 2016 (Chick,

2016). The Centre advertises itself as the largest venue in England dedicated to the exhibition of contemporary craft and design (NCCD, 2017).

## 2.1 What useful written guidance is available on accessible exhibition design and curatorship for regional exhibition curators?

It was agreed the author would identify and collect literature that could provide practical insights and guidance into how to design and curate an inclusive exhibition for visually impaired visitors. The literature search followed a stepwise methodology to identify the highest quality research available. Database searches were made for publications in English between 1995 and 2016 using a combination of words: 'accessibility', 'exhibition', 'guidance', 'guidelines', 'inclusive', 'design', 'museum', 'gallery'. The search was undertaken using the University of Lincoln's EBSCO Discovery Service that enabled the search of the institution's databases simultaneously. This incorporates a wide array of academic databases. In addition, a search for good quality grey literature (unpublished and/or non-peer reviewed) and website text via an internet free search using a Google search engine. Individual searches using the combination of terms above were used to recover reports, websites and documents relating to activities in this area. The first four pages of a search were scanned for relevant documents.

Most of the useful publications identified by the author was grey literature written and published by large prestigious museums and museum associations. Following consultation with Bryony Windsor (Head of Exhibitions, NCCD) the author reviewed the following publications for relevant guidance and guidelines on how to design and curator a non-permanent exhibition that aim for outstanding intellectual access to blind and partially sighted visitors:

- National Galleries of Scotland (NMS, 2002);
- Smithsonian Institution, Washington (Smithsonian Institution, 1996, 2001, 2011);
- Tyne & Wear Archives and Museums department, England (Tyne & Wear Archives and Museums, 2010; and Coburn, 2016); and
- Victoria & Albert Museum, London (Ginley, 2013).

A summary live working-document was developed with guidance signposted under key themes. The NCCD exhibitions team were fully consulted to ensure the content was relevant to a regional venue with limited resources. Topics covered in this working document include: exhibition design, interpretative panels and object labels; audio descriptors; touch objects; tactile and large print guides; lighting; magnification of objects; magnified images and staff training. The objective was to use this document as the platform for exploring how to design and curate NCCD's next non-permanent exhibition to have outstanding intellectual access for blind and partially sighted visitors?

## 3. Methodology

Participatory design was selected as the most useful methodology to understand the specific characteristics of the NCCD context, and the NCCD staff and blind and partially sighted visitors' unique requirements and perspectives. A central tenet of this methodology is that the key actors are co-creators with the author (Bødker and Iverson, 2002; Chick, 2012). She worked closely with NCCD staff in order to gain an appreciation of their workplace culture, and a Creative Lab group was

formed with blind and partially sighted citizens and their companions as well as the voluntary sector. The Stage 1 research project consisted of co-creation workshops including prototyping sessions *in situ* with the above participants. The question posed to this Creative Lab group was how to design and curate an outstanding non-permanent exhibition in a regional venue that prioritised intellectual access for blind and partially sighted visitors? The Stage 2 research will evaluate the resulting exhibition.

### 3.1 Capacity building starting with the co-creation of an inclusive exhibition

For the author a core aim of the partnership with NCCD was to capacity build through each stage of this research initiative, to achieve the goal of maximising intellectual access for visually impaired and older visitors. The most effective way to work towards this goal was for the author and NCCD to collaborate with blind and visually impaired regional groups and citizens. Their key role was as 'users' of the NCCD exhibition and as part of the design team as 'experts of their experiences' (Sleeswijk Visser *et al*, 2005). In order for them to take on this role they must be provided with appropriate opportunities for expressing themselves. Govier (2010, p.4) proposes "co-creation fundamentally means museum and gallery professionals working with their audiences (both existing and potential) to create something new together".

Before the co-creation of the exhibition with participants could start NCCD staff needed training on how to engage and host VIP at the NCCD venue. If the participatory co-creation process was to be successful NCCD sighted participants needed to be more comfortable, thoughtful and empathetic about the needs of VIP. This training proved invaluable to building trust during the process of co-creating the exhibition. All NCCD staff undertook a training day to understand the attitudes that can be a barrier for VIP engaging with sighted people and accessing a museum and gallery. This training also explained the background of visual impairment, facts and figures and dispelled some of the myths around sight loss. Through the safe guiding of a VIP around the NCCD building it highlighted how difficult it can be when VIP visit an exhibition.

## 4. Stage 1 Creative Lab co-creation sessions

A Creative Lab group was formed containing six volunteers, a Royal British Institute for Blind People (RNIB) representative, NCCD Head of Exhibition, and the author. The volunteers agreed to collaborate on co-creating the next NCCD exhibition in the Main Gallery, and if possible continue to participate. The volunteers consisted of five females of which three were artists (one was blind with visual memory and the others had severe sight loss). The remaining participants were their sighted companions. 50% are already regular visitors to NCCD exhibitions.

Over a five month period four Creative Lab sessions were hosted, with no more than six participants at each workshop, as a small group size allowed for greater participation (Stoecker, 2013). The first session contained training to enable the participants to understand co-creation approaches. The author and Head of Exhibitions were the only participants who attend all sessions, even though every effort was made to accommodate participants. The RNIB and visually impaired participants and their companions were not paid for their involvement, but all

expenses were refunded, transport supplied, and refreshments including lunch. The workshops were all held at the NCCD building to provide continuity.

## 4.1 How can a co-creation group that has blind and partially participants effectively facilitate the cross transfer of experience and skills to generate valid information?

It transpired there was no guidance and research on how to effectively facilitate a co-creation process with blind and partially sighted participants (Taxén, 2004). An impetus behind the Creative Lab sessions was to bring multi-directional learning and mutual benefit for everyone involved in the co-creation of the exhibition. The author firstly consulted the RNIB and as trust was built with the participants on the issues and techniques to consider when planning and facilitating the co-creation workshops. So the research initiative developed the secondary question above.

Minkler and Wallerstein (2008) state group decision-making processes can be an effective mechanism because:

- Multiple perspectives contribute to a project;
- Group inquiry and interaction leads to debate about change; and
- Dialogue changes the perceptions of participants and their readiness to contemplate actions that are to the benefit of the local setting.

The author therefore planned the co-creation sessions to be an equitable experience for all participants (Senge and Scharmer, 2001; Stoecker, 2003, 2013). This meant all participants should feel they could influence the design decisions and have ongoing meaningful opportunities to contribute to Creative Lab sessions, as well as afterwards via email and telephone conversations.

## 4.2 Key exhibition components to explore

Following the first session it became very apparent the overall exhibition concept needed to address the bias towards visual culture in experiencing an exhibition. The NCCD exhibition theme of 3D printing provided the participants with opportunities to explore a multi-sensory approach. The group identified the key topics to address during the co-creation sessions for the non-permanent exhibition as:

- Gallery space way-finding solution.
- Achieving an effective multi-sensory exhibition that was inclusive to all visitors.
- Interpretive information in audio and identification of appropriate cost effective audio equipment for the NCCD Main Gallery.
- Inclusively designed interpretative wall panels and object labels.
- Large-print and Braille brochures.
- Visitor assistance and interpretation by NCCD gallery assistants including; guiding a visually impaired person, offering interpretations of exhibits, and answering questions at the NCCD reception desk.

### 4.3 Facilitating the participatory design of the exhibition

Co-creation involving designing is generally based on tools and techniques using visual communications (Sanders and Strappers, 2008). This was still to be the case in the Creative Lab co-creation sessions as only two of the participants were blind, but all visual imagery was larger than common and all text documents adhered to the RNIB accessibility publication guidelines. Visual imagery was also printed or mounted onto thin card to aid with close up consideration. In some instances text and imagery was projected to facilitate collaborative re-designs to occur. As trust was built the sighted participants learnt to verbalise the visual imagery and explain more fully design and curatorial ideas, concepts and solutions for the blind participants. Braille documentation was not used as the blind participants did not read Braille. Lego figures and blocks were used in one workshop to explore the exhibition layout, way-finding and visitor experience. Small-scale card models of the proposed multi-sensory desks were also produced, which could be easily handled. Prototypes of touching objects were also 3D printed for evaluation and discussion.

The rationale behind certain accessibility guidance was more clearly understood by the sighted participants because the visually impaired participants illustrated the consequences to them of ill-considered exhibition designs. So the sighted participants became empathetic to the requirement to ensure visitors could get close to exhibits, graphics and audio to enable touching, handling, looking, reading and listening. The objects were selected based on the 'narrative' of the exhibition, and whether they could be handled or replicated. In addition, it was agreed it was important to demonstrate different materials and textures that are 3D printed, and this provided various materials for the touching objects to be made from. A priority for the author was the development of a design that clearly demonstrated this was a multi-sensory exhibition and the participants agreed. The 'live' working document was continually referred to and iteratively up-dated when time allowed.

Early in the co-creation sessions it became apparent the accessible exhibition guidance could be creatively expanded upon through the co-creation process. An example is a solution was developed to assist visitors with severe sight loss to read the object labels on an exhibition plinth. People with low vision often need to be within 75mm of a label to read it (Smithsonian Institution, 2011, p.25). NCCD visitors would now be encouraged by gallery assistants to pick up an object label from a plinth for close up reading. The object labels would be fixed to plinths with Velcro. This creative solution was not identified in any guidance but is an extremely effective answer for local and regional galleries and museums.

The co-creation activities were most successful because the design objectives were relatively contained in scope, and the participating communities were tightly defined. The author facilitated the co-creation sessions but this leadership was not a heavy-handed, top-down form of direction. In the future, the author will need to develop a tool-kit of different approaches for co-creation sessions with blind and partially sighted participants. There were times during the process when Bryony Windsor and the author strongly offered their experience to ensure the design of the exhibition was aesthetically pleasing. The typeface 'Ariel' was proposed by some of the participants as the most inclusive typeface for the wall panels but because Windsor and the author disliked it, another effective sans serif typeface was chosen. This caused some tensions in the group but it was agreed different wall panel typographic designs would be tested on visitors in the Main Gallery.

Due to time constraints and lateness of funding the participants with a visual impairment were not effectively involved in the testing of the design concepts. This has resulted in the major testing of the exhibition components for effectiveness of intellectual access occurring when the exhibition is open to the public (28<sup>th</sup> January – 23<sup>rd</sup> April 2017).

#### 4.4 Everyday ethics: The challenges of co-creation

Engaging with different participants on a real world participatory design research project raises ethical considerations that go beyond individual-level protections, as the clear distinction between those who were doing the research and those who are researched becomes blurred. The way the author addressed this issue was through exploring and practicing “everyday ethics” which Banks *et al.* describe as “the daily practice of negotiating the ethical issues and challenges that arise” through the life of a research project (2013, p.266).

This approach draws on “virtue ethics”, which places pre-eminence on qualities of character (Banks and Gallagher 2009) and the ethics of care, which focuses on responsibilities attached to particular relationships (Held 2006; Tronto 1993). This led the author to adopt Campbell and Vanderhoven’s stance that “ethics in relation to co-production (and perhaps more generally) should be regarded as less about procedural conformity and more about the demonstration of an ethical state of mind” (2016, p.30). The author found the standard ethical approval procedures did not adequately address the flexibility inherent to co-creation, so the procedures of ethical review were a struggle.

### 5. Evaluating the co-creation approach

It is important for this research to understand the strengths, weaknesses and opportunities of using creative activities as a vehicle to aiding the process of engaging with VIP, including eliciting their views, and encouraging them to participate in NCCD activities. Academics have recently begun to identify these artistic engagement approaches as ‘beyond-text’ (Durose *et al.*, 2011; Beebejaun *et al.*, 2014) or ‘social design’ tools (Armstrong *et al.*, 2014). These researchers are recognising the symbolic value of these approaches for “challenging the dominant form of expression of existing unequal power relationships and sometimes stimulates a change of ethos” (Beebejaun *et al.* 2014, p.12).

The evaluation of the Stage 1 research is focused on understanding the value of the participation process and the significance of the co-creation engagement to achieving effective intellectual access for visually impaired visitors to an NCCD exhibition. The author found, as did Rooke (2014, p.6), many traditional evaluation approaches “particularly unhelpful and inappropriate to understanding participative processes in community settings”. This implies the evaluation and understanding of these processes has become more complex than conducting participation surveys.

Triangulation of research data and the use of multiple methods of data collection have been used to evaluate participatory action research projects for over two decades (PolicyLink *et al.*, 2012) and seems an appropriate approach to evaluating the Stage 1 research. Semi-structured interviews with Creative Lab participants and exhibition visitors; visitor observation in the Main Gallery; exhibition visitor survey; and grey document reviews (including coverage by the media) are presently being undertaken. This is in addition to collecting the exhibition visitor figures and socio-economic profiles.

Over time the author will develop a case study of how the NCCD has iteratively improved how it has engaged with VIP and catered for their needs, and the resulting social impacts. The author is extremely aware that this must go beyond the merely anecdotal. As Crossick and Kaszynska (2014, p.126) advice:

“In the arts and cultural worlds, anecdotes about the transformation of individuals or communities have often been a substitute for systematic evidence. Case studies offer a route to a more nuanced understanding of what constitutes value for those involved, and for the wider collective of which the individuals are a part, and of how we might understand the processes that produce it.”

## 6. The resulting co-created exhibition

### 6.1 Exhibition subject

The exhibition was titled ‘3D Printing: The Good, The Bad, and The Beautiful’ and explores how citizens, designers, engineers, scientists, conservators, manufacturing businesses amongst others are adopting 3D printing. How this technology is bringing about social, organisational, and economic shifts was interpreted for visitors through key themes and the selected exhibits, text panels, audio interpretations, public talks, and education programs. The author developed the exhibition contents and co-curated the exhibition with Bryony Windsor (NCCD Head of Exhibitions).

### 6.2 Gallery colours

Black on white and black on yellow were the colours chosen for the exhibition identity because they are generally regarded as the clearest combinations for VIP (NMS, 2002; RNIB, 2003). These colours were used to visually define the walls, floors, and plinths, so the floor is visually separated from the walls and furniture (see Figure 1). This is because people with low vision and visual perceptual difficulties require at least a 70% contrast in colours to negotiate a space (Smithsonian Institution, 1996 & 2011). If the walls, floor, and plinths are all basically the same hue, all components of the room blend together. Matt and non-reflective finishes were also used.

### 6.3 Way-finding path

A textured exhibition way-finding path using two different bright yellow floor tiles (replicating what is found before a road crossing to indicate to VIP to stop or proceed) were used (see Figure 2). This textured path led visitors to each of the multi-sensory desks in the exhibition space. The consistent lighting in the gallery and the contrasting dark grey concrete floor against the bright yellow tiles combined to produce a clearly delineated circulation route.





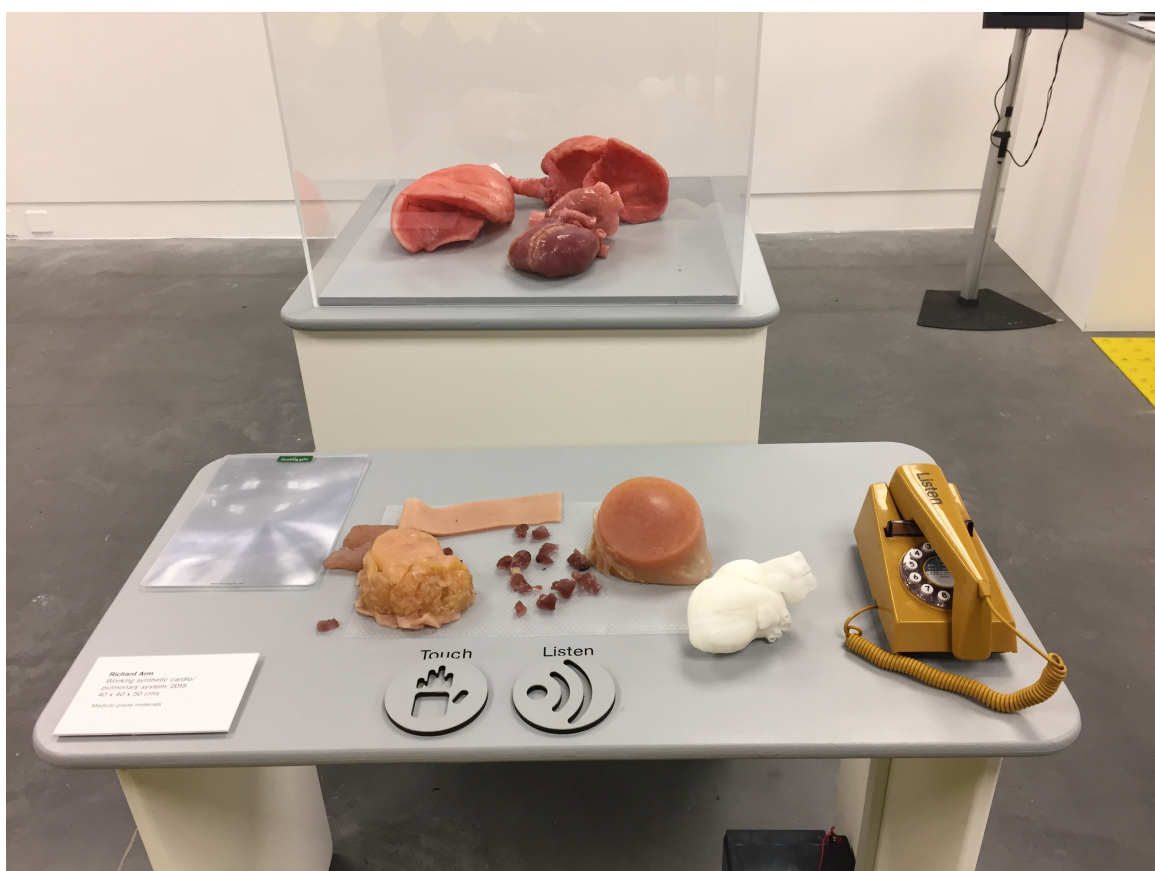
Figure 1. '3D Printing: The Good, The Bad, and The Beautiful' exhibition, The National Centre for Craft & Design, Sleaford.



Figure 2. Textured tiles way-finding path which guided visually impaired visitors to each multi-sensory desk.

## 6.4 Multi-sensory desks

A central feature of the exhibition was a multi-sensory desk containing handling objects; a trim phone (containing the audio descriptors of particular objects and readings of the wall text panels); exhibit labels; and magnifiers. The height of the desks were 700mm because the written guidance consensus was a wide range of visitors can reach over to handle an object when these are approximately 760mm from the floor. This includes visitors in a wheelchair. Three MDF disks were designed by Arnaud Dechelle to indicate to visitors whether they could touch an object; could not touch an object; or there was audio provision on the desk (see Figure 3). A trim phone (of contrasting colour to the light grey desk tops) was used as it allowed the audio to be listened to at adjustable heights, so people in wheelchairs who sit at different heights and people who are tall and cannot bend can use them equally well (see Figure 4).



*Figure 3. Multi-sensory desk with MDF disks, alongside touching objects, audio phone, and a magnifier.*

A demonstration multi-sensory desk and two different way-finder textured floor tiles were placed at the front of the exhibition space, where the gallery assistants were present. The assistant explains to small groups of visitors or individuals the purpose of this desk, including what the different raised disks denote. This desk also contained the large-print and braille publications.

The touching objects on each desk were selected to provide a coherent explanation of the associated exhibit (see Figure 5). Each desk was positioned near the original exhibit (which was displayed on a plinth or freestanding) so the

visitor could relate the contents of the desk to the context of the exhibit. The aim was to provide true access to the exhibition content an exhibit at a time for blind and partially sighted visitors. These desks were meant for all visitors though, not just for VIP. This prevented blind and partially sighted visitors needing to ask for access to handling objects, which can cause embarrassment and makes them feel different to other visitors.



*Figure 4. Multi-sensory desk containing an 'audio descriptor' trim phone, alongside touching objects.*

## 6.5 Exhibits on plinths

The plinths were arranged in the gallery to allow the exhibits to be viewed from at least three sides and exhibits were arranged to avoid visual clutter as some VIP have issues with foreground-background discrimination. Some of the exhibits on the plinths could be touched and handled, but not all objects. MDF disks (with a laser cut out 'X' in the middle) were placed at each corner of the plinth top to indicate objects on that plinth could not be touched.

The colours of the plinths, desks and walls aimed to create colour contrasts between the items and the background, as objects are more easily seen. A 70% contrast between foreground and background is recommended. In addition, objects were not placed against complex backgrounds so the walls were painted white and images of enlarged exhibits were placed near but not behind the exhibits on the walls. Complex backgrounds are difficult to see for people with low vision and for those with figure-ground perceptual problems. The height of the plinth was set at 880mm because exhibits on plinths need to be visually accessible to all as objects placed above 1015mm will be seen only from below by most seated and short viewers (Smithsonian Institution, 1996). The recommended height for viewing objects differs in the identified accessibility guidance publications.



*Figure 5. Multi-sensory desk with objects for handling and close observation.*

## 6.6 Exhibition graphics

Wall panels and object labels need to be legible and readable. Legibility contributes to readability, which is determined by the combined impact of design and layout, type size, kerning, line and word spacing, and line length. For people with poor sight the wall panels and labels have to be simple, have well-spaced paragraphs and layout (NMS, 2002; Smithsonian Institution, 1996, 2011). Clear hierarchy of title and main message, and 36pt body text for the panels and 16pt for the object labels was used throughout the exhibition. Consistent line spacing and a border of at least 10% of the lower case letter height were also used as this increases the effectiveness of the contrast between the text and background (see Figure 6).

Importantly, sans serif fonts are easier to read and fonts such as Arial, Helvetica and Futura are recommended, as well as aligning text to the left margin. Underlining text and all upper case letters is not recommended. As a general rule the space between one line and the next should be at least 1.5 to 2 times the space between the words on a line. Wall mounted panels were placed at a height that is comfortable for both those seated and standing. Panels (including large images of exhibits) were also located in consistent locations throughout the exhibition with no barriers to close inspection and reading (see Figure 7).

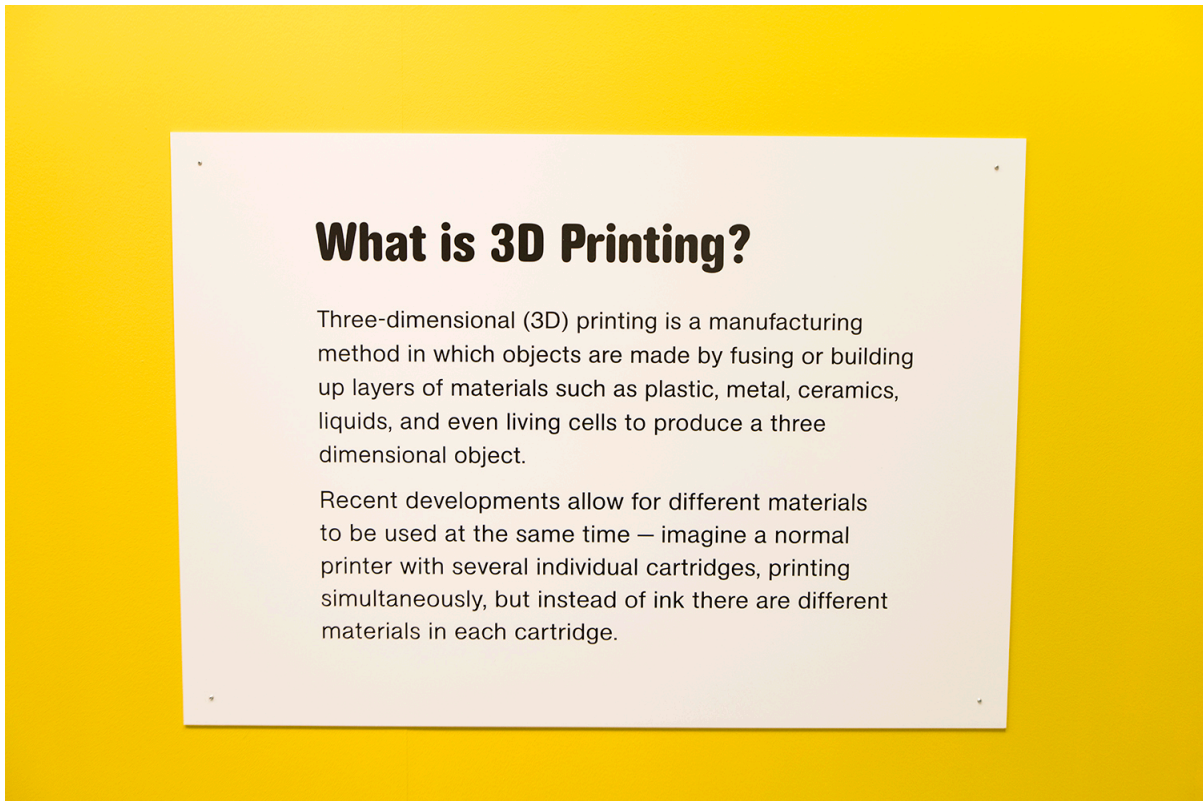


Figure 6. Exhibition graphics: Wall panels and labels were simply designed with well-spaced paragraphs and layout.



Figure 7. Exhibition graphics, '3D Printing: The Good, The Bad, and The Beautiful' exhibition.

## 6.7 Audio descriptions and audio equipment

The aim of the audio descriptions was to fill in what VIP may not be able to see. A trim phone was selected as the controls for the audio because it allowed a VIP to listen to the audio with one hand free to hold onto a guide dog, or stick, or person. In addition, this approach of having eight trim phones placed on desks around the exhibition allowed for visitors who do not use smart phones to access the audio. On a number of the multi-sensory desks there are objects that can be handled after or before listening to the audio description, and this serves as a valuable complement. This audio technological solution was developed because it was cost effective, easy to install, appropriate answer for the gallery space (which did not contain WiFi), and could be adapted for use in future NCCD exhibitions.

## 6.8 Lighting quality

Good lighting is particularly important for visually impaired and older people who tend to need more illumination to see objects and read labels and graphics. There were no conservation requirements for light-sensitive materials in this exhibition, so low light levels were not required. Light level changes within the gallery were minimal and when this occurred it was gradual. Shadows falling directly on an object was avoided, as placed in shadow an exhibit will be lost for people with low vision. The main aim for the lighting design was there had to be sufficient light on each object and label to make them visible to all visitors.

# 7. Conclusion

Through the NCCD curator collaborating with people with different categories of visual impairment novel and effective multi-sensory accessibility solutions have been created that go beyond the available accessible exhibition guidance. These co-creation activities and evaluating the resulting non-permanent are essential for re-thinking the NCCD as an arbiter of 'multi-sensorial' culture. Blind and partially sighted people largely depend on their ability to explore museums and galleries based on senses other than sight (Figueiredo *et al.*, 2012; Richards *et al.*, 2010). This Stage 1 research has highlighted the complexity of designing and curating a multi-sensory exhibition for a regional and local museum or gallery, and it is therefore advisable for curators to build relevant partnerships to facilitate knowledge exchange, collaborative activities and capacity building.

The effectiveness of the inclusive exhibition designs are presently being researched and data collected through semi-structured interviews with NCCD staff, the Creative Lab group members, visitors to the exhibition, and invited inclusive arts experts. Written and verbal feedback on the exhibition from visitors (sighted and VIP) is also being collected in situ. This Stage 2 research will be based in part on the questions the V&A asked visually impaired visitors on their provision in 2012 (Ginley, 2013):

- Does each element of the interpretation provision significantly aid understanding of the exhibition subject matter and exhibits?
- Does each element of the interpretation provision encourage further exploration of the exhibition from the user?

This Stage 1 research is the first step towards developing an in-depth demonstration case study of a regional 'visual' arts venue using co-creation to address how to develop outstanding intellectual access in their exhibitions for blind and partially sighted participants.

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**Professor Anne Chick's** research is focused upon using co-creation methodology to address identified social and environmental issues with the key actors. She is interested in the opportunities of using creative activities as a vehicle to aiding the process of engaging participants to elicit their views, and find solutions.

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