

# Online am Ziel – Kunsterziehung, Neue Technologien und Sinnesbehinderungen

## On-line and on target - art education, new technologies and sensory impairment

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My colleague Marcus has outlined the potential for new technologies and accessible culture. I would like to focus on a particular cultural sector, namely galleries, and the field of sensory impairment in relation to education and new technologies. As time is limited, I shall begin by outlining some of the main issues including funding, very briefly mention the potential for deaf people and finally focus on a specific online project for visually impaired people called i-Map. I should also make it clear that I will be using the term 'gallery' in its UK context, meaning a non-commercial institution concerned with fine art, as supposed to a museum which is primarily concerned with artefacts.

Gallery (and indeed museum) education and new technologies is still in its infancy. There is little research into the ways people use interactive interpretation, online or in situ, and whether it enhances and enables meaningful engagement, or whether it merely provides playful distraction. I think we're probably all familiar with online education resources that look great, are fun to use, but have little educational worth. ICT (Information & Communication Technology) does have great potential to increase cultural access for people with disabilities. However, while I agree that baseline provision should be accessible web sites, I feel that our goal should be to realise the particular potential of each type of technology for each type of disability and then create tailor made programmes. For I would argue that just because information is accessible, it's not necessarily meaningful. Museums and galleries in the UK have spent a decade developing specialist gallery-based pedagogies for people with physical disabilities, mental health problems and learning difficulties. It will therefore take time to do the same in this new field of education, making the need for research both essential and urgent.

One research model might be for cultural institutions and new technology providers to collaborate. Tate Modern is Britain's national gallery of modern art. With funding from Bloomberg, it recently collaborated with Antennae Audio and Compaq to pilot handheld iPAQs that delivered interactive audio and video interpretation in the galleries via a radio network. The project was the first of its kind and offered all parties an opportunity to explore the equipment's strengths and weaknesses. Despite technical problems, visitor response was very positive. Once perfected, this technology has enormous potential for everyone, but particularly deaf BSL (British Sign Language) users who, because English is not their first language, find standard written interpretation difficult. iPAQs could provide them with interpretation in BSL in a video format and on demand, thereby releasing them from the strictures of the fixed interpreted event. Furthermore, recent projects at Tate Modern and Wolverhampton University aimed at improving deaf people's access to the language of art by developing specialist signs, could provide innovative content. In turn, the iPAQ technology would ensure that greater numbers of deaf people were able to benefit from and contribute to these recent linguistic developments. However, the technology in terms of the hardware and network installation is beyond the financial reach of most museums and galleries in

the UK. So support from industry and/or dedicated funding is essential if the partnership between technology and accessibility is to develop creatively.

An accessible ICT opportunity that has been realised at Tate Modern is i-Map. i-Map is an online art resource for visually impaired people that studies the work of Matisse and Picasso. It was launched in August this year, but its creative genesis began five years ago when I began to re-think programming for visually impaired people. There was, continues to be, a lack of innovation in gallery education for people with sensory impairments. This is due in part to the tendency for hidden disabilities to be neglected, but also because people with sensory impairments suffer from particular misunderstanding in the context of galleries. Put simply, there's an assumption that if a person's deaf, an art gallery must be an ideal environment, whilst if they can't see clearly or at all, why on earth are they coming?

Conventional provision for blind and partially sighted people focuses on the supervised handling of robust sculptures which is completely inadequate for engaging with modern and contemporary art. As artists abandon traditional materials, 'touchable' sculpture becomes increasingly rare and as they reject the figurative, basic description becomes increasingly meaningless. Yet if sculpture is about more than just bronze, art is about more than just sculpture. Regardless of the DDA (Disability Discrimination Act), it is unacceptable that visually impaired people are denied access to paintings, videos and installations etc.

To rectify this situation and in collaboration with blind and partially sighted people, I experimented with different approaches to language and touch, developing touch tours that use creative description, discussion, line drawings and a whole range of handling objects. These objects are not just literal replicas of materials or techniques, but physical metaphors or similes for ideas and appearances. Far from finding complex conceptual issues difficult or obscure, visually impaired people are fascinated to learn about systems of representation and engage with artistic debates. However, touch tours are given on a 1:1 basis, limiting numbers and they require visually impaired people to come to the gallery, which is not always possible. Also, I was concerned for visually impaired children studying art in mainstream education. Their art teachers often have little specialist training and so poorly serve them, segregating their work from that of their classmates. For all these reasons, it seemed logical to try and adapt the pedagogy of the tours to online resources.

i-Map was a creative collaboration between myself and web author Daniel Porter. Our aim was to provide visually impaired people with the necessary tools to understand why these two artists were so influential and to make their own critical judgements about them. We wanted to go beyond straightforward description of appearances and we were not interested in trying to simulate purely visual experiences. In short, we wanted to move away from the usual focus on the 'what' in favour of exploring the 'why' of art.

Although i-Map was designed to accessibility guidelines, consultation with blind people is invaluable. Indeed, we continue to make changes to the site in response to comments sent via i-Map's feedback forms. Consultation not only corrected specific errors, it also gave us confidence when our ideas ran counter to conventional online wisdom. For instance, Tate Modern's education pedagogy is non-didactic. We encourage visitors to use their own lived experience as a route to understanding and engaging with an artwork. However, in order for visually impaired people to do this, they first need a more didactic approach to art history which we knew would make i-Map text heavy, something online design tries to avoid. Yet development of both audio and touch tours had revealed that blind people are not averse to lengthy explanation if it helps them understand. On a technical level, Dan and I were led to believe that frames were the bane of accessible web design. However, conversations with blind advisors revealed that they make screen readers easier to use by organising information. Similarly, they also advised us that by moving links to the bottom of the page we would improve usability and that allowing both keyboard and mouse navigation of the site encouraged sighted people to participate too.

Flash, the software used to create animation is inaccessible for screen readers, even in its latest version. So our solution was to have i-Map exist in two versions. One is designed for people reliant on screen reader software and is purely textual, using alt tags and html. The text is accompanied by raised line drawings that can be borrowed from Tate Modern or downloaded as A4 images to be raised by the user. Each drawing is introduced with orientation information so that blind people can familiarise themselves with the tactile image itself, before using it to explore the artwork in question – something I knew to be a necessity from my gallery-based tours.

The second version is designed for people with some useful sight and uses a combination of text and animation. The text is created in html, original images have alt tags and the animation is in Flash. The animation is used to isolate, enhance or highlight elements of an artwork, to break down a composition and to simulate a process of conceptual transformation. For people whose partial sight interrupts their view of an image, isolating and magnifying sections enables them to get a better impression of individual elements and form a mental picture of the whole.

Evaluation of i-Map is on-going. Feedback is carefully analysed and we are looking to conduct some structured research prior to developing the site further. Initial responses though from individuals, education providers and specialists in the field of visual impairment have been extremely positive. Equally, comments from sighted people have revealed that they also find the detailed breakdown and clear explanation helpful, something we imagined would be the case from our experience leading touch tours in the gallery!

In terms of exploring the possibilities of ICT to expand visually impaired people's access to art, i-Map is a small step. However, I hope that in this very brief presentation I have managed to indicate that there is both the need and the potential for innovative, specialist provision that, if derived from dedicated research, will maintain educational rigour. I believe that people with sensory impairments who for different reasons have been denied fundamental access to art, could reap substantial benefits from both gallery based and online technologies. The challenge now is to find the resources to realise this potential.