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Canterbury, revisited: Reflections on a collaborative photography course for sighted and visually impaired participants

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Abstract

This chapter discusses the design, development, and implementation of a photography course that encouraged visually impaired and sighted students to work collaboratively. The teaching and collaborative tasks on the course were designed to encourage soft skills through the development of photographic skills, an understanding of students' experience of objects and environments, and to test the use of mainstream inclusive technologies in educational and real-life settings. The course was designed using the principles of inclusive technical capital and inclusive capital, and it was hypothesized that all participants would find working collaboratively with ubiquitous, mainstream photographic technologies accessible. During the

evaluation, it was found that collaboration stretched the students' learning, motivated future creative work and that smartphone and tablet computers had useable introductory photographic technologies, but experienced students with visual impairments and with sight preferred specialized cameras.

Keywords—education, visual impairment, photography, andragogy, mobile technology, disability, inclusion

Introduction

How can photography education for people with visual impairment evolve to become more inclusive?

This chapter addresses this question by discussing the design and evaluation of a photography course in Canterbury, UK, using inclusive andragogical methods, i.e. methods of teaching adult students. This course aimed specifically to support visually impaired and sighted students working collaboratively to share their experiences of imagery. The students participating in the course had varied experiences of photography, had different forms and levels of physical impairment and none, and came from the UK and Germany. Three of the students were from Kent, the county where Canterbury is located, which was important to the educational aims of the project, as it was intended to conjoin the international experience of the teaching being developed with an experience of often unseen aspects of the local environment. Importantly, this chapter also discusses how autonomous learning experiences through the production of photographic imagery can stimulate further self-directed learning and self-confidence, and motivate future image making.

The inspiration for the course was the development of a collective of international photography teachers and students, along the same lines as previous tuition of adult and school-

aged students during customised fine art and photography courses designed to support those with diverse access needs (Bhowmick 2015; Peña 2014, 2015; Hayhoe 2013). Similarly, the main educational aims of the course were to investigate cost effective alternatives to expensive, traditional photography and educational assistive technologies, to examine the development of soft skills using mobile technologies, and to explore the most effective way of providing training in the use of these devices for photography.

The primary aim of the chapter that follows is to contribute to the debate on art and aesthetic education for people with visual impairments through the experiential learning of photography and two-dimensional image making, as a means of developing cultural agency and inclusion. Unfortunately, there has been scant investigation of this issue and its relevance to a general understanding of the role of image making experiences of people with visual impairments, yet such a debate can inform intellectual and cultural inclusion, a notion stipulated in contemporary international laws with a focus on human rights (Hayhoe, 2015a). The secondary aim of this article is to contribute to a broader debate on the nature of the visual arts, art education and visual culture, as the following discussion questions the idea that learning about such concepts is premised primarily on visual perceptions alone (Hayhoe, 2020).

The following chapter is divided into the following four sections: an outline of photography by people with visual impairments, a discussion on the design of the course, a discussion on findings from the evaluation, and the conclusions drawn from the course.

The Context of Photography and Visual Impairment

To develop the aesthetic foundations of the course at Canterbury, the context and nature of aesthetics and photography by people with visual impairment was examined, and a critical analysis of the philosophies that provided its foundation was conducted. In this initial examination, it was observed that the received wisdom of philosophers up until the latter half of

the 20th Century was that sensory perception contains purely visual concepts that are increasingly unavailable given decreasing levels of sight. This traditional argument has theorised that people with visual impairments have no vision, or at least their residual vision is unworkable, people with visual impairments will never experience *visual* aesthetics, and thus people with visual impairments are unable to understand the work of *the sighted*. It has been argued that the reason for this theorisation of visual impairment is complex, but largely relates to an understanding of visual impairment as an abstract intellectual idea, rationalised and oversimplified by academics and institutions to make intellectual functioning easier or to support broader social and cultural prejudices (Hayhoe 2020). Thus, it is also theorised that much of what was felt to be common sense by much of our world was a prejudice based on the lack of thought and ability of academics and others who led our cultural development, which has led to the passive exclusion of people from institutions such as museums, galleries, and websites (Hayhoe 2017).

Despite these perceived barriers, in the early years of the 21st century photography by visually impaired artists rapidly developed new genres in the field of contemporary art, and these were based on the unique qualities of tone, texture, vivacity, and the subjects of these photographs. Furthermore, the notion that a completely blind person wanting to create an image of what they experienced through residual vision or through touch, taste, sound, or smell was slowly beginning to be understood (Barry 2006). This notion also provided a significant recognition of what the mind can experience cognitively, whatever its level of sensory input, and of what can be imagined or communicated given divergent perceptions and comprehensions of aesthetics, images, and art education. Over time, it appeared that three genres of photograph provided illustrations of these aesthetic and intellectual forms of work by visually impaired artists: the genre of *tonal photography*, the genre of *vibrant color photography*, and the genre of *raw image photography* (Bhowmick 2015).

The three genres of photography by visually impaired artists

The *tonal photography genre* was observable in the black and white studio and landscape portfolios being developed by visually impaired artists working largely on portraiture or still objects, an example of which is illustrated through the work of the New York based Seeing with Photography Collective (2022). What few theorists realised was that many people with visual impairments saw only in tones of black and white, known medically as achromatism. Thus, what the chromatic viewer sees, i.e. the viewer who sees in colour, is a sense of extreme depth in the necessary tones used in these photographers' images. This is an experience that is often unusual for those who see the world primarily in full colour, where these tonal qualities are often masked.

Research with a young female art student with achromatism, i.e. total colour blindness, shows that the process of this representation of tonal difference can be used as a tool of learning about the textural qualities of the body and the environment first-hand (Hayhoe 2008). For instance, during this early research it was observed that the student's artworks reflected a different aesthetic character, and that her perception of the bodies and landscapes that was unobserved in earlier research on art education and visual impairment (Hayhoe 2015a). Furthermore, it was evident that the student saw better in a dark room lit by infra-red light than many sighted people did whilst using similar equipment. This was a discovery that motivated the student to work on different forms of image development in the darkroom and to experiment with the different qualities of textures in the resulting prints. Eventually, the student also found that because she could not see colour, her experience of the shading of images was more defined, detailed, and richer in texture and tone. It was thus hypothesised that this greater understanding of the depth of image was ultimately based on the practical reliance of living in a world without the extra cognitive dimension of colour.

The psychology behind the genre was also observed during a study of a colony of achromatic people on the tiny and remote Pacific atoll of Pingelap, who saw local landscapes better as the sun set than the chromatic population, i.e. those who saw colour (Sacks 1998). During this study, it was seen that the cognition of tone was far more intense for achromatic members of the community, making the experience of *tonal-contrast* far more important to the navigation of their immediate environment, and the reading of objects within it.

Similarly, the extreme contrast between light and shade was immediately apparent in many of the black and white images seen in the portfolios of the visually impaired collectives that produce the images in the tonal photography genre when seen in low intensity or single coloured light. Although, it was also noted that the different use of shade was noticeable in many of the colour photographs in these portfolios when they worked in this medium. Consequently, the artists were possibly experiencing colour purely as tone, and therefore saw more enriched qualities than the subtle variations that people who were chromatic saw.

The genre of artwork pertaining to *vibrant colour photography* provided alternative forms of aesthetic information, and what could be described by chromatic viewers as a robust colour experience. This experience of imagery was of particular importance to photographers who were visually impaired and chromatic, i.e. those with low but more regular light perception (Hayhoe 2008). Many of these photographers were often more reliant on the simplicity and contrast of the colour of the images they produced to provide cognitive information beyond that required by the more understated colour images preferred by people with higher levels of regular vision.

Consequently, the strength of vibrant colours needed to be more intense when creating and developing photographs in this genre, to amplify what little vision the photographer had left. Therefore, this need for vivacity became a quirk of a different experience of rich and varied sensorial experiences, where colour difference was hard to determine, and images created in the

vibrant colour genre were more likely to illustrate what it was like to have compromised vision in a different way.

The psychology of different colour perception that underpins this genre was highlighted in a study of those viewing and creating multi-sensory fine artworks in a collaborative school-museum project. During this study, a group of visually impaired and sighted school children were given a guided tour of the Victoria & Albert Museum in London, UK, to find artworks that they could collaboratively reproduce, each emphasising the non-visual senses as much as they did the visual ones (Hayhoe 2013). During the tour, it was observed that although the children were initially shown 3D, touchable pieces by a guide who assumed that they would only want to know about touchable pieces that were devoid of different colours, the children from the school for the blind were more interested in exploring the glass gallery. In this gallery, everything was delicate, untouchable, and constructed of brightly coloured glass and reflected light. Eventually, two of the three favoured pieces chosen by the children for reproduction were from this glass collection.

Samples of artworks by chromatic visually impaired photographers that featured a vivacious intensity of colour were exhibited at the California Museum of Photography in 2009 in a show called Sight Unseen (McCulloh, 2009), and were also developed in the portfolios of Blind With Camera (2022) in India and Blind Photographers in other parts of the US (Estrin, 2009). Although highly diverse in their structure and subject, there was a distinct juxtaposition between the dark backgrounds, the combination of strong colours and those in which light colour is used to stand out from the darkness in these photographs, providing a distortion of their compositions. For example, the images of two particular Indian photographers, Kanchan Pamnani and Pranav Lal (Blind with Camera 2022), often seemed to mirror their different visual impairments, something they did not feel shy in expressing through their technique. This contrasting of colour was also seen to be applied most effectively in Blind With Camera's

Painting With Light series, in which the dark background of the images were set against moving lights funnelled through the lenses of cameras on night mode.

The photographs in the *raw image photography* genre were often produced during so-called photo voice projects. These projects were designed for novice photographers, each of whom were given a simple camera without adjustable instruments and asked to take pictures of different elements of their lives. An early model of this type of project being run with students with visual impairments began in San Francisco in 2002 (Deifell 2007), and was then replicated by many schools and other educational institutions worldwide, such as PhotoVoice's examination of what it was like to be a visually impaired person in the UK (PhotoVoice 2022).

This genre, it was felt, stood apart from the previous two as its process transformed the photographer into a narrator of the social problems and inequalities that they faced in their daily lives. Photographers working in this genre also did away with the need for expensive cameras or equipment set up by trained technicians, whose images were designed for high-profile exhibitions or commissions, and thus highlighted issues of economic inclusion. Furthermore, because the images generated during these projects were generally produced with disposable cameras which took simple photographs that reflected the scenes and everyday lives of their users, their compositions took on an anthropological quality of day-to-day existence, in the style of a sociological visual methodology (Mitchell, 2011).

For those working within the raw image genre, photography seemed to become less a matter of the cognitive difference between visual impairment and sight, but a social narrative about the excluded reality of the camera user. To put it another way, images in this genre not only took the viewer into the cultural aesthetics of the photographer but also into the social environment and the circumstances that these photographers lived with. An example of work in this genre was a series of images on the life of Rahul Shirsat, a totally blind Indian student who had previously seen and had a visual imagination. His series was guided by his hearing, a sense

that fired his visual imagination to understand the scenes around him and that included photographs of staircases and students at his school for the blind sitting on highly polished floors, his echoey experiences of a local underpass and the vibrations on concrete steps through his legs and cane (Blind With Camera 2022).

Founding an Andragogy on these Observations

What was learnt during the analysis of all three genres, was that the process of creating an image is not just of intellectual use to students who are visually impaired, but are also intellectually, physically and socially illuminating to students with sight. It was this element that was in part reflected in the projects of Blind With Camera and their college of photography, which was specifically founded for the education of students with visual impairments. The images that were collected during projects by Blind With Camera showed radically different worlds of institutionalisation and school friends that are rarely photographed, contrasting cold, dark insides and hot, light outsides, or scenes that can only be communicated through a fleeting moment. Thus, an idea of inclusion through creative collaborative work was formed.

What was most aesthetically significant about the images represented in the compositions and ideas in these genres, was the photographers' lesser need for formal rules of composition or subject choice. This approach, it was felt, potentially made less technical or formal approaches to photography a creative vehicle for developing inclusive practice, where no presuppositions were to be placed on *the photographic student* and no external judgements made. It was on this theory that a more formal four-day collaborative photography course based at Canterbury Christ Church University (CCCU) was developed in 2015, in partnership with Canterbury Cathedral and a local contemporary art gallery in Margate, Turner Contemporary.

The Canterbury Photography Course

The andragogical model used to develop the four-day course at Canterbury was largely informed by a model of inclusive technical capital (Hayhoe 2015b), as it largely reflected the educational aims of the course and focussed on the inclusive elements of the photographic equipment. However, this model did little to inform the aesthetic or andragogical aims of the process being undertaken, and so during this course and in a later museum-based project a model of inclusive capital was developed. This later model was founded in large part on the notion that learning can be interpreted as an accumulation of abstract capitals, which are used to develop autonomous learning and inclusion (Hayhoe 2019).

Andragogically, inclusive capital was to be developed through the process the photographers acquired through collaboration, the participants' development of knowledge on the cameras being used and the environments and the subjects of the photographs themselves. In the application of the model, it was found that access to inclusive capital and inclusive technical capital was best developed through accessible regular cameras found in devices like smartphones and tablet computers. This development freed the learning activities to concentrate on the environment of photography alone, and the shared aesthetics of the students. This environmental understanding of image creation focussed primarily on the mechanical aspects of capturing an image, the relationship between light and the functions of cameras, and what photographic processes could explore in relation to the social experience of visual impairment and full vision. Thus, exercises were designed to include subjects and topics that would allow all students to collaborate through the experience of familiar objects or topics. The exercises were also designed to help the participants investigate local Kentish environments which were less familiar, exploring issues such as mobility and an understanding of different social, cultural, and geographical surroundings through image making.

The teaching and collaborative work on the course was also designed to encourage soft skills through the development of photographic skills, an understanding of students'

experiences of objects and environments, and to test the use of mainstream inclusive technologies in educational and real-life environments. This work was also designed to encourage a process of thinking about the experiences of different forms of disabilities or none, and other's differing learning needs as inclusive technologies, i.e. mainstream technologies designed to include all users. This andragogy contrasted with more traditional separate art courses for people with visual impairments and assistive technologies, i.e. technologies that are designed specifically for people with physical and learning disabilities, which considered the learning practices of people with visual impairments to be fundamentally different to those with sight.

The four-day course was designed with the following tasks. On the first day, students were introduced to the cameras they were to use and the history and culture of traditional photography, they were taught how to upload, share and exhibit their photographs, and they worked on the development of simple images through collaborative work. These tasks were formulated according to principles of universal design for learning (Katz & Sokal, 2016), and participants initially worked in pairs to support each other developing images on their own devices. These images were then verbally described, encouraging visually impaired and sighted students to share the development of this description and thus encode their experiences in a form that could be understood by the broadest possible audiences. During the demonstration, students were also asked to work on their own mobile devices and prepare images that could potentially be shared using live social media.

The collaborative tasks were particularly noteworthy, and consisted of taking pictures of learning partners, and verbally describing the image or what they thought the image looked like without showing it to their learning partners, stimulating the students to come up with new forms of communication. During these tasks, students took images of their own faces close up; images of their partner's legs and arms from a distance; images of their own arms and legs

close up – these images were to focus on a feature, such as a finger, hand, painted toe or foot -; images of something on their body close up, such as a ring, necklace or tattoo; and, an image of a body part on themselves or their partner that they would not normally see, such as their back, their heel, or their nose from beneath. As with the portraits, after each image was captured, the students worked with their partners on a description of these images.

The purpose of these tasks was to allow the students to collaboratively focus on a self-image of their own body in a way they would not normally conceptualise it whether they had sight or not, and that they did do not really take much notice of on a daily basis; to reflect on parts of the body that others rarely see of them in order to expose their own body image; and, to reflect on items they had chosen to add to their own bodies for aesthetic purposes, but rarely focussed on. Taking images of other students bodies from a distance also allowed the students to explore the concepts of distance beyond their own reach. This concept in particular explored the nature of far off and near by imagery, and the principle of foreshortening, i.e. the sight of items in the foreground appearing to be larger than items in the background.

The subsequent three days of the course were spent applying this initial training and then reviewing an initial portfolio of work in various inclusive environments. On the second day the students collaborated on a photo-narrative of the life of Canterbury Cathedral and its surroundings. This exercise was designed to provide an example of a local heritage environment that explored the history of the area close to the university and included sharing images and verbal descriptions of these images amongst each other. On the third day of the course the teachers, students and support staff travelled by train to conduct a photo-narrative of the life of Margate beach and sea front, based at Turner Contemporary, and an examination of a number of photographs, the gallery and seafront as a backdrop. This exercise was designed to act as a contrast to the previous day's heritage environment and allowed the students to experience one of the most colorful and vibrant environments in Kent on a summer's day.

On the fourth and final day of the course, the students returned to the classroom to discuss their experiences of the tasks undertaken over the previous three days, to discuss the development of their portfolios that had been created, and to evaluate the course. This final day's debriefing was designed to allow the students to discuss each other's work in more detail, and to choose each other's favourite photographs from the course before considering how they would like to develop their experiences through autonomous learning.

Analysis of the Observations Made During the Course

The analysis of a questionnaire, discussions and observations during and after the Canterbury course raised two significant issues that could be used to improve future collaborative photography education: the first issue was that the students' previous experience of students affected their use and appreciation of the tablets and smartphones used during the exercises; the second issue was that the different student experiences and backgrounds discussed during collaboration made the group work richer, and thus many social as well as photographic soft skills were developed through cooperative learning.

On the first issue, the main observation was that the experience of the participants was not related to their visual impairment or blindness. One of the students who was visually impaired had no experience of photography prior to the course, but four of the other visually impaired students had their own high-end, technically sophisticated cameras and had studied photography for many years. One of the visually impaired students was also taking a bachelor's degree in photography at the time of the course, whilst another was working as a professional photographer.

Subsequently, the smartphone cameras and tablet computer cameras were of limited use to these seasoned visually impaired photographers. However, these simpler technologies did prove to be the most popular form of camera for those students who had little experience of

photography, both visually impaired and sighted students who often used smart devices for other activities, although the size of these devices sometimes proved problematic. As one student with little experience of photography classes and a visual impairment stated, “I use an iPhone, so I was familiar with [tablet computers] ... My [tablet] was a bit heavy ... Sometimes I was a bit afraid I’d drop it.” Another inexperienced sighted student with a physical disability stated,

“I found the [tablet] that I was loaned a marvellous piece of equipment. It is very user friendly ... I had never used [a tablet] for photography before. I found it understandable and practical to use and fun. And, as it was light, I found the handling of it manageable as well.”

By contrast, although the experienced photographers followed the initial training on the use of these simple devices, they preferred to use their own equipment during the activities, or a combination of both simple devices and their own equipment. However, they also saw a position for the simple devices with less experienced students, both blind and sighted. For example, an app called Photo Booth allowed one Blind Veteran to see handwriting for the first time since becoming blind decades before, as it reversed the color of a handwritten page and writing. Furthermore, the professional photographer also taught photography to others who were visually impaired, and after attending the course emailed the following,

“I have encouraged several people to use tablets for photography as we had a photo week and a couple members [who] really struggle with cameras so they used a tablet all week ... I then did a presentation at a conference on photography where I also showed tablets and I have another member now using a tablet.”

On the second issue, students found it useful to use photography as an inclusive social experience, discussing their capabilities as they went along and comparing images with others, with the zoom functions and the larger screens on tablet computers helping the process. It was

found that the students also stayed in touch after the course, and conversations went on for months afterwards, which encouraged further autonomous photography exercises by students who had previously had little or no experience of photography. During the course, it was also seen that the inexperienced students found it useful to share techniques and became more socially and technically confident. This was particularly important for the older students, who felt that they were more vulnerable to social and cultural isolation. One older student even brought in jars of jam on the final day of the course, as a thank you to others she had worked with.

Observations of the course also provided an opportunity to discuss and experience access in numerous ways, providing a potentially different form of soft skill. In particular, the students worked within a physically mixed community, and students with all levels of vision often had other physical disabilities, and thus had to adapt to a different way of learning, working and communicating. For example, one sighted participant with a physical disability stated, “The teaching was interesting, thought provoking and stimulating. The tour was fabulous. Interesting, visually, and orally. A most informative and enjoyable experience.” Similarly, one of the visually impaired students with a physical disability later wrote stating,

“[The discussion] gave a useful introduction to technology and the history of photography. It provided me with a theoretical background and helped me to find motives and inspirations for my pictures. I enjoyed talking to other participants and looking at their pictures. Everyone was very nice and the accommodation of people with different disabilities worked very well.”

Conclusion

At the beginning of this chapter, we asked the following question, How can photography education for people with visual impairment evolve to become more inclusive?

During the Canterbury course, we demonstrated how andragogy involving collaborative tasks by students with visual impairments and sight has the potential to develop inclusion, motivate autonomous learning and increase an understanding of visual impairment and sightedness. Participants using mainstream technologies successfully learnt with and from each other, produced images collaboratively, and remained connected afterwards no matter what their level of education or previous experiences of photography.

This andragogical experiment has therefore not only led to the development of technical and aesthetic soft skills, it has also stimulated novel, valuable experiences of what is traditionally felt to be a purely, unattainable visual culture for people with visual impairments. What effects these inclusive skills will have on future educational development is still to be established, as a single course only provides limited findings. Thus, a new critical methodology and further studies now need to be developed, to assess the significance of collaboration on inclusive photography education.

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