Methods of contextualising

Statement:
Through this group work, I developed a deeper appreciation for accessibility design and how our Kensington Gardens Birdwatching Kit could enhance the experience for people with vision or hearing impairments. Our project consists of four sections: Mapping Active Areas, Visualizing Sound, Visualizing Flight Trajectories, and Sign Language for Birding. I focused on visualizing flight trajectories.
Initially, we considered using AR navigation to help Deaf birdwatchers locate birds. However, we quickly realized this reduced the joy of exploration—one of birdwatching's key experiences. Instead, I shifted my focus to visualizing flight paths, highlighting distinct flight patterns to make birdwatching more intuitive and engaging.
To enhance readability, I used layered tracing paper, allowing users to flip through pages and see the gradual progression of bird movement. This process helped me understand that accessibility is not just about alternative solutions but about rethinking how different users perceive information. I also realized that accessibility tools must be flexible and adaptive to truly serve diverse needs.
This experience deepened my understanding that Disability Justice is not just about assistance but about creating equitable experiences. Moving forward, I aim to explore how information visualization can further support accessibility design.

Annotated Bibliography:
Heart n Soul is an arts charity that helps people with learning disabilities and autism. They believe that accessibility should not only solve problems but also make life more enjoyable. They focus on creativity, self-expression, and fun, not just making things easier to use.
This idea changed how we planned our project. We could have designed a tool that helps Deaf people hear birds, like a hearing aid. But that would only replace sound. Instead, Heart n Soul made us think about how to create a better way for Deaf people to enjoy birdwatching. This is why we focused on four main parts: bird habitat maps, sound visualizations, flight path visualizations, and sign language guides.
Heart n Soul also showed us that design should not only be useful but also interesting and engaging. This influenced my part of the project, which is visualizing bird flight paths. Instead of just drawing simple lines, I wanted to show how birds move and how their flight feels. I used layered transparency and simple shapes to make it easier to understand and more fun to explore.
This project is not just about helping Deaf people see birds. It is about making birdwatching an enjoyable and meaningful experience. Heart n Soul helped us see that design is not only about fixing what is missing but also about creating new ways to experience the world.

Heart n Soul (n.d.) *Heart n Soul*. Available at: https://www.heartnsoul.co.uk (Accessed: 18 February 2025).

Dear Data explores how hand-drawn data visualization can turn personal experiences into clear visual expressions. It emphasizes symbols, layering, and step-by-step information display to make data easier to understand. This concept became relevant when one of our students, who is Deaf, needed help interpreting part of his biology course. We decided to create visual tools for Deaf birdwatchers to support his work.
When working on bird flight path visualization, *Dear Data* made me realize that accuracy is not the only goal—how people interpret data also matters. I traced trajectories of wings, heads, tails, and feet, recording changes over time. I separated each motion into distinct parts and created graphs showing how they move together. This helped viewers understand how different body parts form flight patterns.

It also made me consider different ways to present data—lines vs. bars, circles vs. triangles—to keep information clear yet visually appealing. This idea influenced my use of labeled circles instead of complex calculations. It also shaped my map design, color choices, and interactive elements, impacting how we approach visual data representation in future projects.

Lupi, G. & Posavec, S. (2015) *Dear Data.* Available at: https://www.dear-data.com/theproject (Accessed: 20 February 2025).

This study looks at the challenges and ways to improve birdwatching for people with disabilities. It explains the main problems, like trails that are hard to access, people not being aware of their needs, and birdwatching relying too much on sound. It also suggests solutions, such as using maps, adding visual tools, and creating new ways for people to connect with nature.
This research helped us focus on Deaf birdwatchers because they cannot hear bird calls or other sounds used to find birds. Instead of turning sound into another type of sound, we wanted to create a better way for Deaf people to experience birdwatching visually. We designed maps to show bird locations, visual patterns to represent bird calls, and layered images to display how birds move. We also created a flip book with sign language animations to show different bird actions. These tools help Deaf birdwatchers observe and engage with nature in a way that fits their needs without missing out on the fun of discovering birds.
The study also shows that people's attitudes affect accessibility. It made us realize that our design should do more than just provide information—it should encourage exploration, learning, and enjoyment. By using clear visuals, hands-on elements, and thoughtful design, we made birdwatching an experience that both Deaf and hearing people can enjoy together.

Sinkular, E. N., Dayer, A. A., McGregor, F. A., & Karns, M. J. (2025) 'Accessible birding in the United States: Constraints to and facilitators of birding with disabilities', *Human Dimensions of Wildlife*, 30(1), pp. 77-93.

This study explores how photography and filmmaking serve as key tools in Deaf research, emphasizing that visual storytelling aligns with Deaf culture's reliance on gesture, body language, and sequential imagery. It highlights that visual methods are not just for documentation but shape how Deaf individuals engage with information.
This research influenced our project in two key ways. First, it helped us recognize the importance of sign language as a visual communication method, leading us to include a sign language guide for bird-related actions in our toolkit. Second, it made me think about how photography techniques could improve the way I visualize bird flight paths. After reading about visual sequencing in Deaf communication, I realized movement could be broken into a series of images for better understanding. This led me to explore photographic techniques, where I discovered multi-exposure photography as a way to show motion in layers.
Inspired by this, I used tracing paper to separate bird movement into frames, allowing users to flip through and gradually reveal each stage of flight. While this study did not mention multi-exposure photography, it led me to explore how photography techniques could refine my approach, shaping how I presented bird movement.

O'Brien, D. & Kusters, A. (2017) Visual Methods in Deaf Studies: Using Photography and Filmmaking in Research with Deaf People. In: De Meulder, M., Murray, J. J. & McKee, R. L. (eds.) Innovations in Deaf Studies: The Role of Deaf Scholars. Oxford: Oxford University Press, pp. 265-292.

Drucker explores visual cognition and nonlinear knowledge, emphasizing that reading is an active navigation process, not just passive information intake. This notion changed the way I approached learning altogether; I started to see information as a result rather than merely consumption.

In the end, though I might have been a bit presumptuous of how much information—especially visual—would make people interested enough to keep looking at the same place as long as they wanted information from someone else—or at least until something changed their circumstances so they had no choice but to seek out the information elsewhere. So accessibility comes not only with offering things at a quicker pace but also with providing an opportunity for others to explore and learn on their own terms.

I was inspired by Drucker's concept of reading as navigation. Instead of having a fixed destination in mind, I suggested to the team that instead of being direct with their position on the page, we should be layered with transparent states, and have the user slowly uncover the birds' movements through turning the pages. This way the information is intuitive and interactive, and there is an opportunity for active engagement rather than passive consumption.

Moreover, Drucker explains the ways in which multi-layered visuals can render readers "seeing" patterns that are helpful to understand the subject matter at various angles; this was why I chose multi-exposures, transparences, and geometric forms. The resulting black-and-white photo of Deaf birdwatchers with a zoomed-in on their respective nets allowed me to read "bird's-eye view" of the scene.

This study redirected me away from solutions-oriented thinking toward more immersive opportunities for birdwatching accessibility for Deaf audiences.

Drucker, J. (2014) Graphesis: Visual Forms of Knowledge Production. Cambridge, MA: Harvard University Press.

This study examines critical thinking in design and education. The discipline of critical thinking involves questioning the status quo, and in doing so it should be directed at more than just following established practices. Critical thinking requires an evaluation of current thinking, whether or not it is effective, that challenges assumptions, and changes what is learned through experience. This idea was inspired by our childhood decisions to pursue a degree in architecture and then, later, become a designer-in-training with Habitat.

We did not presume that accessibility to birdwatching merely meant providing visual elements. We challenged why birdwatching needs to be an auditory experience in the first place and what can change if the focus shifts away from sound. The answer lies within a focus on rethinking disciplines at the very least. Thus, with the deaf community in mind, we explored how bird identification, behavior, and movement might be envisioned visually rather than acutely.

It allowed us to shift focus from making amends by compensating for hearing impairment to remaking birdwatching with a new purpose of never being deaf again—and always asking what that means. Ultimately, this research prompted us to see our contribution to birdwatching not as an auxiliary endeavor but as a working restoration of meaning made of a critically reflective ear-witnessing activity.

Bailey, S. (2011) Towards a Critical Faculty (Only an Attitude of Orientation). The Serving Library.