The Gap Between Worlds:

A tactile ceramic experience of sound from a deaf perspective

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for the degree of Master of Design

Abstract

I identify as both a deaf and hard-of-hearing person; yet I am neither because I occupy a space in-between. People assume that deaf individuals live in silence. However, I perceive the worlds of the hearing and d/Deaf as fragmented spaces due to a cochlear implant which acts as a threshold, allowing me to cross between worlds without a second thought. This research is a personal response to the question, "***How can textile practice demonstrate my experience of being between two worlds: d/Deaf and hearing?***"

This practice-based research project aimed to navigate my hearing loss through ceramics, recognised as textile practice. Using action research as a guiding methodology, the gaps experienced in verbal communication are explored. This gap in communication is how I experience lipreading and hearing in my day-to-day life and prompted an investigation through a series of interactions with ceramic materials. Reflecting on my relationship with deafness, I have traced pieces of my struggles where my liminal position created a new dynamic; the gaps are illegible and there is a constant barrier between communication that I can never comprehend.

To express my liminal positioning, repetitive hand-crafted making methods generate an interactive ceramic experience. The gaps, while they do not speak for themselves, serve as visual expressions that convey my situation between two worlds.

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Attestation to Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor any material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed,

11/10/22

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- My brother and sisters, Que, Coorn and Kim – although we live in different worlds, you have never treated me any differently. Thank you for always transforming my deafness into comedy, even the ones I do not find funny.

- My parents, I read this passage somewhere: "The diagnosis of deafness propels a child into a different life, not a *lesser* life," (Virdi, 2020, p. 15), I thought of you both. I have come to understand that your cultural values, gestures and expressions of 'love' are not explicitly verbal. But I can see and feel your love being expressed in a non-verbal communication. You both have been through sacrifices and burdens that I will never know the true gravity of. Because of your love and sacrifices – I am able to write, read and speak like every other. My work, *The Gap Between Worlds*, is for you – a sign of my dedication, respect, gratitude and love for you.

Figure 1. *My Parents*: 2019 Scanned Analogue Photograph.

- Lastly, in *Loving Memory* of Uncle David.

I regret not being able to say goodbye to you when you left the world. I look at this photo quite often, to simply remind myself of the long journey to my deafness; through which, in my own way, I *found* myself. It is always surprising how quickly meaningful moments can pass by. Most of them are over before they can start, casting a light on the future – making an impact that is unforgettable. You shined a light on us that I will always remember vividly, like this photograph you took on my 5th birthday. Thank you for welcoming my family into a beautiful country we gladly now call home. For one far better than I had ever imagined it could be.

Figure 2. *My Fifth Birthday*: 2003 Analogue Photograph taken by my Uncle David.

Chapter 1. *Introduction*

Figure 3. *Haptic Exploration:* Rolling Wet Paper-Clay.

1.1 Prelude

Being deaf requires integration into the hearing world, rather than securing a sense of belonging within the confinements of the Deaf community. This feeling is similar to being "foreigners in their own land" (Virdi, 2020, p. 13). Central to this practice-based research are the concepts of gaps, liminal space and textile crafting combined with the personal experience of being a deaf person in a hearing world. This research applies a practice-based methodology to explore the communication and sounds that are missing due to my hearing loss.

I was once asked; ***"Is it hard to read lips?"***, to which I struggled to provide a concise answer, as it is not simply a 'yes or no' response. The distortions I experience due to lipreading create a sense of uncertainty, as I attempt to fill in the missing words. As a textile artist, I want to understand and share my hearing experience, striving to demonstrate the gaps I perceive in sound. I identify myself as audiologically profoundly deaf. It is essential to distinguish between Deaf people with a capital D and deaf people with a lowercase d (Cooper, 2007). The capital "D" describes people who embrace deafness as a cultural identity and actively engage with sign language as their first language. The lowercase "d" describes those who have an audiological condition of hearing loss, like myself, who are not part of the Deaf community. I do not identify as only a Deaf person because of a cochlear implant. It is a device that "provides hearing sensations for severely and profoundly deaf individuals" (NZ Audiological Society, n.d.). I see myself as someone in a liminal position that negotiates the space between two worlds: the hearing and d/Deaf. It is a common experience for someone who is deaf to ask others to repeat what they have missed out on. My lack of hearing evokes a feeling of loss, of something missing, a flaw that distorts the whole

conversation. I perceive this gap as a space ‘negatively’. The term *gap* is used in this research to signify how I understand and interact with the world. The gap in sound is like a weak radio signal; it requires a lot of more energy to receive the signal, even before the task of interpretation begins (Street, 2017). The gaps I experience in sound create a communication barrier. Lipreading does not provide me with a fully formed means of communication, as I encounter other visual and physical fragments of ‘sound’ that neither my eyes nor ears can fully grasp.

1.2 Research Objective

I often refer to myself as a person 'in-between', as a way to articulate the inarticulate. This has unknowingly revealed the painful truth that I have been trying to blend into the hearing or deaf world, neither of which I will ever belong to. How do I feel as I hover between these two worlds? I am neither hearing enough nor deaf enough, although I am part of both worlds. David Wright, a poet who lost his hearing, wrote about, "deafness, I know everything and nothing" (Wright, 1969, p. 5). I, too, know everything about deafness from my experiences of learning to adapt myself to a hearing world. However, I know nothing because I have become an outsider in both worlds. Living in-between and navigating both worlds is also the source of my greatest discomfort.

This research explores the question; "***How can textile practice demonstrate my experience of being between two worlds: deaf and hearing?***"

My inability to decipher the gaps in my hearing triggered this research investigation into what this means and how this liminal positioning can be expressed through a textile-based medium. This research practice aims:

- To expand my understanding of how I experience sound.
- To use a ceramic medium to convey the liminal space between deaf and hearing and represent the gaps I experience in verbal communication.
- To develop a form of artistic expression that allows hearing people to better understand my liminal position in the world.

As a textile artist, I intend for the audience to experience sound differently through a combination of textile mediums and space. Form, colour, and texture are investigated during this research practice. I highlight the importance of the sense of hearing or the lack thereof, through the final ceramic output, intended to be physically interacted with. This research explores repetition, variations of scale and textile qualities of different ceramic materials. My practice investigates the hand-making process through repetition. The repetitive process is regularly used in my practice to "transform the space through the repetition of modular elements" (Gogarty, 2006, p. 28), as a large- scale installation. The repetitive overlay is similar to my lipreading experience, reciting words repeatedly to compensate for the gaps. Repetition is critical to me as I cannot always absorb words or speech at first hearing. Ceramics provide a medium for exploration of my experience as an abstract vocabulary.

1.3 Positioning the Researcher

I perceive my relationship with silence, specifically the gaps of sound, as being a negative aspect of my identity. I am a textile artist whose training has led me to engage with a textile-based practice. Through my practice, I aim to express and capture my liminal position connected to hearing sound and demonstrate how this creates gaps in my communication. My practice seeks to illustrate that "there is a kind of loneliness that comes from being with people. The kind that is more about recognition of the failure of communication: the *gaps*." (Scanlon, 2011, p. 14). I am a deaf person operating and interacting with the hearing world through lipreading. Lipreading affords me a daily challenge: completing sentences that have missing words that I must fill.

Most deaf people have some sensation of sound, but just not enough to make sense of it. A sensory dimension that I engage with, is one I can feel, such as the rhythms and vibrations of the world around me. Loud music at a concert makes the bones in my body reverberate to the beat. My fingers learnt to recognise the different pulsations of the key pitch when playing the piano. Others hear sound; I *feel* it. My perspective of sound resonates with deaf musician, Evelyn Glennie (2015), who discusses hearing as a specialised form of touch. Glennie is profoundly deaf like me, and her deafness has shaped the way she makes sense of music. It causes her to pay attention to the tactile and visual aspects of sound; she sees and feels the music (Glennie, 1990). Vibration is my way of seeing and feeling the 'sounds' that I miss hearing. The use of ceramics is more than a tactile response – involving the muscular action of crushing and transforming matter (Gibson, 1983). Similarly, hands are meant to touch, knead, press, and grip the clay to feel its forms, textures and shapes. Touching is a "function that

enables one to see feeling as the property of another and simultaneously to feel it - or at least to know it as felt" (Driscoll, 2020, p. 194).

The COVID-19 lockdowns altered my approach to my practice and introduced ceramics as a key medium into the research project because they were available. Through handcrafted ceramic-making, this research explores my experiences of sound. There are two types of sounds that can be produced: one is resonant and open, and the other is quiet and muted (Cage, 1981). In the context of my liminal position, they can be compared to sound and silence, loud and quiet, hearing and d/Deaf.

1.4 Rationale

An influence for me that I carried specific ideas from like a blueprint for my practice and research, was the work of deaf visual and sound artist, Christine Sun Kim: *How to Measure Loudness* (Figure 4). Kim believes sound is not part of her life as it is for hearing people. As an artist, she has encountered similarities between American Sign Language (ASL) and music. I resonate with her belief that "sound does not have to be known solely through the ears - it can be felt, seen, and experienced as an idea" (TED, 2015, 4:50), and this is what is explored through this research.

Kim's work is embedded in the materiality of sound and language; her practice investigates how we might reframe our perception of sound, especially the deaf sound experience. Her work draws sonic experience into musical staff, translating daily rhythms into the "thickness of the line, smudges, and discontinuous passages" (Kim, 2020, p. 71). This type of translation is also relevant to my practice, such as her interpretation of sound, which defines her d/Deaf experience of it; becoming the different sensory and emotional responses that influence the visual aesthetic of her practice. She measures loudness through an abstraction of musical staffs as Figure 4 shows.

This relates to my practice as I want to convey my experience of gaps in hearing through touch, as a 'subtraction' of sound. Glennie noted, "sound is more than meets the ear - it is a multisensory experience" (TED, 2007, 34:06). My practice responds to concepts with sound through the act of making.

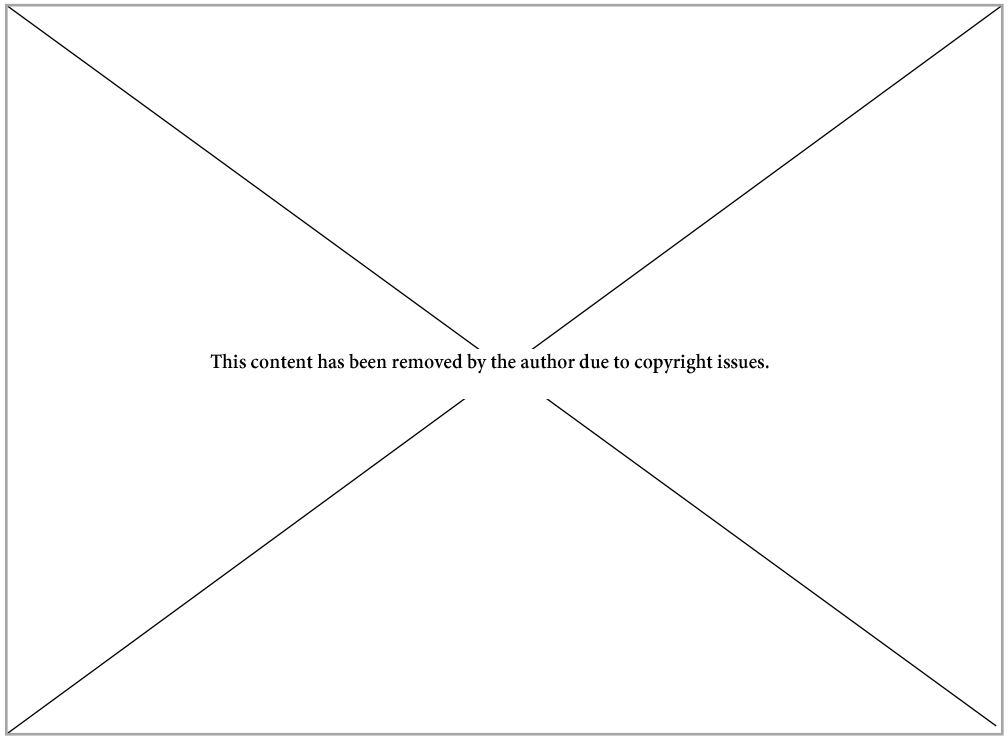


Figure 4. *How to Measure Loudness:* Musical Drawings.

Note. Christine Sun Kim's illustrations capture the shapes of gestures in ASL. From "Christine Sun Kim: 'I'm not trying to be a freak show'," by T. Auld, 2015, *The Guardian* (https://www.theguardian.com/artanddesign/2015/nov/25/christine-sun-kim-sound-artist-deaf-london-exhibition). Copyright 2015 by The Guardian.

Chapter 2. *Contextual Review*

Figure 5. *Flatten Clay with a Roller.* White Porcelain.

2.1 Sensory Loss: *Deafness*

Deafness is a significant loss of hearing, resulting in a damaged inner ear (cochlea). Hearing people tend to think "a world without sound would be a world without meaning" (Lane, 1992, p. 11). Deafness is inadequately understood in general. For instance, there is a common misconception that deaf people live in a world of silence. I was partially exposed to the Deaf community as a child, but I do not identify as culturally Deaf because I have a cochlear implant. It is a sensory substitution device that allows a deaf person to convert a grid of vibrations felt against the skin into recognisable speech. A cochlear implant became "a specific trait of my life and as a means of connecting to or *making* it in the hearing world" (Breivik, 2002, p. 3).

I had my auditory training through the Cochlear Implant Programme Assessment Test (Figure 6). This assessment training is used for testing one's ability to lipread and listen with a cochlear implant. Figure 6 shows my successful result with listening and lipreading at the same time, in contrast to Figure 7 without lipreading. Lipreading and listening are the communication tools I use to understand the auditory world. As Kolb (2013) discussed spoken words occur in my blind spot, a vacancy in my perception. A cochlear implant helped me to hear and speech-reading let me "fill in the blanks" (Virdi, 2020, p. 5), but most of the time, the gaps still remained insurmountable. English is not my first language, which complicates things further; to understand spoken English, I have to rely almost entirely on lipreading. The sounds I have to make sense of - are not heard through my ears but through my eyes.

Figure 6. *CIPA Test:* Part 1.

Note. Listening with a cochlear implant (CI) and lipreading.

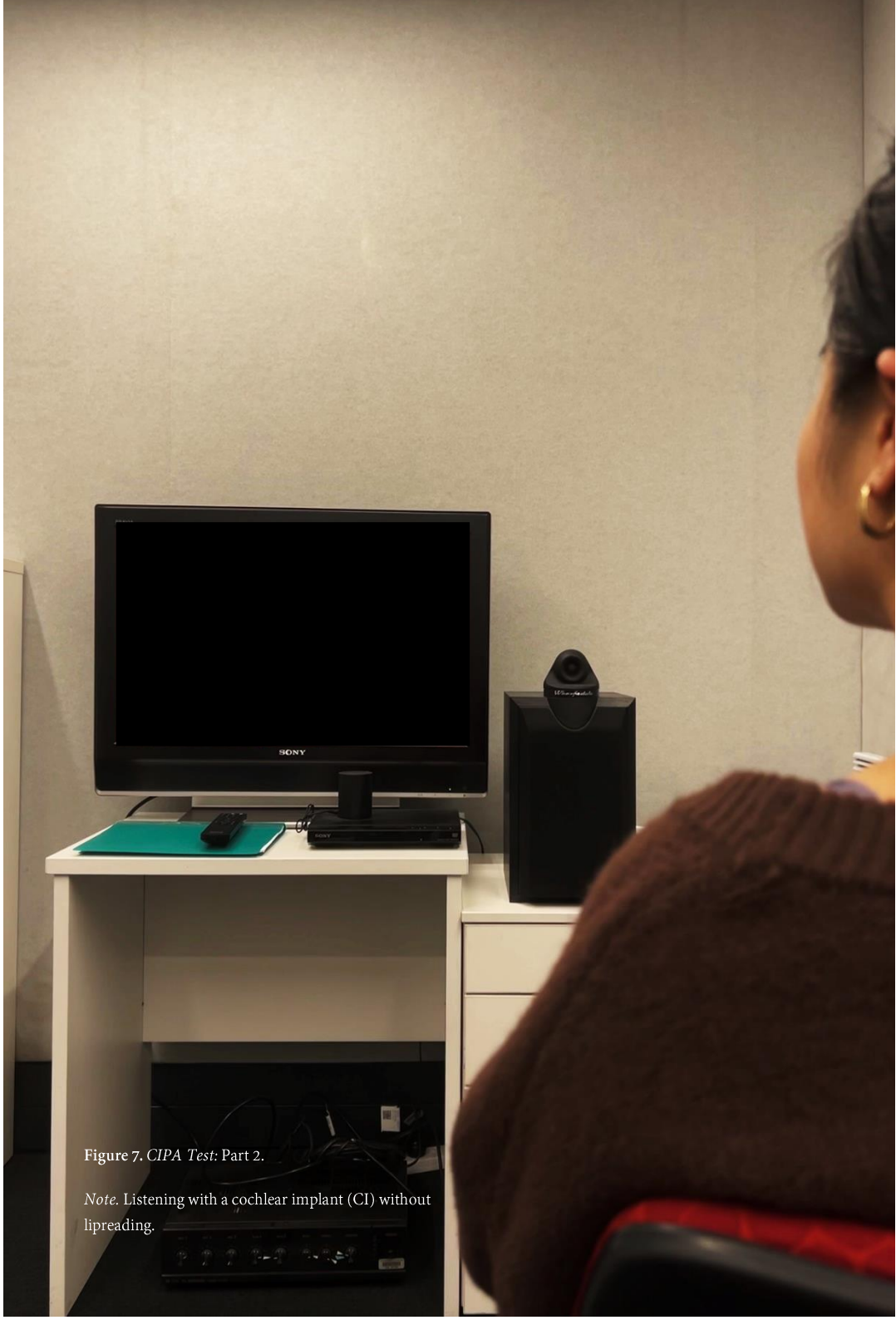


Figure 7. *CIPA Test:* Part 2.

Note. Listening with a cochlear implant (CI) without lipreading.

Gaps in sound can serve as a bridge, but they can also be a barrier creating misunderstanding. I seek understanding amid the uncertainty: my in-between position becomes like "a bridge that mediates between two realities" (Pallasmaa, 2009, p. 60). The bridge can be actual or abstract; it can function as a transition between two worlds. As articulated in *This Bridge Called My Back* (Moraga & Anzaldua, 1981), my body is a bridge, yet I focus on where I am bridging *from* or *to*. A bridge binds two worlds, yet has no place in either. It represents a liminal space; I view myself as a bridge linking two worlds.

2.2 Liminal Space

My position "can be described as a passage or a liminal phase" (Breivik, 2005, p. 56). A cochlear implant is a strange threshold border, a different normality (Leigh, 2009). I view my cochlear implant as a threshold that lets me occupy the hearing world while drifting away from being deaf.

This liminal space also leads me back to what deaf scholar, Brenda Jo Brueggemann (2009) called the concept of 'betweenity'. *Betweenity* is an identity that describes my inadequacy in both the hearing and deaf worlds (Valente, 2014). I lean towards the hearing community more than the d/Deaf community mainly because of my cochlear implant that allows me to communicate verbally. I became obsessed with hearing; mostly out of the fear that I would miss out on what everyone was saying. This position has contributed to my strong sense of ambiguity.

Rooted somewhere between hearing and d/Deaf worlds, I do not quite perfectly fit in either, but this allows me to be present visually and observe. In many ways, my liminality shapes my identity and how I perceive the world through communication that is both hearing and d/Deaf.

2.3 Relevant Artists/ Designers

Belly Miller

My research is about communication. I was three years old when I learnt how to communicate in New Zealand Sign Language (NZSL). I received a cochlear implant at six years old, this was the turning point when my parents encouraged me to speak rather than sign. I do understand sign language, but I rarely use it. Deaf artist Betty Miller is very literal about her experience and pride as a Deaf person. For instance, her *Ameslan Prohibited* (Figure 8), shows an illustration of hands with chains attached to their wrists and fingers chopped off, representing that American Sign Language (ASL), is banned in mainstream schools. This channels her passive hostility towards hearing people by emphasising her love for ASL.

Miller states, "I hope this work, and the understanding that may arise from this visual expression, will help bridge the gap between the Deaf world, and the hearing world" (n.d.). Though I understand this perspective, I cannot fully relate to this status because of my liminal position.

However, I can relate in part to her experience because I am deaf, despite the fact I am not Deaf. It is something I adjusted to, especially when I learned NZSL. My parents expected me to follow the rules of the auditory world. It does not matter that my sense of sound was not as keen as others. I cannot relate to Miller's oppression because I think I have a more practical relationship with sound through my ability to verbalise. Speaking is my way to communicate and to improve my auditory training to understand the world of sound.

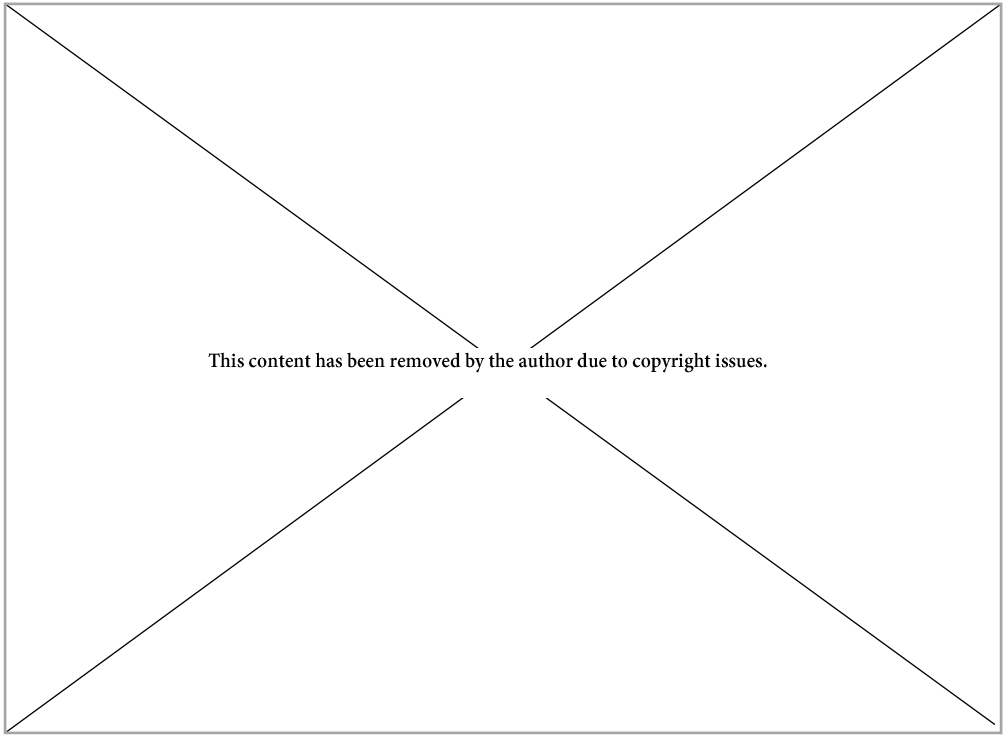


Figure 8. *Ameslan Prohibited:* Drawing Ink on Paper.

Note. Betty Miller's drawings capture the prohibited sign language through chained hands and chopped fingers. From "Deaf Art Spotlight #1- Ameslan Prohibited by Betty.G. Miller in 100 Words," by JoWritesWeb, 2018, *WordPress* (https://aslfox.wordpress.com/2018/11/26/deaf-art-spotlight-1-ameslan-prohibited-by-betty-g-miller-in-100-words/). Copyright 2018 by JoWritesWeb.

Sue Dupor

The painting, *Family Dog* (Figure 9) by deaf painter Sue Dupor, relates to this research project and to my own hearing experience. Dupor portrays the faces of family members "being blurred, likening in the experience of lipreading to the experience of listening to a TV program disrupted by static" (Loveless, 2015, para. 2). Her description speaks to my practice of conveying a narrative of what it feels like to 'hear gaps' from a deaf person's point of view. This experience is known as 'dinner table syndrome'. *Dinner Table Syndrome* describes the situation in which deaf people are constantly left out of conversations (Zarchy, 2020). The dinner table, a symbol of family life and bonding in popular hearing culture, often represents loneliness to deaf people.

Loneliness occurs when words are distorted and frequently lost in ongoing communication. This relates to the term 'overhearing', described by my teacher aide as, "deaf people do not have the luxury of *overhearing* conversations and language, so a lot must be learnt, picked up through direct teaching or exposure" (J. Butters, personal communication, June 15, 2021). Conceivably, the gaps are the visual expression of the uncertainty that surrounds me because of an unclear reception of sound and makes me adopt a negative outlook on my deafness.

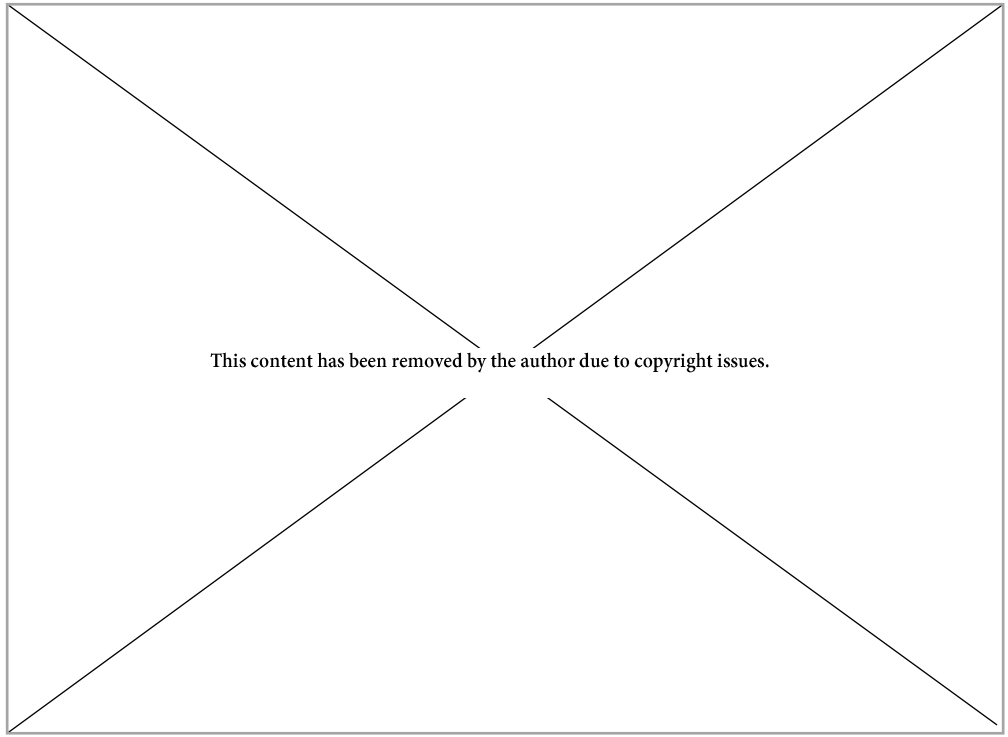


Figure 9. *Family Dog:* Acrylic Painting.

Note. Acrylic painting by a deaf artist Sue Dupor (1991). *From* DeafCulture, by A.K. Keaton, 2015, *DeafCulture* (http://deafcuture.blogspot.com/2015/07/7.html). Copyright 2015 by Ashley Keaton.

Figure 10. *Relationship Between Maker and Material*: White Porcelain.

2.4 Material Making

Textiles are a language, a concept and a material thing (Dormor, 2020). In my practice, I will be incorporating haptic exploration of ceramics through textile crafting. Author Glenn Adamson noted, "the fundamental rules of a craft are only learned by actually doing the activity. Indeed, they are the activity" (2007, p. 75). Through the medium of ceramics, I individually craft my textile output rather than manufacture it, by using mass production methods. This allows me to understand the 'ubiquitous uniformity' as a maker, with marks of the process left behind. We can feel the imprint of the artist's hand (Driscoll, 2020). Ceramic is a receiving material that can be marked by kneading, pressing, staining, imprinting, and moulding. As researcher Jo Dahn noted, "one way to characterise ceramics that fit readily under the heading of craft is to describe them as 'material-based', since what they are made of and how they have been made is central to their construction of meaning" (2005, p. 5).

In working with clay, I am both "touching and touched" (Merleau-Ponty, 1968, p. 163). By encouraging the viewer to haptically engage with the practice, I seek to convey what I feel is at the heart of handmade-crafted ceramics: contact with the maker. As ceramist Pippa Galpin believed "ceramics and the haptic are inextricably linked" (2016, p. 21). This engagement between the viewer and maker allows me to provide a tactile connection through ceramics, to share a conversation.

Figure 11. *Rolling as Haptic Engagement*: White Porcelain.

2.5 Haptics

As a textile artist, my practice includes haptic exploration and experimentation through making. The Greek word for haptic is *haptikos*, "suitable for touch" (Elbrecht, 2019). Galpin (2016) stated that the "haptic is perceived through the sense of touch – is instrumental to how we experience ceramics, and perhaps, as the oldest and the most distinctively pre-verbal of all the senses, how we understand experience itself" (p. 21). I believe that ceramics are suitable for touching, for not only the maker's, but also the viewer's hands, which engage with the handmade. Prior to this research, my role as a maker in the making process intrigued me, I recognised "our experiences of textiles are sensory, felt and lived as much as conceptualised" (Philpott, 2010, p. 101). However, Galpin mentioned that,

> We do not seem to have the words to adequately talk about touch. Though we use metaphors of touch to capture and signify what we 'feel', information about our tactile realities often gets lost when verbalised. This I describe as the *paradox* of the haptic (2016, p. 109).

This relates to how our differences in hearing, especially for deaf people like me, can generate unique experiences of the aural world. Through ceramics, I intend to explore my relationship with sound and the communication gaps that occur. Touching is an act that includes the body in the experience of ceramic. A deaf musician, Evelyn Glennie (2010), noted that "we tend to make a distinction between hearing a sound and feeling a vibration, [but] in reality they are the same thing" (p. 146). I relate to her statement because deafness does not mean we cannot hear; we hear certain sounds and feel vibrations. Due to lack of

hearing, we use other senses, especially sight. We can 'see' the sound that only makes sense to our eyes, not our ears.

In relation to my practice, I find that ceramics invite self-reflection and self-understanding through interaction with the vibrations of the sounds they make when touched or knocked together (Driscoll, 2020). In this research, the ceramics- making practice "invites a sense of participation and fullness of being that can come only from physical involvement" (Dormor, 2020, p. 154). Ceramics form a relationship between materials and bodily movement within my practice. As a deaf person, I am familiar with sign language, which consists of hand movement. Hands can be as gesturally expressive as faces. When I touch something with fingers I produce a simulation of vibrations. The touching movements of the "fingers are like the movements of eyes" (Gibson, 1962, p. 422). Touching by hands combines the "feeling of movement and the feeling of contact, where two sensations fuses into one experience" (Gibson, 1962, p. 478); this I interpret as *vibrations*.

2.6 Beaded curtains

Felix Gonzalez-Torres

According to Dormor (2020), textiles have the capacity to occupy space. Felix Gonzalez- Torres, a visual artist, is renowned for his beaded curtain works, which are examples of tactile textile installations. I am drawn to his work because the emotional resonances within his design are central to his personal experience. He noted "bodily fulfilment refers to existing in a state of togetherness, to constituting a community of two" (Spector, 1995, p. 143). These curtains are a textile but not textiles *per se;* they are textile-like because beads are usually strung on string, rope or monofilament line (Hector, 2013).

Gonzalez-Torres's work, *Blood* (1992) consists of plastic beads stretched across a room or doorway, representing the threshold between life and death while remaining in a liminal space. His curtain work demands physical participation by viewers, inviting them to walk through (Figure 12). Gonzalez-Torres created his curtain practice to "leave a mark that I existed: I was *here"* (Colpitt, 1993, para. 14). The curtains are tactile, audible, visual and temporal, generating a singular and profoundly sensual experience imparted by moving strands (Hector, 2013). Through the beaded curtain, I can comprehend that "we may close our eyes and even block our ears, but our body continues as an active receiver of sound" (Street, 2017, p. 23). I relate to the curtain where the beads reveal and conceal, depending on how they are arranged and viewed. This applies to my position; I view myself as a navigator of silence and sound.

This chapter discusses the contextual framework to situate my research – the communication gaps. Through the gaps, I intended to portray my liminal experience within a haptic exploration of ceramics.

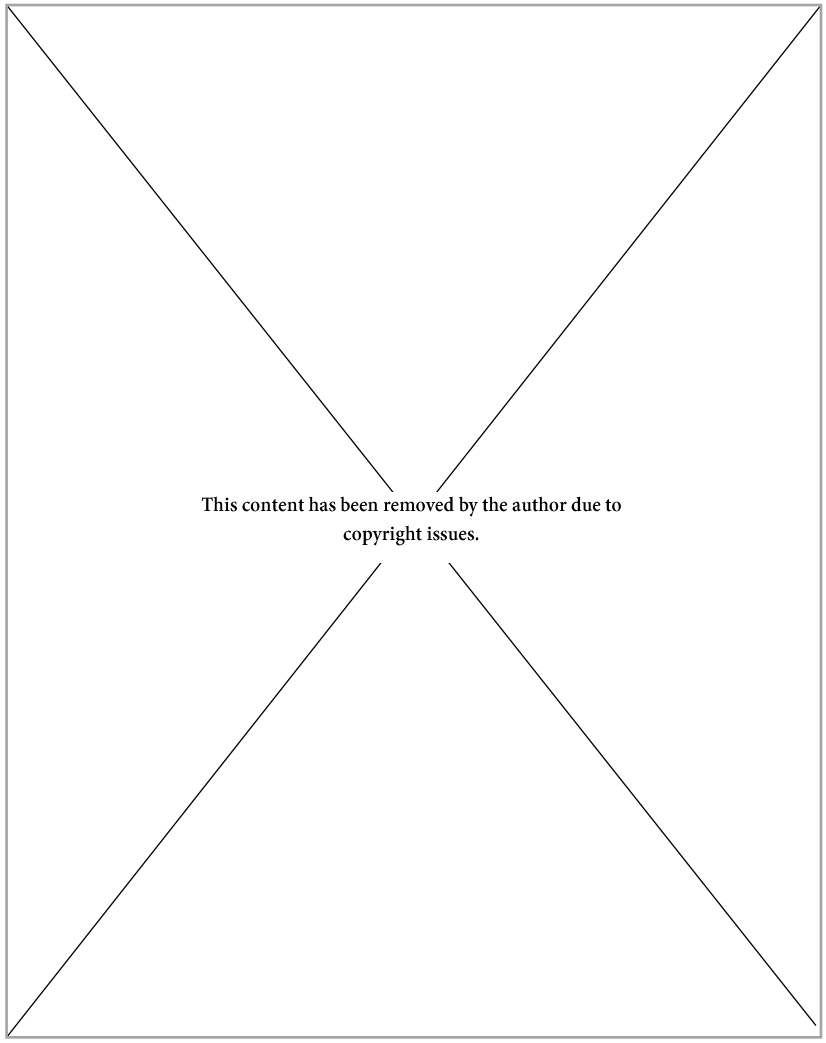


Figure 12. *Blood:* Beaded Curtain, Installation.

Note. Beaded curtain installation designed by Felix Gonzalez-Torres (1992). From Hostility to Hospitality, by T.W. Worley, 2015, *Curator Magazine* (https://www.curatormagazine.com/taylorworley/play-at-your-own-risk/). Copyright 2015 by Taylor Worley.

Chapter 3. *Methodology*

Figure 13. *Making Shapes*: White Porcelain.

3.1 Action Research

This chapter introduces action research as the guiding methodology for this project. Action research is an "iterative cycle of planning, acting, observing, and reflecting in a documented study" (Howeidy, 2017, p. 3). An action research methodology is appropriate for my research because my textile-based practice uses an iterative reflective practice. Specialists and academics have written about action research and the reflective practitioner in connection with research design practice (Donald Schon, 1964; Kemmis & McTaggart, 1988; Hopkins, 1993; Swann, 2002).

Donald Schon (1964), in *The Reflective Practitioner,* noted how the problem is framed and how the situation changes and evolves into the design process. The design process Schon identified applies two crucial approaches to research: reflection "in action" and reflection "on action". Reflecting *in* action is taking note of thinking and acting during the process, whereas reflection *on* action is revising and learning after the process, which influences future decisions.

Schon additionally discussed how "practitioners reflect on their actions during and following their work" (Swann, 2002, p. 50). Although typically used for social practices, this methodology can be applied to design practices, such as textile design. The action research cycle (Figure 14) illustrated by John Hopkins provides a framework to guide planning of the research practice phases. Educators Stephen Kemmis and Robin McTaggart (1988) noted that the action research spiral diagram "demonstrates the spiral or cycle of action research, which involves planning, action, observation, and reflection" (para. 6).

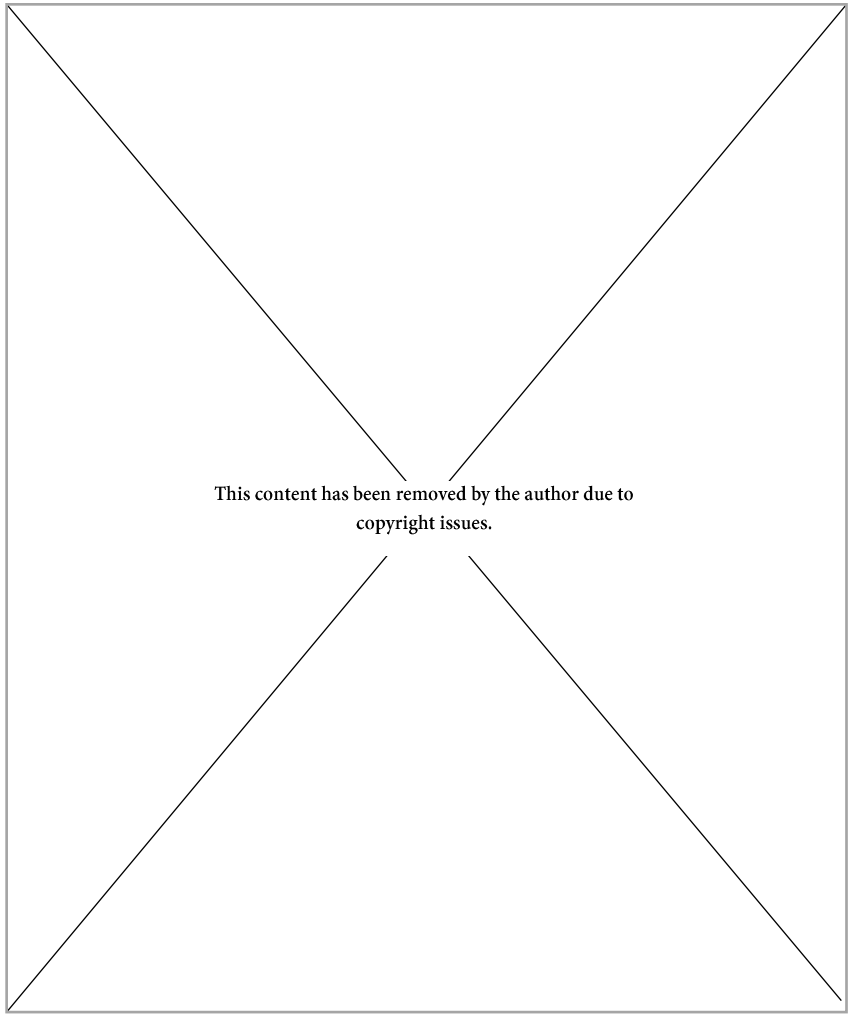


Figure 14. *The Action Spiral Diagram.*

Note. From *An experiential learning process for the advancement of previously disadvantaged employees in an industrial context.* W.J, 2007 (https://base.socioeco.org/docs/research_methods.pdf), p. 146. Copyright 2007 by W.J. Cilliers.

The Action Spiral diagram illustrated in Figure 14 provided a structure for the phases of my design research and final practice. The cycle of iterative reflective practice in my making process encouraged the development of tacit knowledge (Nimkulrat, 2012). Schon defined tacit knowledge as "knowing in action" (1983, p. 49). My textile-based practice is an experiential process: I learn by doing "through practice, through research and through reflection on both" (Gray & Malins, 2004, p. 2). Using an action research methodology allowed tacit knowledge to build during the bodily making, informing the connection between maker and material (Aktas & Mäkelä, 2019).

An action research methodology provided a framework for iterative physical prototypes, as it allowed exploration of ceramic materials through trial and error. Repetition is a critical factor in my daily life as a deaf person; I require words to often be repeated to understand them. Therefore, this cyclic method of reflective repetition comes naturally to me as a way of comprehending my making process.

The action research diagram seen below (Figure 15) illustrates an iterative circular process that applies through a cyclic series of making and reflection, with four interlinked phases of creativity. The phases of research allowed me to navigate, track, document and observe the ceramics-making process. Figure 15 illustrates the four phases as a whole design process and they provide a framework for this practice:

- **Phase 1:** Mapping Research
- **Phase 2:** Navigating Materials
- **Phase 3:** Building the Gaps
- **Phase 4:** Final Installation

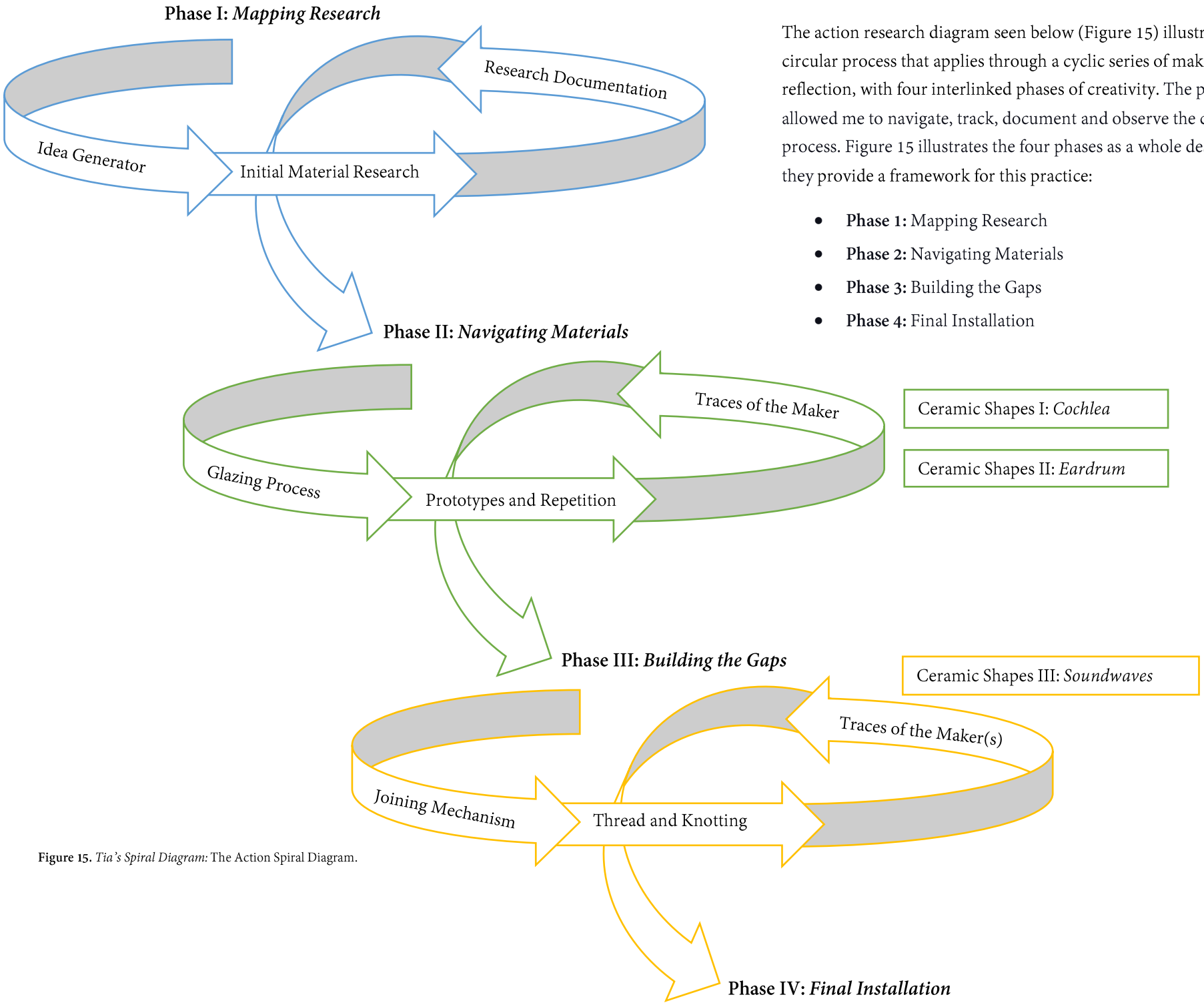


Figure 15. *Tia's Spiral Diagram:* The Action Spiral Diagram.

3.2 Methods

Academics Carole Gray and Julian Malins (2004) identified practice-based methods as "the body of work exploring the research questions" (p. 30). The following are the key methods used for my practice and research: mapping connections, sketching, prototyping, documentation and reflective practices.

3.2.1 Mapping Connection

I used the archaeology of words research tool utilised by Giuliana Bruno. In *Visual Culture Studies: Interview with the Key Thinkers* (2008) Bruno identified a word – mapping method as a means to use words to "construct all of these connections: deeply excavating into words, I look for almost geological forms, strata of meanings that make ideas connect together" (Bruno, p. 149). This process enabled me to gather and record my thoughts cohesively into a mind-map of keywords. Keywords offer "some entry points into the labyrinthine space and some mapping points to initiate new journeys" (Dormor, 2020, p. 22).

Lipreading requires an ability to spot and recognise visual keywords. Figure 16 shows where I started mapping words in this research practice. This method informed connections between concepts and ideas which were constantly shifting and changing. This helped clarify initial design ideas and explore conceptual relationships in a visual format. Keywords enrich language by excavating their more profound meanings, enabling me to start the next step: sketching drawings.

Figure 16. *Keyword Mapping of 'Lipreading'*: Words Encountered Through the Translucent Paper Layer.

3.2.2 Sketching as Thinking

Building on mind maps, I use imagery that is inspirationally relevant based on the identified keyword '*Lipreading*'. Sketching acts as the way to develop a work through exploration and re-tracing of its imagery in search of the pattern, repetition, and scale. Applying sketching as a mode of reflection requires me to "think about *doing* while [one is] engaged in the process of doing" (Crouch, 2012, p. 52). Sketching is a vital part of the documentation of thought; it is also a way of illustrating and forming abstract shapes. Michael Taussig (2011) noted that sketching allows the experience of recording and tracing visual observations. I use visual imagery to conceptualise and materialise my thinking through drawing. Figure 17 illustrates the process of exploration through mark-making, recording the research process and reflective practice.

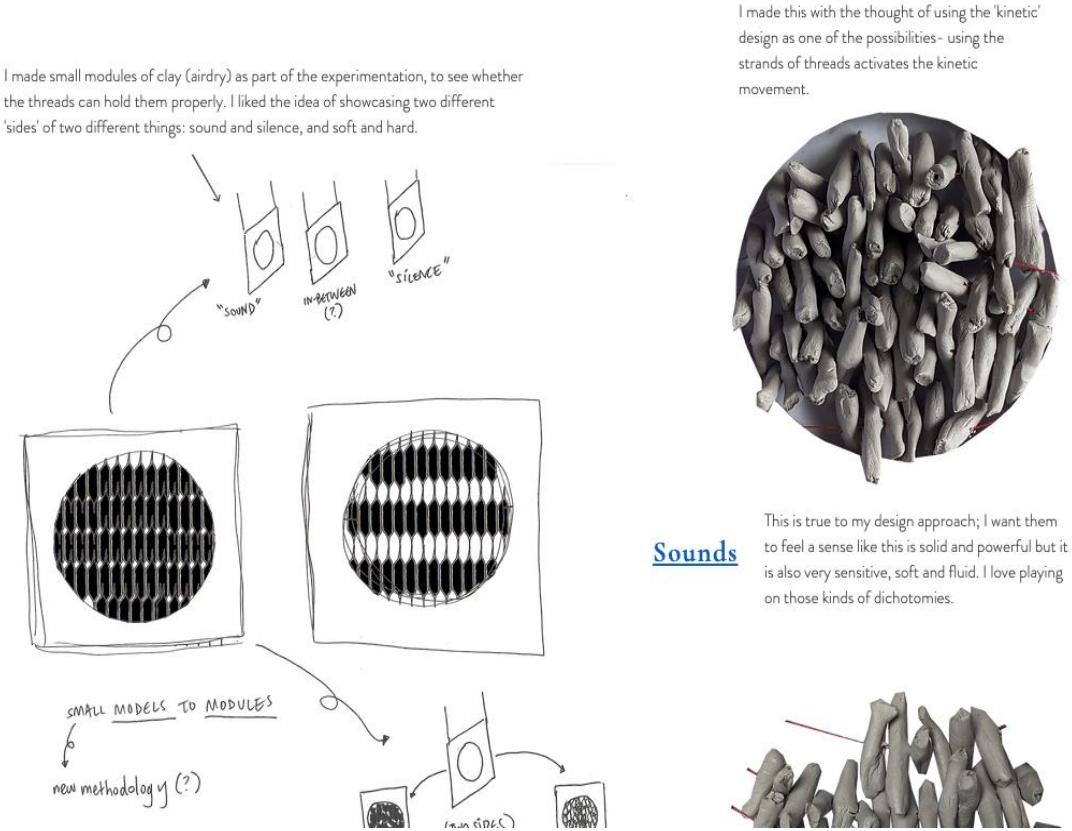


Figure 17. *Sketching as Thinking:* Blog Documentation.

3.2.3 Making

After initial sketching, the medium requires exploration, through physical prototype experimentation. Maarit Mäkelä described prototyping as "physical work, apparently with a slow process during which I take the material into my possession both physically and mentally" (1997, p. 64). My practice-based process combines materials and trials using prototyping methods, where the material and making process feed into each other, informing the inquiry. This learning through making (Figure 18) relates to author, Glenn Adamson (2007) perspective of "a dynamic process of learning and understanding through material experience" (p. 7).

Additionally, academic Nithikul Nimkulrat (2010) noted that craft materials such as ceramics are "a means for logically thinking through senses" (p. 75), asserting the importance of prototyping in contributing to knowing by doing. The making process helps me understand the different ways the medium can represent my understanding of gaps in speech and how prototypes represent a liminal space.

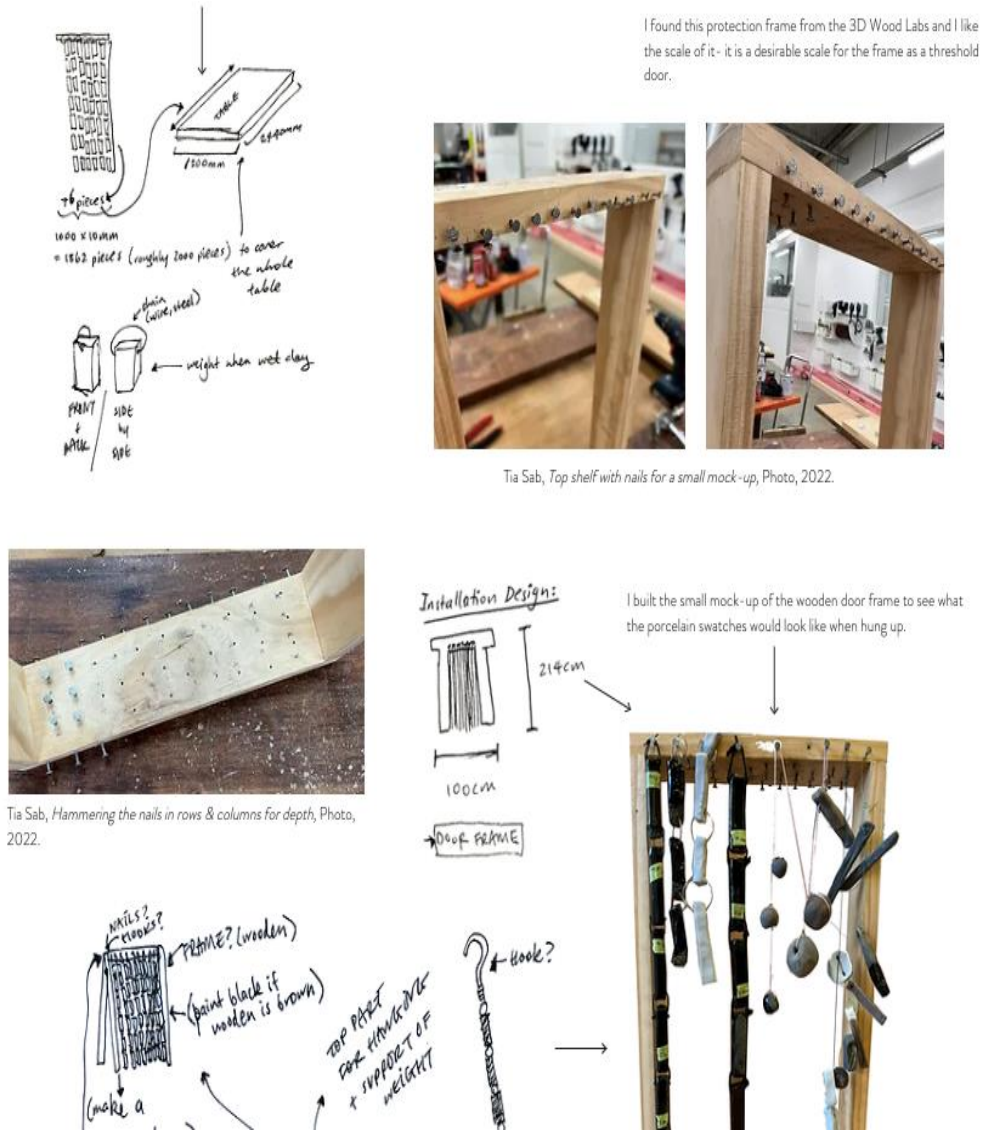


Figure 18. *Small Frame Prototypes:* Blog Documentation.

3.2.4 Reflective Practice

Reflection of my practice 'in action' and 'on action' (Schon, 1964) helps me understand tacit knowledge when framed within the design process. One of the ways I practiced reflection during this research, which coincided with the COVID-19 lockdown, was by using a blog site to document my thoughts and practice as a type of learning journal (Park, 2003). The blog as "the documentation of work in progress, is essential for both practice and for research" (Gray & Malins, p. 60).

Figure 19 shows how this method of creating a blog allowed me to not only share my progress with my supervisors but also annotate references online, moodboarding and contextualise the research notes relevant to my practice. The blog is a documentation of my mapped journey through thinking and making. Reflective practice is a core part of this research project. It is an appropriate method used all phases of my practice, allowing me to analyse and interpret my experience through thinking and making.

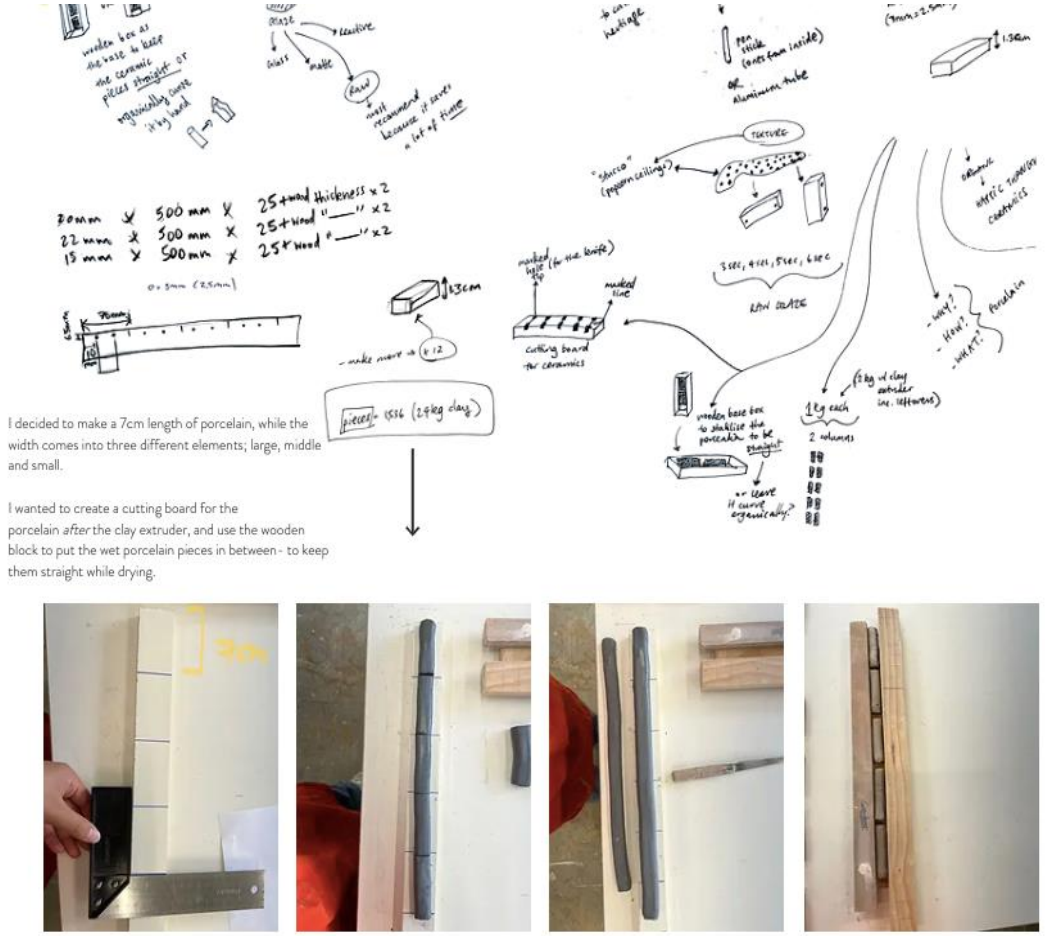


Figure 19. *Reflection:* Blog Documentation.

Chapter 4. *Design Practice*

Figure 20. *Building Kiln Frame:* Poking Holes Into Recycled Clay.

4.1 Phase I: *Mapping Research*

4.1.1 Idea Generator

This chapter discusses three of the making phases undertaken in my design practice. The forth phase is the final exhibition to be included as Appendix A after examination. The first phase, Mapping Research, involved the mapping of my research trajectory and consisted of four interconnected stages: Idea Generator, Mapping Ideas, Initial Material Research and Research Documentation (Figure 21).

At first, I explored mould casting to create glass tiles seen below (Figure 22). Glass has several connections to me and my research, as it directly symbolises my relationship with my *Ama*[1] and the beginning of my deafness. However, COVID-19 restrictions meant that workshop labs and facilities like the kilns were unavailable, so I was forced to reflect on through my blog documentation (Figure 23, seen in page 41) and determine what mediums I could use at home.

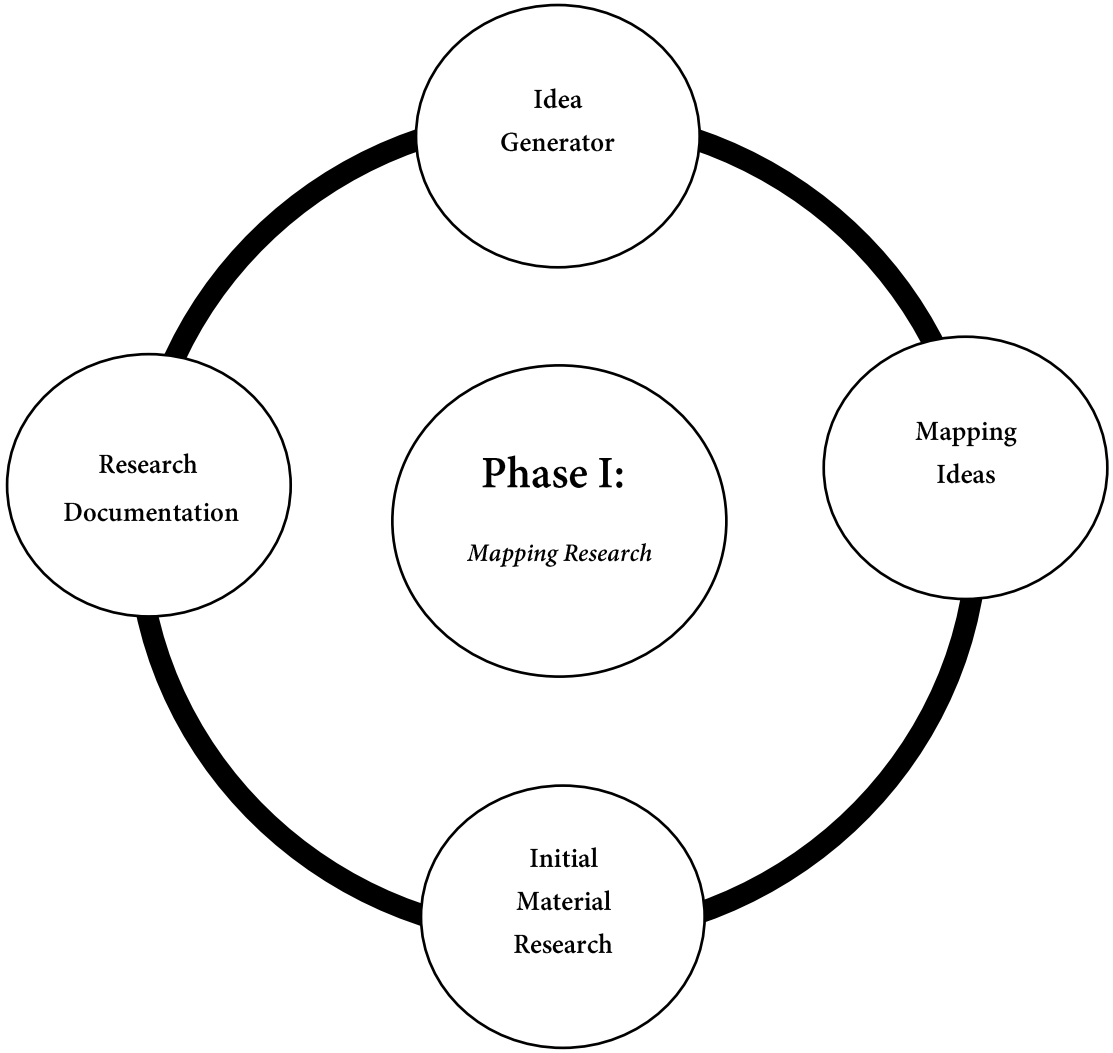


Figure 21. *Mapping Research*: Phase I.

[1] *Ama* means 'grandmother' in the Thai language. The story my Ama told me was about how she dropped her glass of water and how the sound of broken glass did not startle me as a baby – that was when she found out I was deaf.

Figure 22. *Blue Tile*: Small Fragment of Glass.

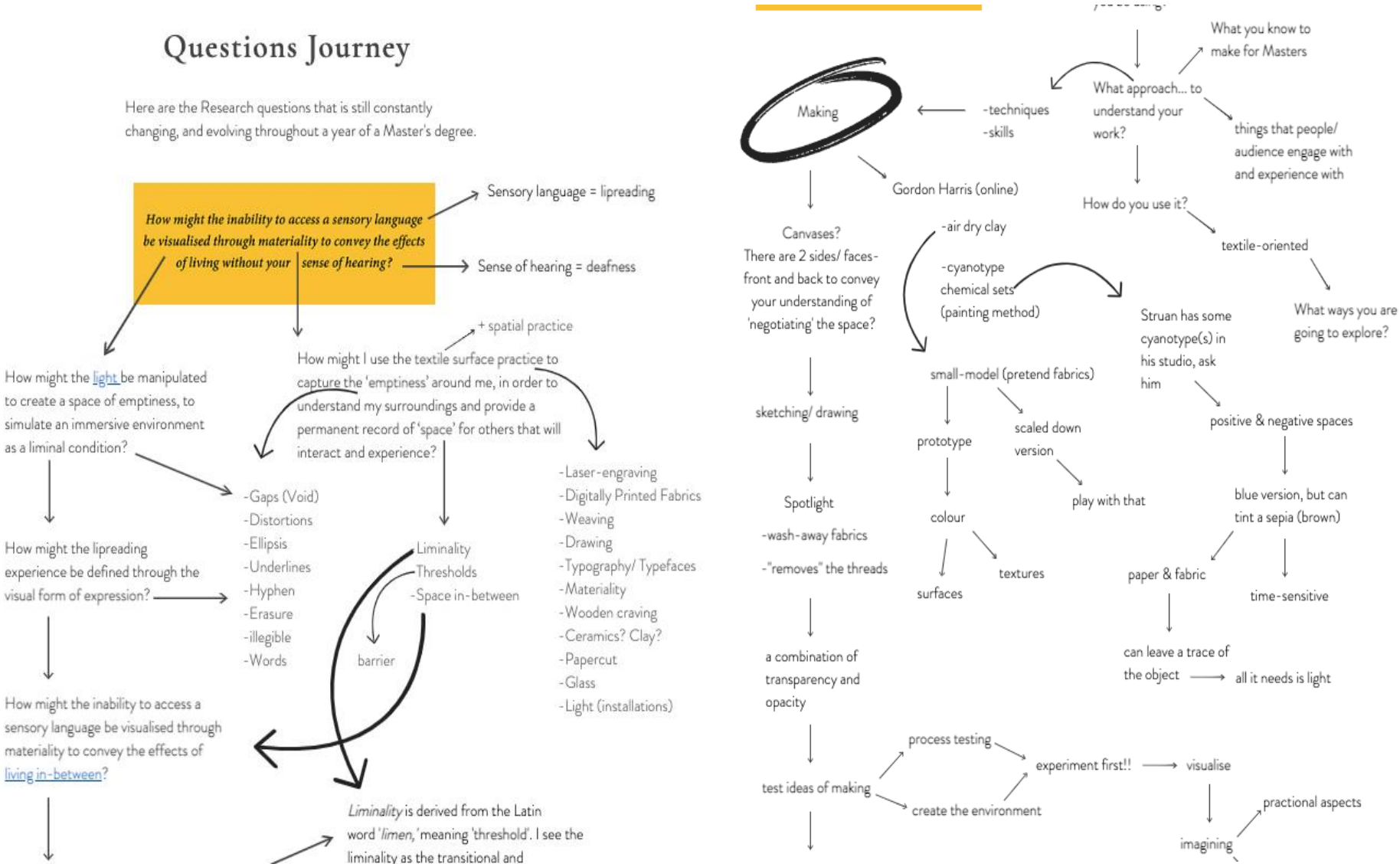


Figure 23. *Lockdown Reflection:* Blog Documentation.

4.1.2 Initial Material Research

Stuck in my thinking, as well as in making processes, I returned to the archaeology of words method and mapped keywords (Figure 24). What stood out from the rest was the word, 'fragment', whose Latin root is *frangere,* meaning "to break" (Etymonline, 2017). This triggered my first journey with clay as a material (readily available to me at home). I began by pulling the clay apart into fragments, bits and pieces, much like my communicative world, which has always been fragmented (Valente, 2019.). My communicative process and experience through the gaps are akin to what Joseph Valente, a deaf researcher, describes. I navigate conversations within a fragmented language, constantly "in search of multiple, uncertain, and unending meanings" (Valente, 2019, p. 353). Similarly, I thought of using fragments of clay materials. The gap became a design trigger, representing the partial sound I experience.

Figure 24. *Keyword Mapping of the 'Fragment'.*

Galpin noted that "ceramics has always operated as a link, a connection, sometimes a barrier, to the outside world" (2016, p. 126). I find ceramics to be a way of recording my experience of how I understand sound and execute it through my other sense: *touch*. Galpin's use of clay as a way of recording relates to my method: word mapping and translation into physical actions, in this case focusing on the word *'gap'*. Clay material as a recording is a fundamental shift in my practice and a new direction for my research. I have always been interested in ceramics but did not pursue them previously because of a lack of expertise; I had previously worked mainly as a print– textile designer. The transdisciplinary shift in material practice resonates with the question, researchers Anne Marr and Rebecca Hoyes ask, "where do textiles end and when do ceramics begin?" (2016, p. 8). The starting point of this project was my interest in experimenting and exploring a new medium: *ceramics*.

4.1.3 Research Documentation

The documentation of my reflective practice carried my research throughout the lockdown- which played a role in changing my thought process. Prior to this, ceramics were an extension of my sensory medium, the photographic records an extension of my vision, and the blog documentation as well as reflective practice an extension of my thought process and imagination (Driscoll, 2020).

Through research, the moodboard and keyword mapping were continuously developed during the lockdown. Figure 25 shows comments and quotes relevant to my project. As a visual learner, I preferred creating a moodboard filled with images that inspired my creative process, by keeping me on track and discovering aesthetics suitable for this project. A question relevant to my research is as follows, "if one can hear, then what is the point of using additional sensory modes to attend to sound?" (Ceraso, 2014, p. 109). I used my experiences to challenge the audience on how vibrations can be learned as a bodily experience, regardless of where they fall on the hearing continuum.

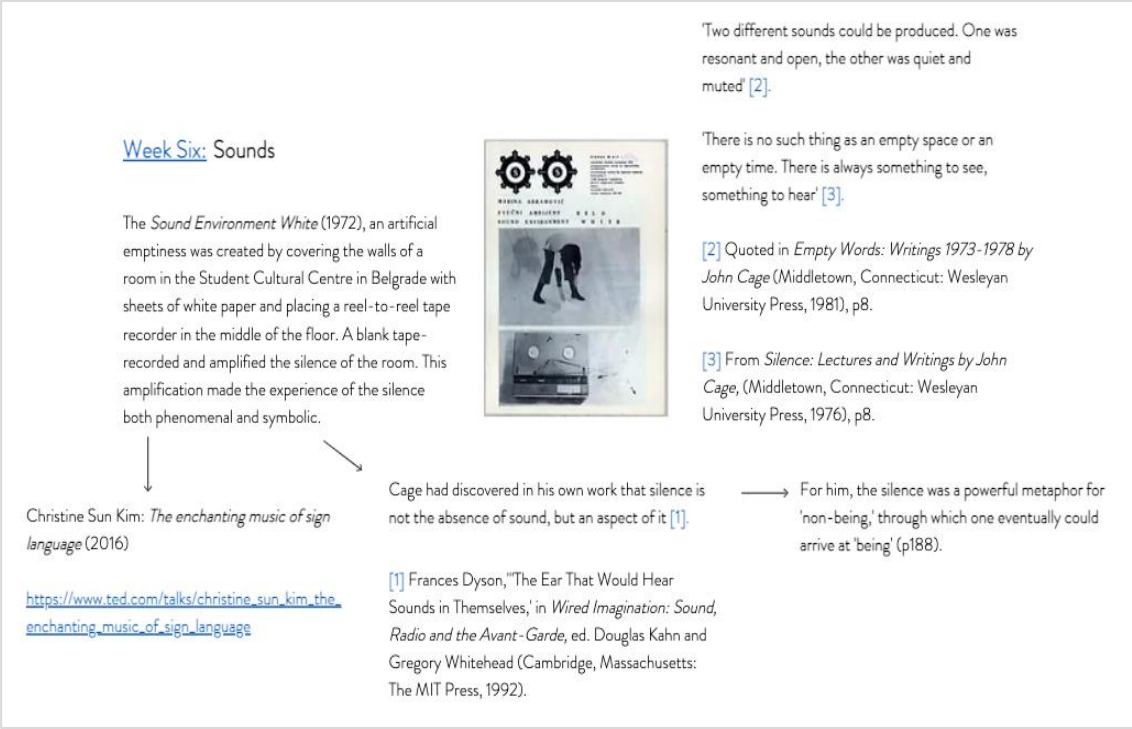


Figure 25. *Moodboard About Sound*: Blog Documentation.

Galpin (2016) refers to the triangulation depicted in Figure 26 as, "the dynamic between myself, the medium and the project" (p. 6). It summarises how I explored aspects responding to each other: the dynamic among my liminal position, the clay and the gaps of sound. Ceramics became the "material point of contact, between sound and body" (Ceraso, 2014, p. 108) and helped expand my understanding of how I experience sound as vibrations. One example in this project was that I experimented with different types of ceramics to determine what sound they made when colliding together. Not only did I notice they could make sound, but it also produced a sensory representation of sound, which directly mirrors my aural experiences.

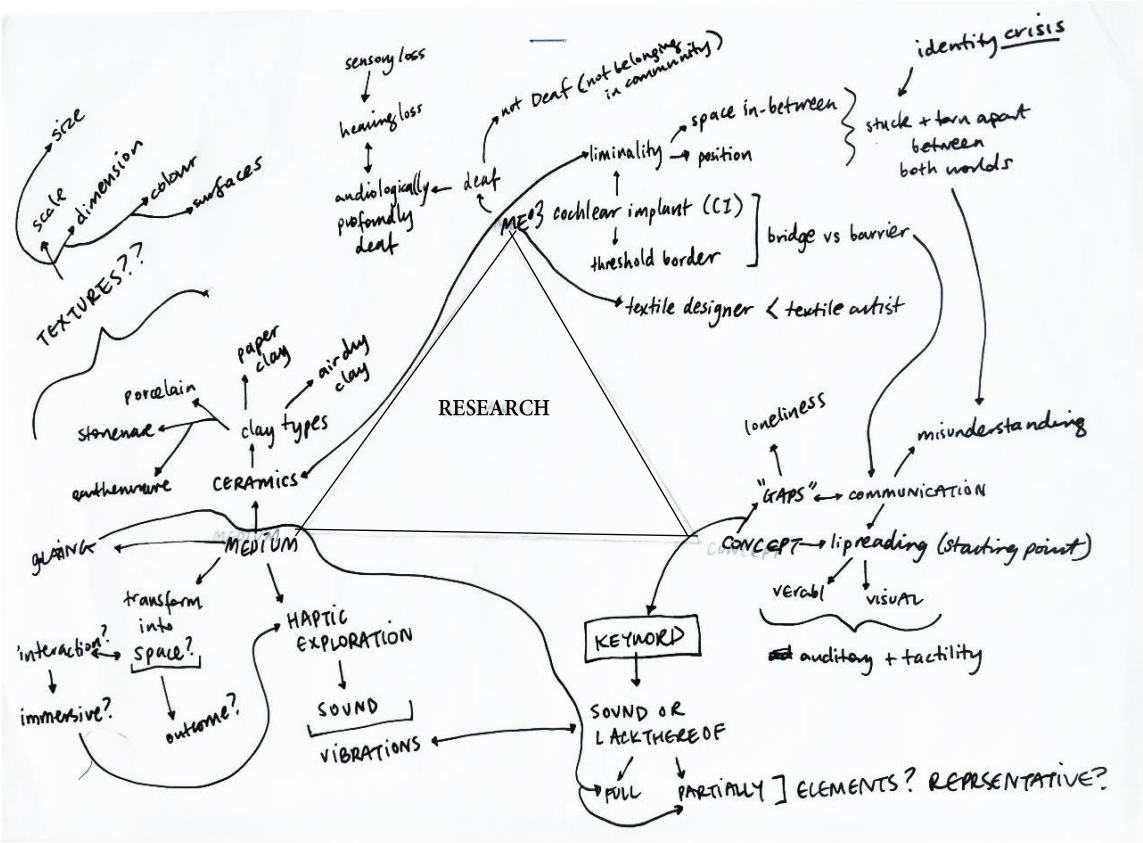


Figure 26. *Tia's Triangulation Diagram*: Blog Documentation.

4.2 Phase II: *Navigating Materials*

4.2.1 Glazing Process

In March 2022, we were able to return to study on campus. As I transitioned back into the workshop environment and resumed working in the Wet Lab, I continued using hand-made clay materials from the lockdown to process them further and to familiarise myself with the process. The ceramicist and technician supported me to understand some of the basic processes of ceramic making and finishing. This became Phase II (Figure 27) of my research practice. I started to explore a variety of methods through physical prototyping. Shapes, colours and textures of glazes were investigated until I found ideas in practice that reflected my conceptual notions of illustrating what it is like to be deaf in a sound-oriented world.

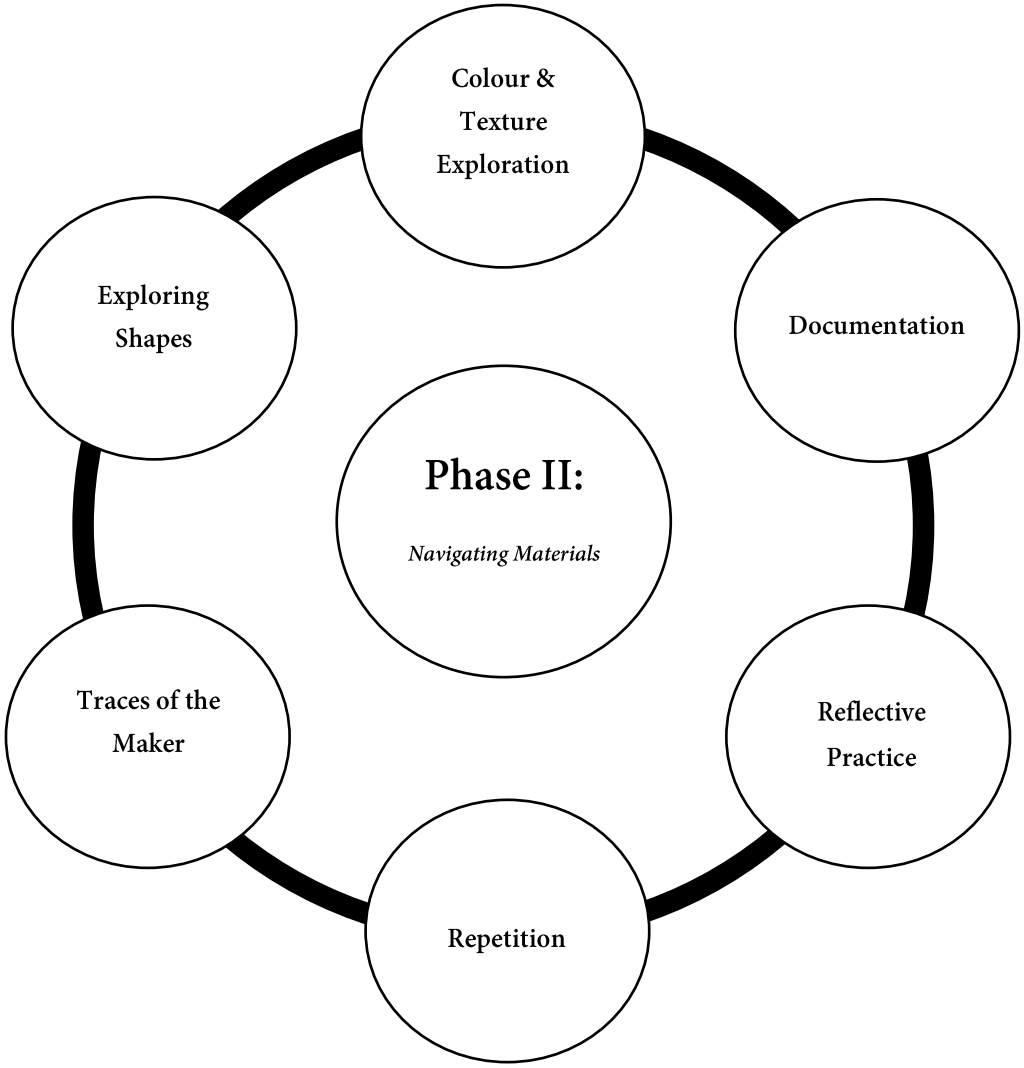


Figure 27. *Navigating Materials:* Phase II.

Porcelain, both black and white, was the material I accessed during lockdown (Figure 28). It was hard to ignore the importance of colour as a tool for experimentation and as a way to unify the design. In this phase, I investigated how ceramic materials and colour might work together. I thought of how ceramic pieces were the central focus of my project, so being colourful was not my intention and neither was it necessary. I used black glaze to create a contrast with the monochromatic colours of the clay.

Figure 28. *Bisqued Porcelain:* Black and White Beads.

The black and white porcelain were both bisque above (Figure 28), that is ceramics that have been fired in the kiln prior to glazing. Acquired tacit knowledge was used to reveal the differences in porcelain materials through the gloss, matte and reactive black glazes (Figure 29). The markings were built texture to encourage haptic exploration. I traced the making process through glazing. The partial glaze added 'humanness' to my practice because it served as a reminder of the imperfections that comes from my hearing loss. The glazing elements were dipped in the glaze container fully and partially. I intuitively used black glaze to subliminally portray my experience. I learnt about raw glazing without a single firing, different to the bisque method. I found that raw glaze gave me a number of options for finishing each piece as well as saved time in the processing phase.

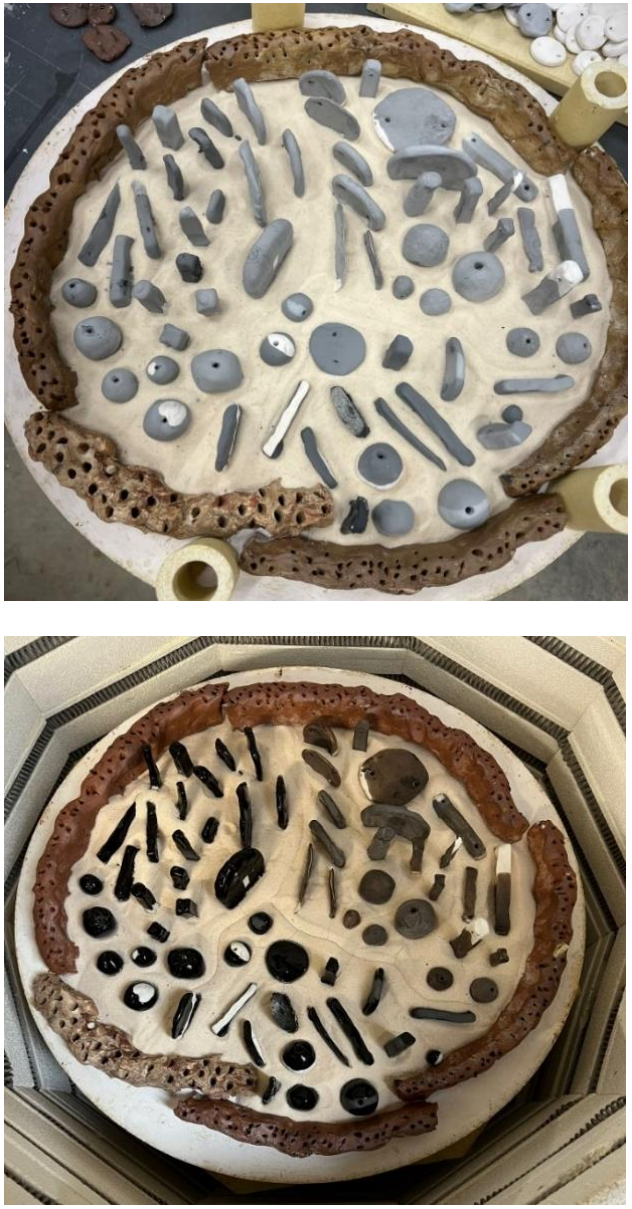


Figure 29. *Tacit Knowledge:* Black Gloss, Matt & Reactive Glaze.

Black gloss glaze concealed the black and white porcelain materials to 'hide' both materials so that they appear to look the same. This speaks to my experience of listening to each different noise frequency, which, to a deaf person like me, *sounds* the same. I cannot distinguish between a loud or soft pitch by listening to it, but I can tell when it is felt. The two porcelain materials are treated differently; they are baked at different temperatures: one high and the other low. There is one key difference; the sound they each make. These different sounds from similar – looking ceramic objects (Figure 30) represent my roles as I oscillate between the worlds of the hearing and the d/Deaf.

Figure 30. *Porcelain Beads:* Oscillation Between Both Worlds.

Figure 31. *Shimmering Black Surface*: Abbott Black Ceramic Glaze.

4.2.2 Prototyping

To prototype alternative shapes and sounds, I used the clay extruder. This device provided an opportunity to explore the possibility of making mass–produce ceramics effectively. The extruder helps to create consistency, passing the clay through a column with applied pressure. The die is etched into a specific shape as negative space for the clay and attached to the bottom column of the extruder (Figure 32). I designed the die by laser-engraver using a rectangular outline to create cylinder forms. I explored shapes, such as square, rectangular and circular, as the negative space of the die.

Figure 32. *Die Shapes:* MDF and Perspex.

I noticed that the 'sharp' corners tore the ceramics after extruding. This process allowed me to observe and change from sharp corners to curves. The curves smoothed the ceramic extrusion, allowing me to mass produce repeatedly and effectively, creating a consistent scale given the limited size of the extruder die (Figure 33). However, it did draw me away from engaging with the clay material in and through haptic exploration.

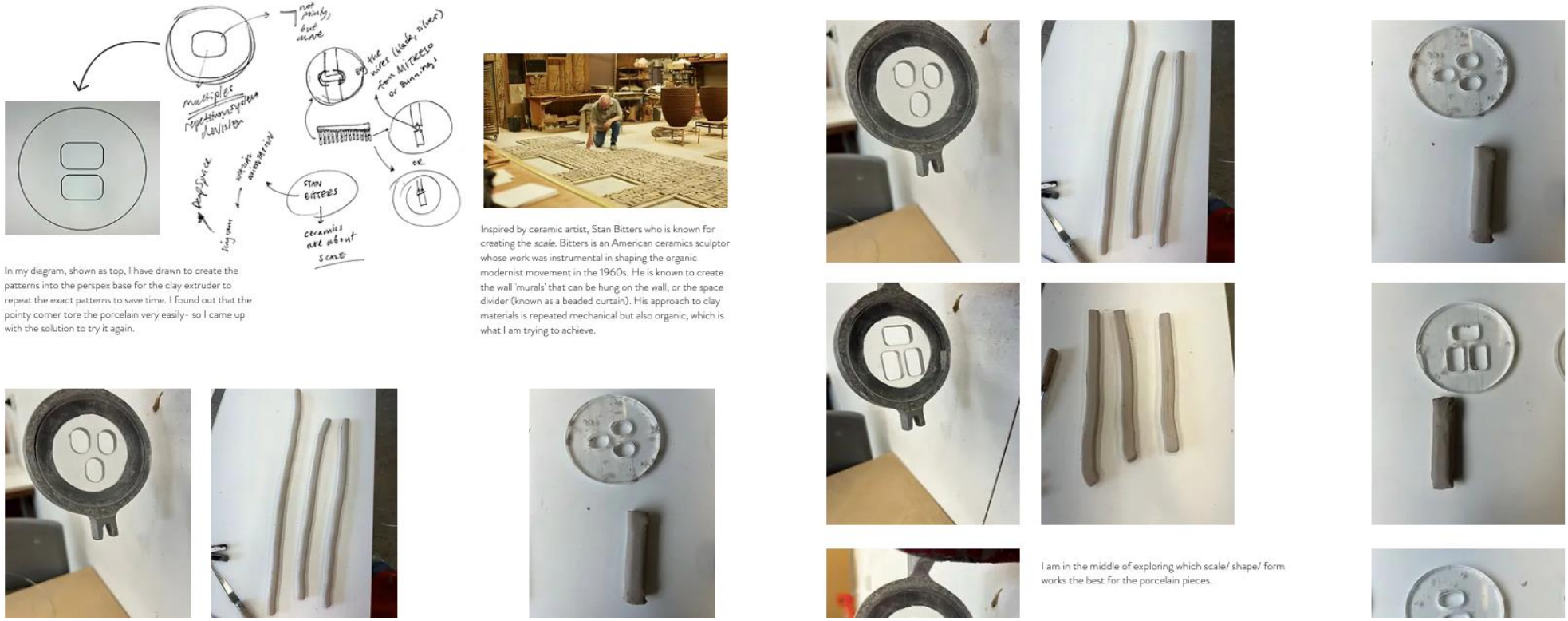
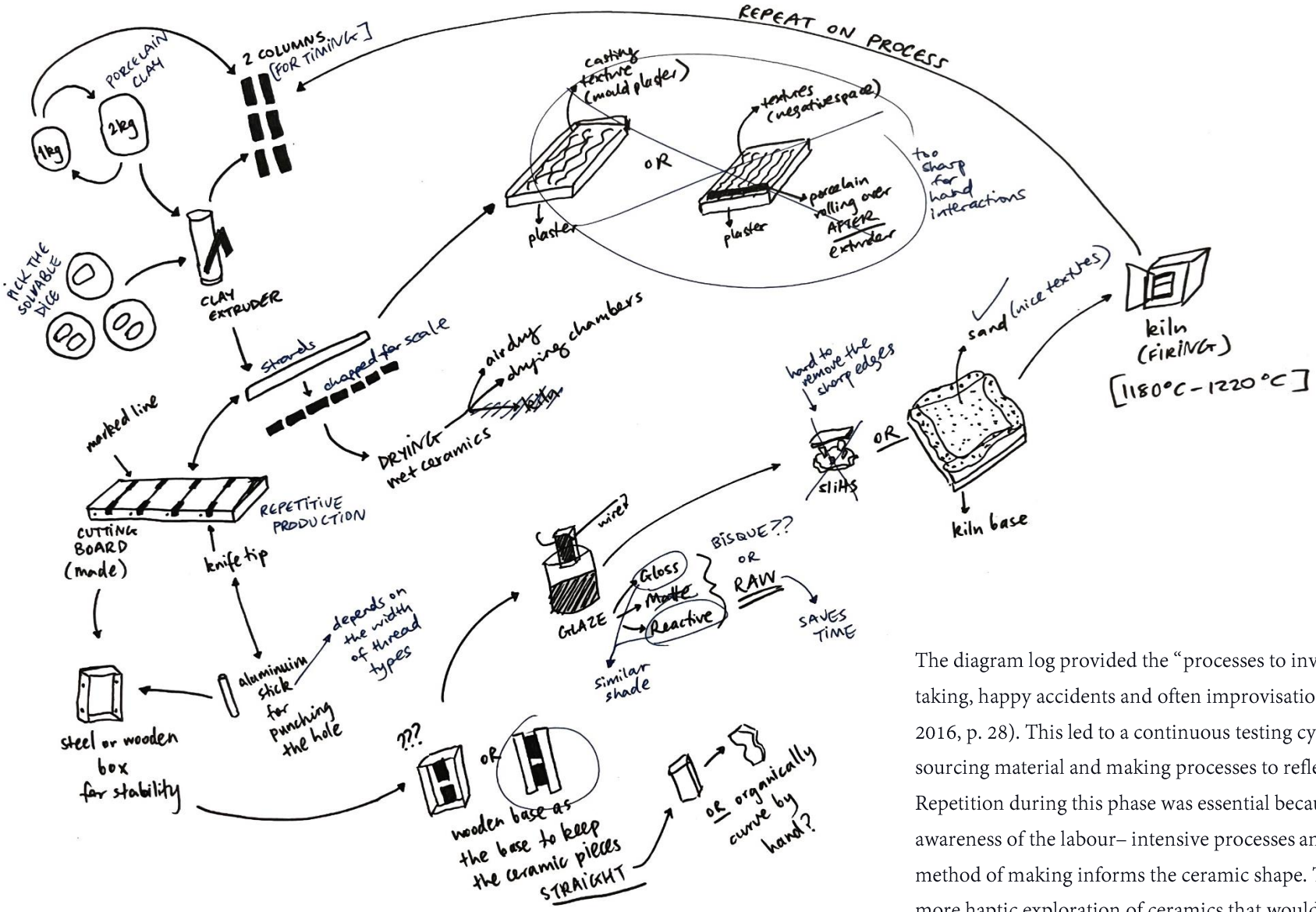


Figure 33. *Clay Extruder:* Experimentation in Blog Documentation.

4.2.3 Repetitive Process

As research represents my lived experience, I had from the beginning intended to create a large-scale installation as a representation of my (physical) body. To achieve this, I needed to be aware of the scale, the outcome, and the process to get there. A repetitive process to create smaller components was explored to work around the limited space in the ceramic kiln. To understand the process, one must create '*system*' to keep the repetitive production practice consistent.

Through diagrams, I recorded my ceramic process. I drew illustrations of objects at each step, allowing me to cycle back, re-think and re-make when I hit complications within the practice process. One complication I encountered was finding the right technique to add texture to the clay. Originally the texture was imprinted onto the surface of a plaster mould-cast. However, this added sharp edges to the ceramics, which could potentially injure people. I kept these diagrams as a record, supplementing them with labels and notes to analyse what went right and wrong. I followed the cycle of *draw –make – observe – improvise* and *repeat* (Figure 34, seen below), giving myself room to distinguish among potential issues I could fix or areas I could re-arrange to allow the repetitive system to '*flow*'.



The diagram log provided the "processes to invite creative risk-taking, happy accidents and often improvisation" (Marr & Hoyes, 2016, p. 28). This led to a continuous testing cycle, starting with sourcing material and making processes to reflection on the results. Repetition during this phase was essential because it increased my awareness of the labour– intensive processes and of how the method of making informs the ceramic shape. This propelled a more haptic exploration of ceramics that would continue to hold traces of the maker.

Figure 34. *Diagram Log:* Cylinder Ceramic Shapes.

The repetitive process resonated with me and helped me articulate what I wanted to capture: the creation of a larger unit made up of smaller repeated individual units as a representation of how I understand *fragments* of sound in the hearing world. In this case, multiple clay pieces come together to form a larger object – rather than a singular piece.

Figure 35. *Fragments of Sound*: Multiple Repeated Ceramic Pieces. .

4.2.4 Traces of the Maker

Haptic exploration can provide more "fully than sight, an experience of space and the way it interpenetrates forms" (Driscoll, 2020, p. 150). As I investigated the traces of the maker through the haptic exploration of play, the interaction with the ceramic medium produced sensations for space, its dimensions and its qualities (Driscoll, 2020). I chose to work with paper clay (Figure 36) for its rigid sculptural forms, giving me more room to experiment with shaping. The paper clay "is the clay body with added paper" to strengthen the plasticity (Kim, 2006, p. 17). This inspired me to use paper clay as a tactile representative of d/Deaf worlds because of its organic characteristics of touch and the fact it produces 'hollow' sound – meaning more room for vibrations.

Figure 36. *Paper Clay*: Fingerprint Marks.

I envisioned the hole as an illustration of my practice: the visualisation of gaps. I tested the hole placements through ceramic shapes at the front and back, top and bottom and side by side (Figure 37). Lesley Millar (2011) noted "the holes between the threads" (p. 6), which added a metaphorical element to my practice. Metaphorically, the holes are an empty vessel for a ceramic practice. They represent something missing where it once was: the activity of threading, the process of connecting, and the symbolisation of the passage of in-between. The holes were made into solidified ceramic forms with threads framing my work by creating a boundary representing my ability to move between the hearing and deaf worlds.

Figure 37. *Porous Boundary*: Marking Holes in Paper Clay.

Galpin (2016) also notes that sound and haptic are intertwined which reminds me of my relationship with music: piano. The focus on fingerprint was inspired by my experience with a piano keyboard. Since I could not differentiate the pitch when playing, I felt the vibrations which taught me to understand the aural exposure. I created three thicknesses for each ceramic base, to gauge the degrees of loudness they made (Figure 38). This allowed m e to use a thick base as framed reference of *How to Measure Loudness* (2014) relating to the vagueness of sound dynamics.

Figure 38. *Paper Clay Layers*: Thin to Thicker Base.

4.2.5 Ceramic Shapes I: *Cochlea*

The ceramic shapes explored are inspired by my bodily experience; playing with the perception of sound allowed me to give the audience a glimpse into my visual interpretation of vibration. This approach of the traces of the maker showed me a way into the meaning of ceramics that I might not otherwise have thought of. In addition to the tactile experience of sound, the visual exploration of ceramics was a focus of my research.

The sketched images within my practice processes evoke sensations, which in turn stimulated my investigation of alternative ceramic shapes. When I first began working with ceramic shapes, I wondered what sound the shapes could produce and how they would feel to the touch. Stella Kramrisch stated, "the touching evokes presence, at the spot touched, of the essence that informs the shape" (Kramrisch, 2020, p. 175). Shapes are a critical element of my practice because I am always drawn to symbolism that relates back to my experience.

As a maker in practice-based research, my thinking occurs through drawing-making, which allows me to ideate my ideas by shaping ceramics. I resonate with David Katz (2020): "both hands together, forming like a binocular sight – two hands are able to read the shapes and spaces between them" (p. 38). This statement inspired me to use a magnified scale of imagery (Figure 40, seen below).

Figure 39. *Keyword Mapping of the 'Cochlea'.*.

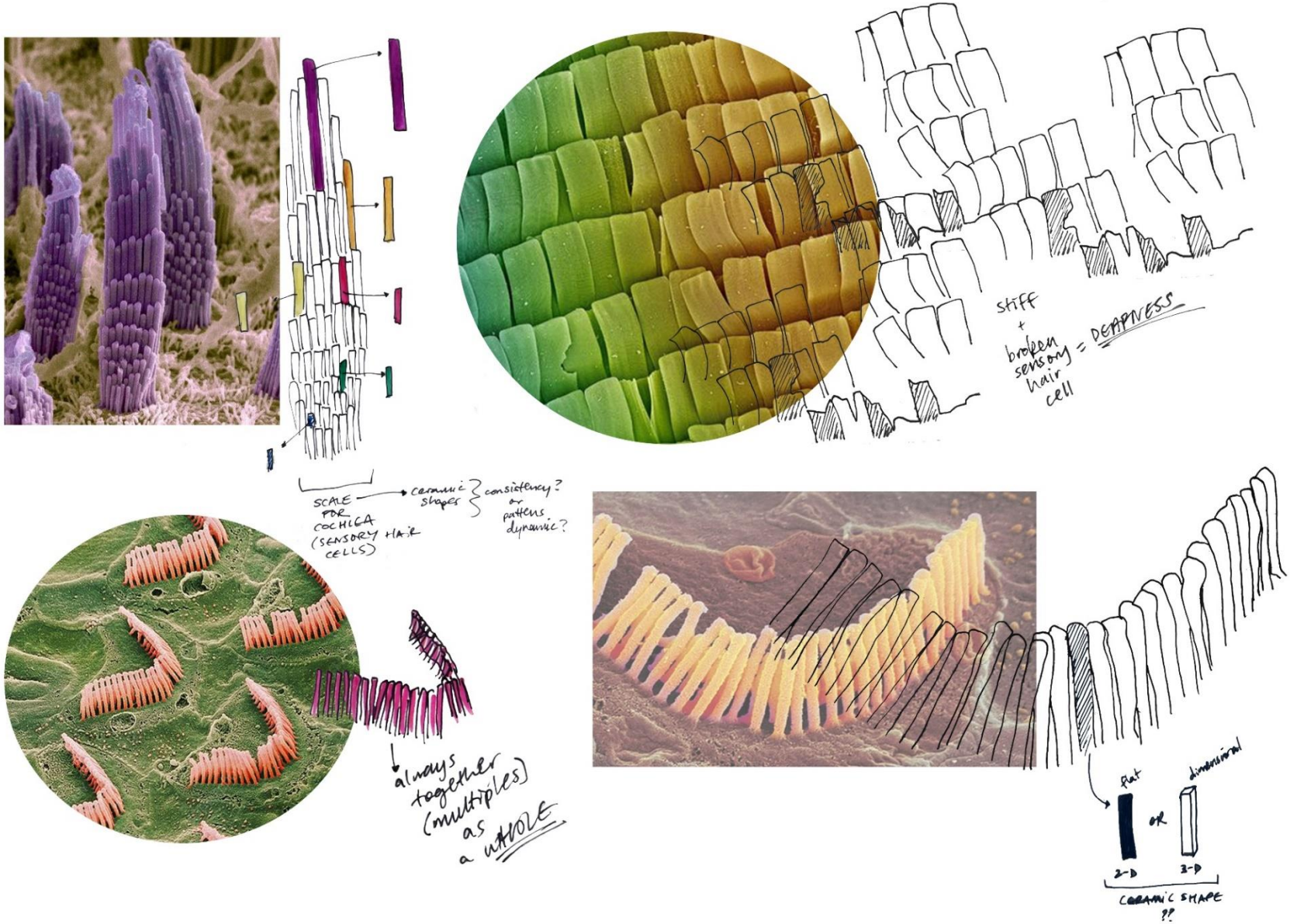


Figure 40. *Cochlea*: Moodboard with Sketches.

I began with sketching the imagery of cochlea, sensory hair cells inside the ear, seen through the perspective of a microscope (Figure 40, seen above). This led to creating cylinder forms similar to the cochlea shape. Sketching or drawing acts like a synapse between body and experience, showing thinking that holds the capacity to tell a story. The cylinder shape (Figure 41) is similar in form to the cochlea and resonates with me: I position myself as always, "caught in the hyphen of both either – both deaf and hearing identities, shuffling in the between space" (Brueggemann, 1999, p. 337). This was the first shape I created from a clay extruder, I then started looking to expand and develop further approaches to creating three-dimensional ceramic shapes.

Figure 41. *Cylinder Shapes.* Gloss Glazed.

4.2.6 Ceramic Shapes II: *Eardrum*

The next shape that I worked on was the shape of a disc, inspired by the *tympanic membrane* (eardrum) and its vibrations in response to soundwaves. The circular shapes were derived from my audiogram (Figure 43, seen below). An audiogram uses 'banana' speech, which describes the area where frequencies and decibels related to understanding speech exist. When sound falls outside of the membrane's shape, there is hearing loss. The gaps are usually a negotiation at this threshold, rooted somewhere between hearing and speech; this is how I hear and why I position myself between two worlds.

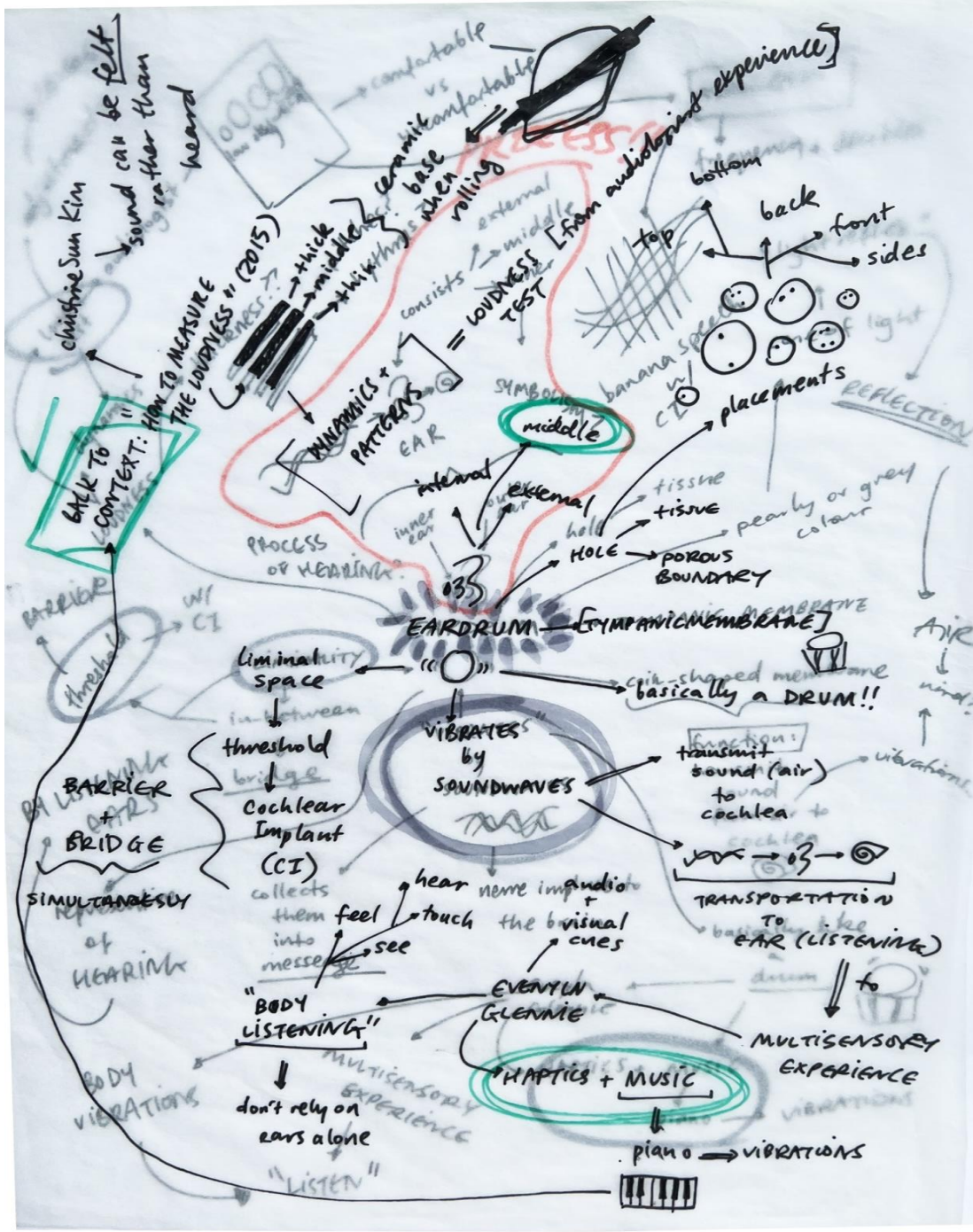


Figure 42. *Keyword Mapping of the 'Eardrum'.*

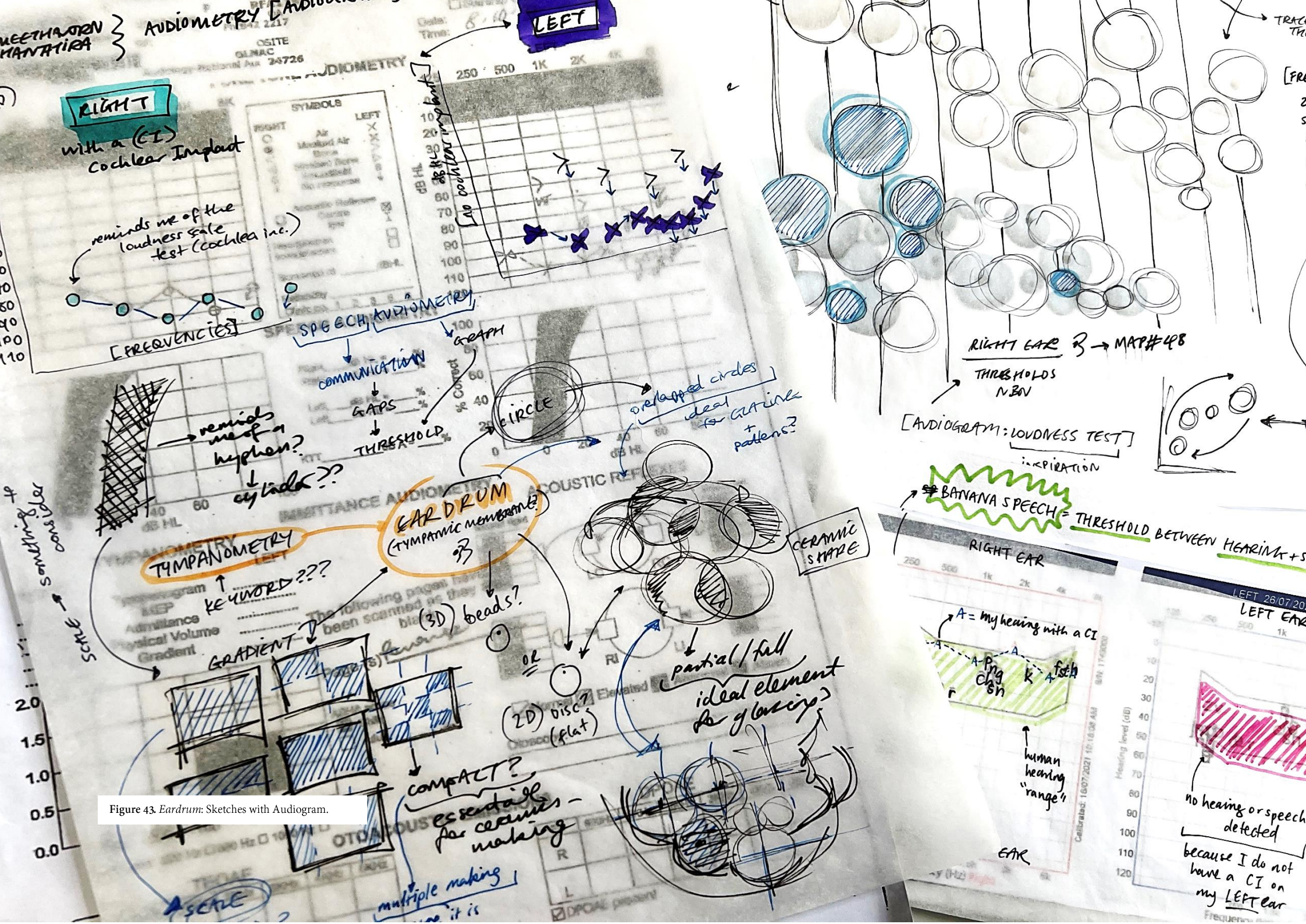
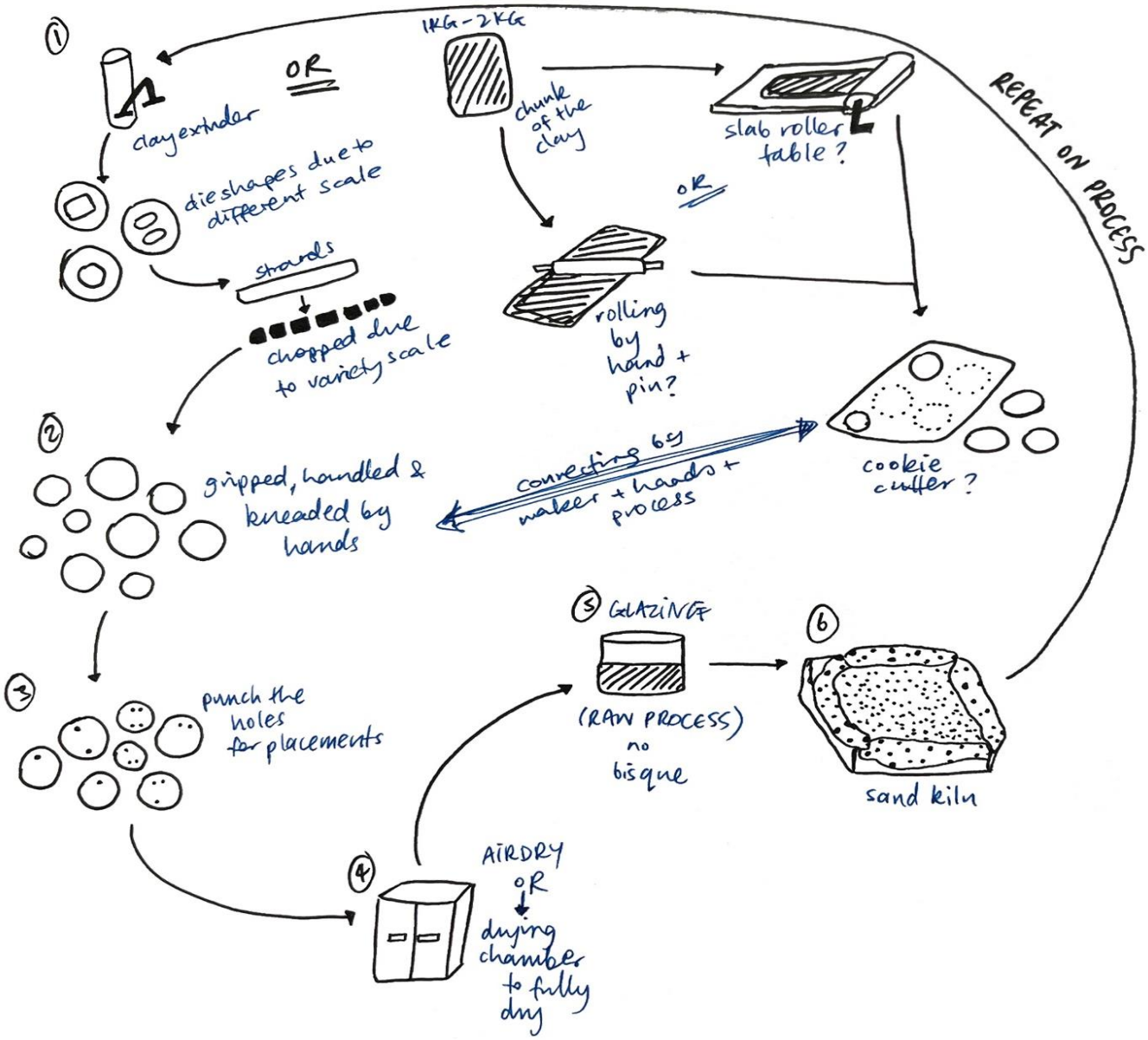


Figure 43. *Eardrum*: Sketches with Audiogram.



I drew the diagram log based on the eardrum sketches (Figure 44), based on learning from the repetitive process. A clay extruder allowed consistent strands of clay in scale and control of the size of ceramic pieces by chopping the length of the clay log after extruding. Through experimentation with this ceramic process, I improvised three different ways I could flatten the clay; using a slab roller, rolling pin or cookie cutter. I found myself drawn to pressing and kneading the ceramic pieces by hand because touching activated a haptic exploration (Figure 45), connecting the process and the maker.

Figure 44. *Eardrum*: Sketches with Audiogram.

Figure 45. *Circular Shapes*: Kneading Clay by Hand.

Reflecting upon my previous ceramic shape (Figure 46), I felt the outcome of the prototype was too literal and did not portray the fragility of sound that I experience when hearing. I considered continuing to develop the ceramic shapes further through keyword mapping of the 'eardrum' (Figure 42, seen in page 62), relating back to vibrations. The word 'soundwaves' stood out to me and inspired the development of soundwaves as ceramic shapes.

Figure 46. *Eardrum*: Glazed Porcelain Shapes.

To develop the soundwave inspiration, I traced freeform drawings with a craft knife on the clay base into wave forms as a starting point of tacit knowledge (Figure 47). Using soundwaves as the shape established a connection to my research and practice, "as sound vibrations literally move the tympanic membrane to create rhythmic patterns that the brain can detect" (Ceraso, 2014, p. 108). With the design components prototyped, I then moved to Phase III of my practice: *Building the Gaps*.

Figure 47. *Tacit Knowledge*: Tracing Freeform Drawings of Soundwaves.

4.3 Phase III: *Building the Gaps*

4.3.1 Joining Mechanism

This phase of research involved established the finalisation of design decisions about ceramic shapes, refinement and pattern placement (Figure 48).

Inspired by Felix Gonzalez-Torres's curtain installation, *Blood* (1992), I worked with the holes that appeared in the damp clay because they provided an opportunity to investigate methods of joining the ceramic components. The joining mechanism "operates both as an expression of the architectural space, and simultaneously, as models and diagrams within the process of forming the whole installation" (Dormor, 2020, p. 22).

This enabled me to use the joining mechanism as "seeing the movement [of beaded pieces] that automatically gives them the feeling that sound is *there*" (Ceraso, 2014, p. 109). I used the workshop lab as a test space to situate the beaded curtain: joining ceramic pieces together to form my liminal space. There are two main overlapping elements to building the design: refining the final ceramic shapes and learning how to thread multiples through knotting.

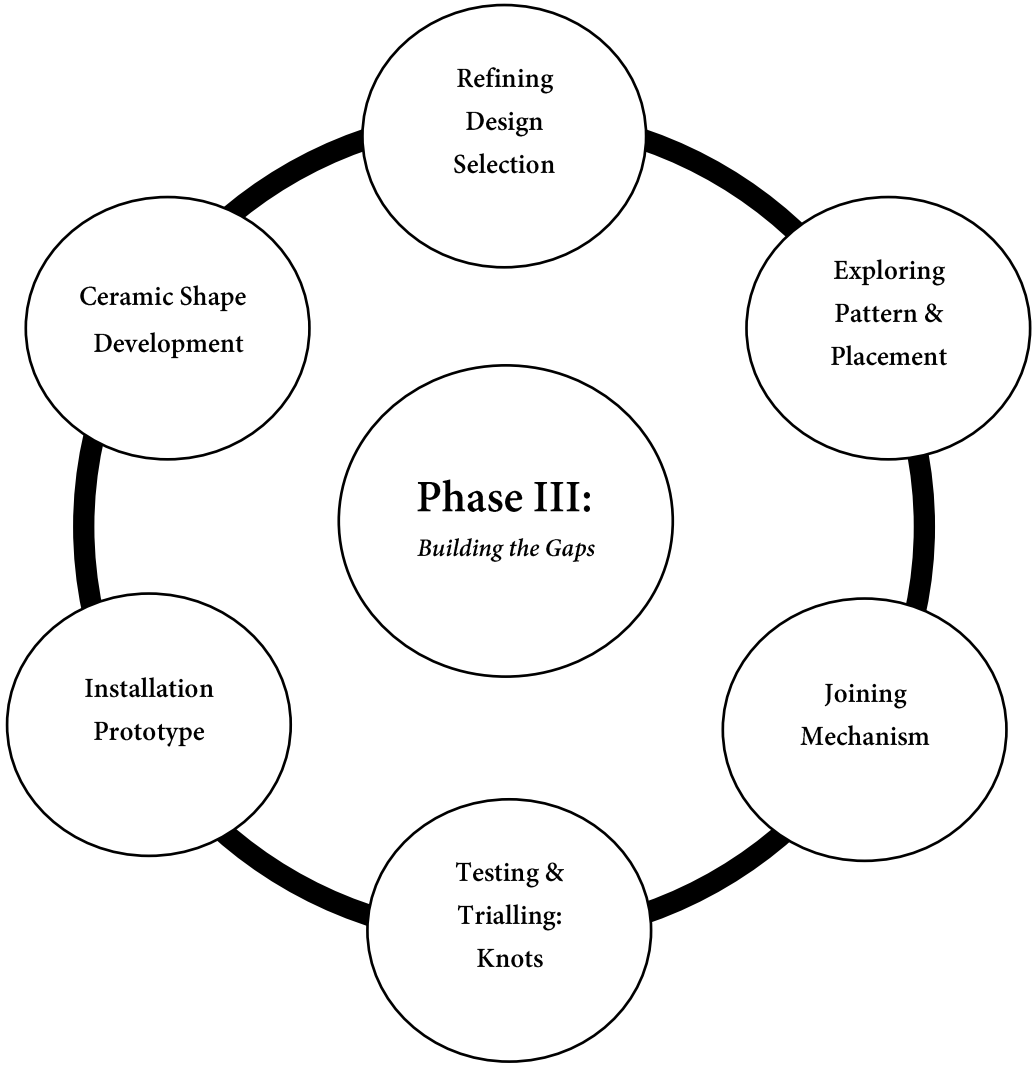


Figure 48. *Building the Gaps:* Phase III.

Figure 49 illustrates the knotting types explored through sketches to suit the intended installation. This allowed me to visualise the loop as it was hard to photograph, due to the dark colour that obscures the detail. Each stage shows the process of knotting experimentation, which went from metal jump rings to monofilament, cotton to leather thread, and macrame to waxed thread. I felt frustration knotting with cylinder ceramic shapes because they were too noticeable and distracted from the overall shape (Figure 50, seen below). The holes in the cylinder ceramic pieces became a constraint within the design process.

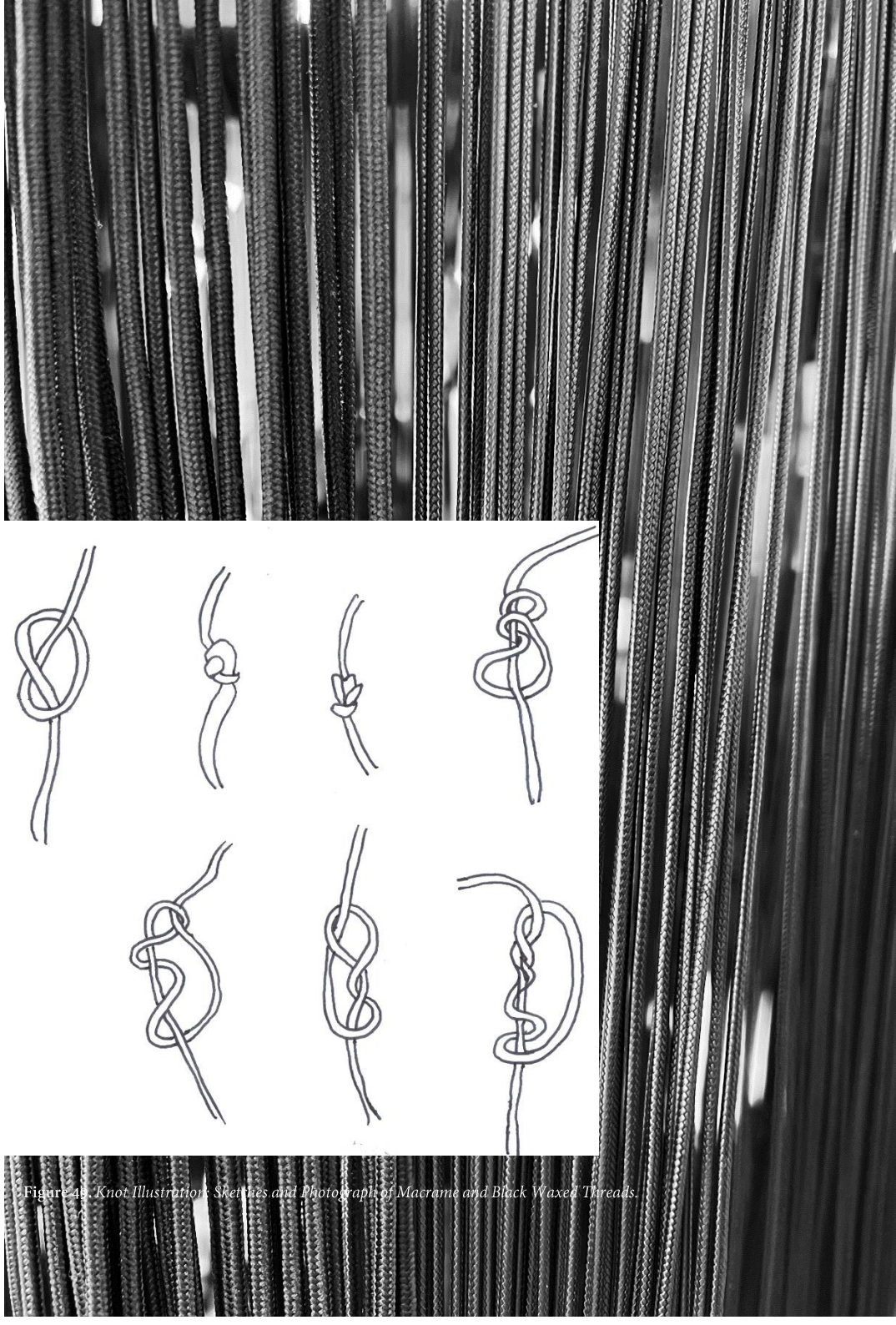


Figure 49. *Knot Illustration: Sketches and Photograph of Macrame and Black Waxed Threads.*

Figure 50. *Failed Prototype*: Threads with Cylinder Shapes.

I drew this failed joining mechanism (Figure 51); failure was a crucial force within my practice because it enabled me to realise what would happen next and helped me avoid entering a loop without a solution or decisive thinking. I rejected the cylinder shapes and experimented further with knots with circular ceramic shapes. The knots were applied connecting the ceramic pieces, symbolising my liminal position of trying to grasp and connect sound through the gaps.

Figure 51. *Failed Prototype:* Hanging from the Frame.

4.3.2 Thread and Knotting

I tested the correlation of weight and sound, comparing the weight between hanging full and half strands in terms of the number of ceramic pieces; how they sounded and how they would react.

Two circular frames, one canvas and one steel, were set up to prototype the size of the frame required and examine its relationship with the ceramics and threads into testing spaces (Figure 52). Two different ceramic shapes were initially trialled to compare the sound and tactile qualities of circular and cylindrical forms (Figure 53 and 54). These shapes were used to explore the 'vibrational' differences. I could feel the vibrations of the ceramic pieces knocking each other which changed with the clay material (paper clay and porcelain) and also when textural glazing was applied.

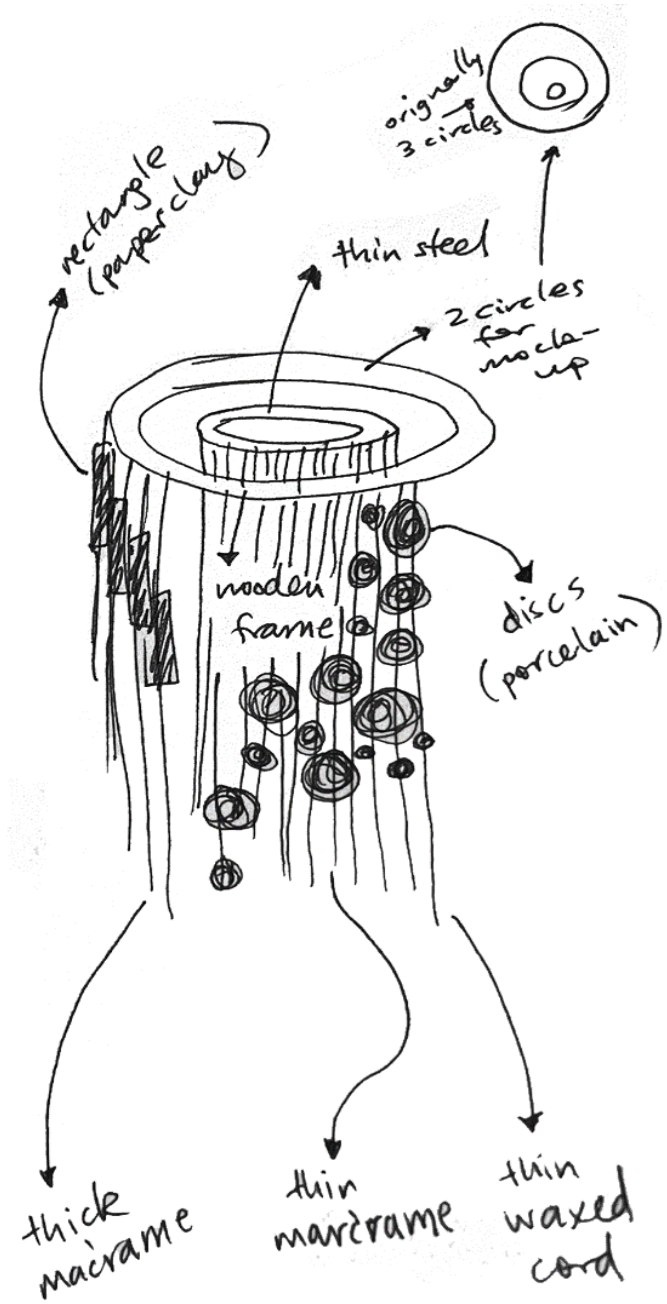


Figure 52. *Comparison of Two Shapes:* Circle and Cylinder Diagram.

Figure 53. *Eardrum Ceramic Shapes*: Circular.

Figure 54. *Cochlea Ceramic Shapes*: Cylinder.

I noticed that the cylinder shapes (paper clay) felt more clunky and hollow compared to the circular ones, which I experienced as tinkling. I managed to distinguish the roughness and rigidity of the cylinder shapes (porcelain) as opposed to the smoothness and the form of circular shapes in my hand; I *felt* the sound. I am not reflecting on the meaning of sound (hearing) in this practice; rather, I am reflecting on how I experienced the effect of the sound, and also how it felt interacting with my hands.

When I was testing the 'sound,' I turned my cochlear implant off to interact with the vibrations. I rarely turn it off, but I realised that it was conditioning me not to notice the vibrations. This ironically equipped me to hear, drawing me away from the other senses, including touch. Evelyn Glennie argued that listening is not just hearing soundwaves but involves more than one sense: "touch, feel and respond to sound as vibration" (Curtin, 2013, p. 227).

As I slowly knotted the ceramic pieces, one by one, I felt little sensations of vibrations through knocking sound. If one ceramic piece among others can evoke such sensations through sound, what might an entire installation *feel* like? I think the pattern placement of each circular ceramic shape (Figure 55) previously did not feel appropriate as an expression of my experience because I also wanted to talk about my liminal position.

Figure 55. *Test Space*: Circular Frames with Circular Shapes.

4.3.3 Ceramic Shapes III: *Soundwaves*

As the process of shaping ceramics evolved, sketching acts as an archaeological record of this practice. The design influence for the ceramic shape shifted from a cochlea to an eardrum to soundwaves captured by the ear. Like Galpin (2016), who investigated the connection between haptic ceramics and sound, I used the recordings and translated them into an abstract soundwave that became part of my practice. I used the audio application *Signal–Scope* which translates audio recordings into soundwaves (Figure 56). The imagery obtained from two-to-four soundwaves was layered and folded using tracing paper to generate an interpretation of my gaps of sound as a visual reference (Figure 57, seen below).

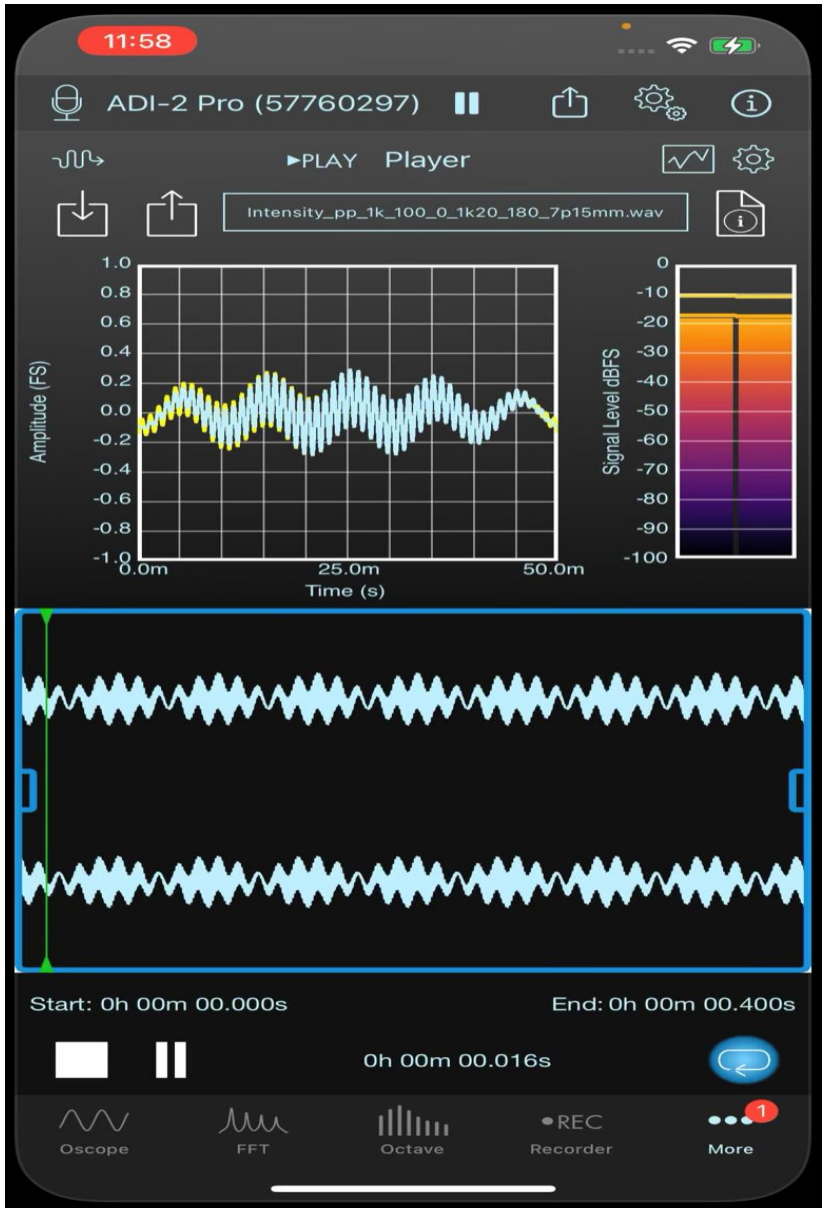


Figure 56. *Signal- Scope:* Application Screenshot.

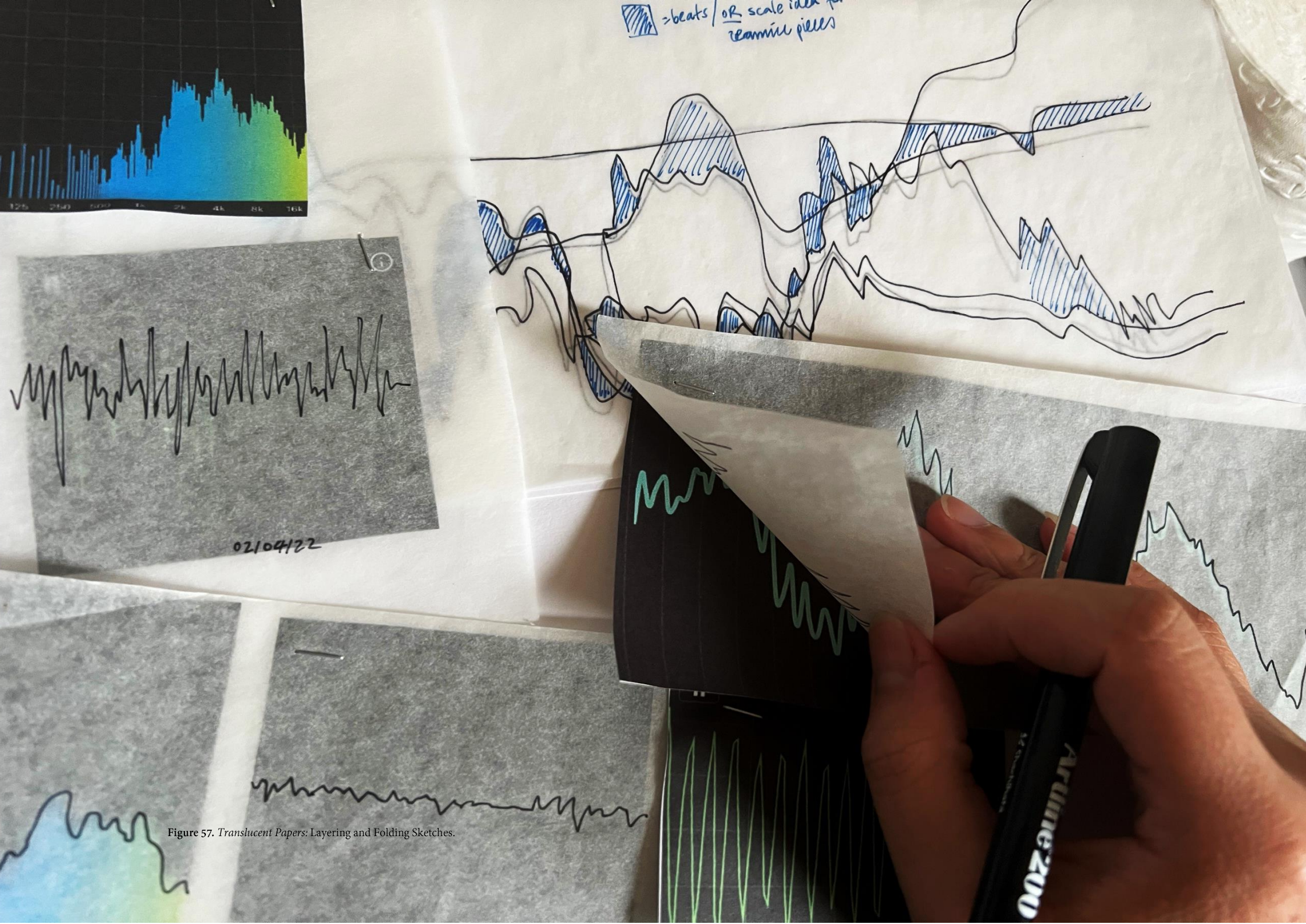


Figure 57. *Translucent Papers:* Layering and Folding Sketches.

As I investigated the audio application further, I considered how the experience of the recording might be altered by my perspective, and lived experience as a deaf person. The sketching method employed created an imaginary drawn line between a cluster of soundwaves and the digital recording, which allowed me to identity the 'sound' gaps absent from my hearing (Figures 58 and 59). The cochlear implant helped me fill the gap between partial and profound hearing loss.

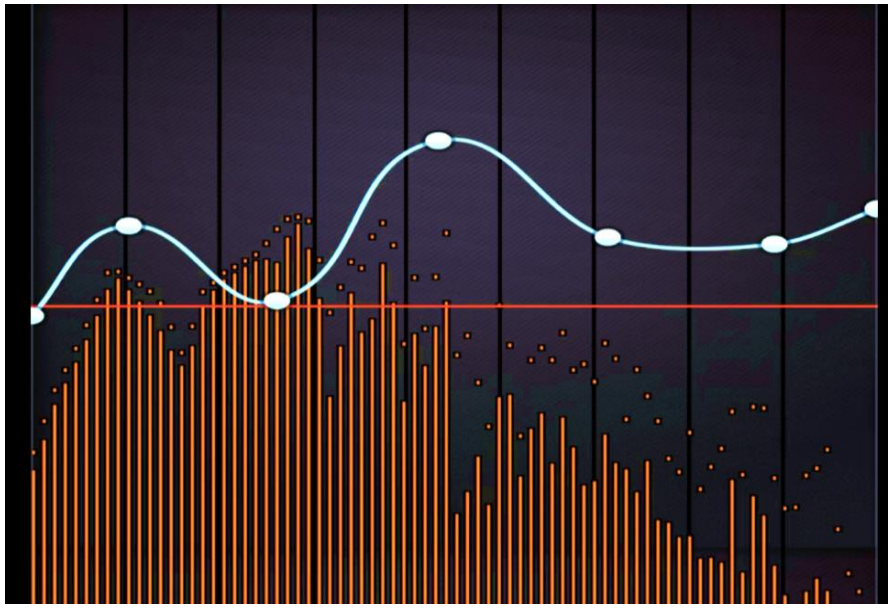


Figure 58. *Soundwaves Recording:* Manipulation of Frequencies Screenshot from Illustrator.

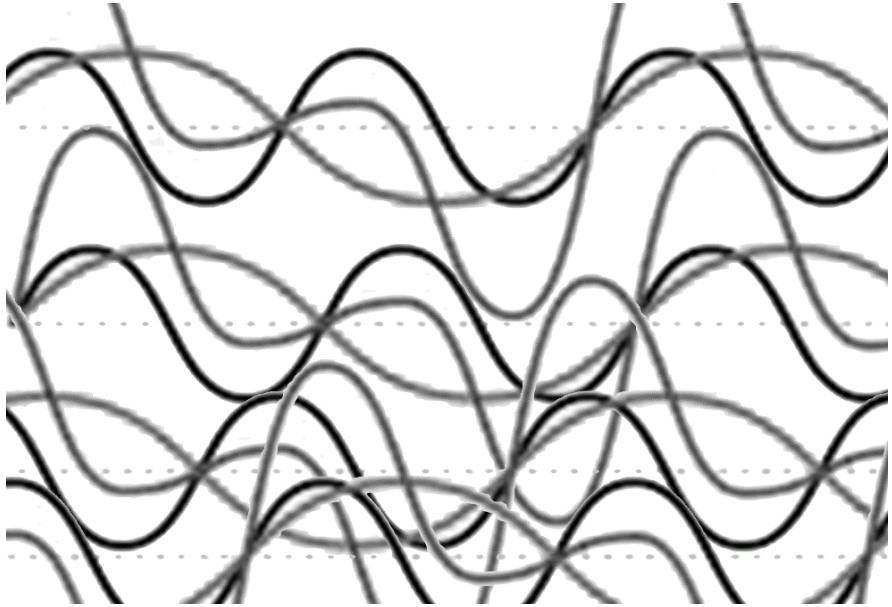


Figure 59. *Soundwaves Recording:* Manipulated Soundwaves Overlapped.

The lines depicting the soundwaves looked like gaps, mixed with a narrative based on the recording (Figure 60). Because I intended to make multiple ceramic pieces, I found recording every conversation difficult, given my limited hearing. As my solution, I focused on the 'muffled' sound, influenced by Sue Dupor's *Family Dog* (1991). By recording the muffled background sounds where conversations overlapped, I could mark dots where I heard rhythmic patterns (Figure 61, seen below). The rhythm became my reinterpretation of gaps - I could not distinguish the muffled sounds from background noises, overlapping voices, and interruptions. These represented my experiences with conversations as rhythms, which in turn became repetitive movements created in the ceramic-making process.

Figure 60. *Translucent Papers:* Tracing Soundwaves as Gaps of Sound.

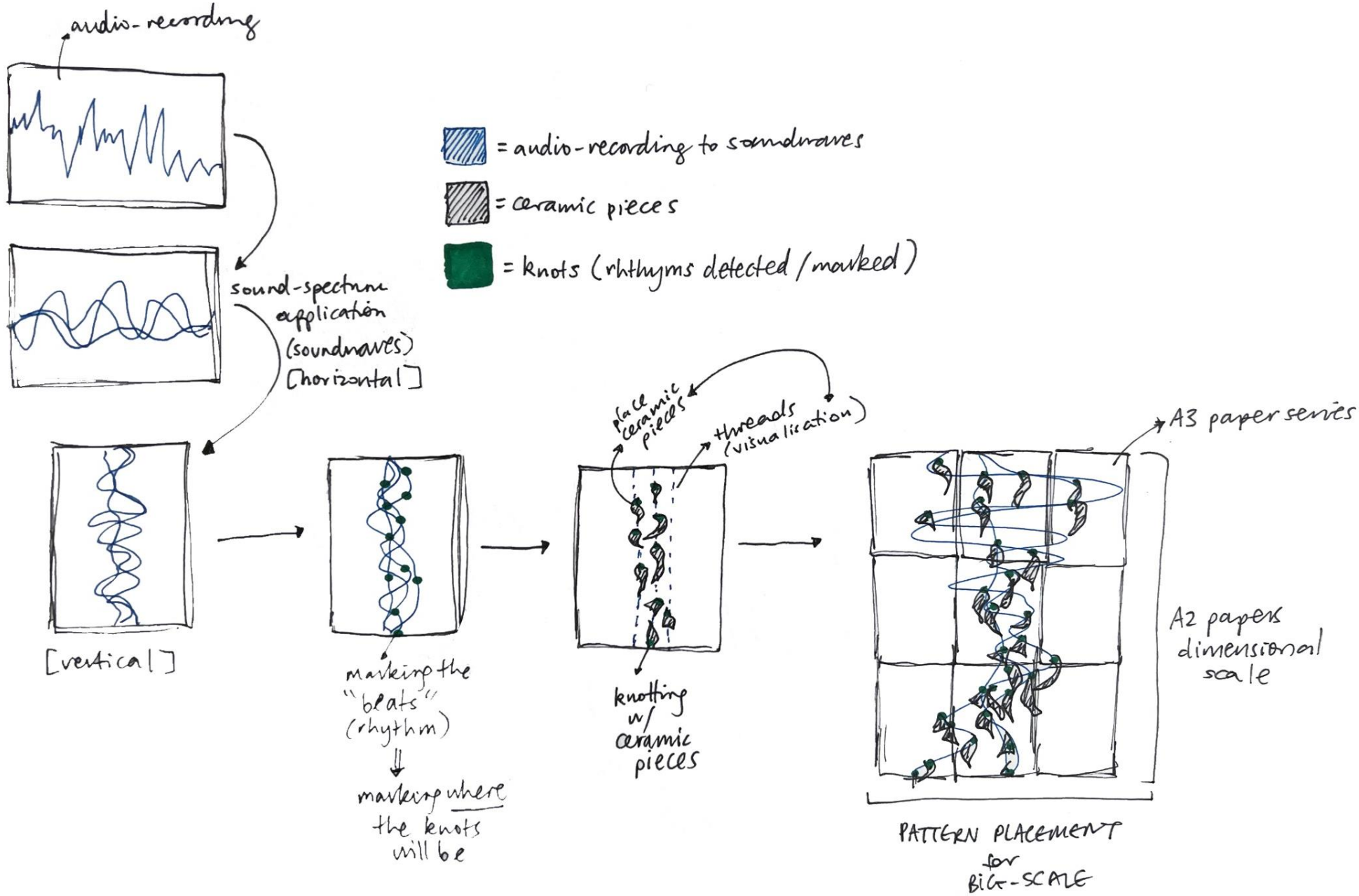


Figure 61. *Pattern Layout:* Sketching as Thinking for Pattern Placement.

While the tracing paper method is no longer used to mark my ceramic pieces, I decided to use it as a pattern placement (Figure 62). It allows me to mark the 'gaps', visualising where the ceramic pieces will be knotted and hung. The pattern placement became an engaging conversation through my experience as a deaf person.

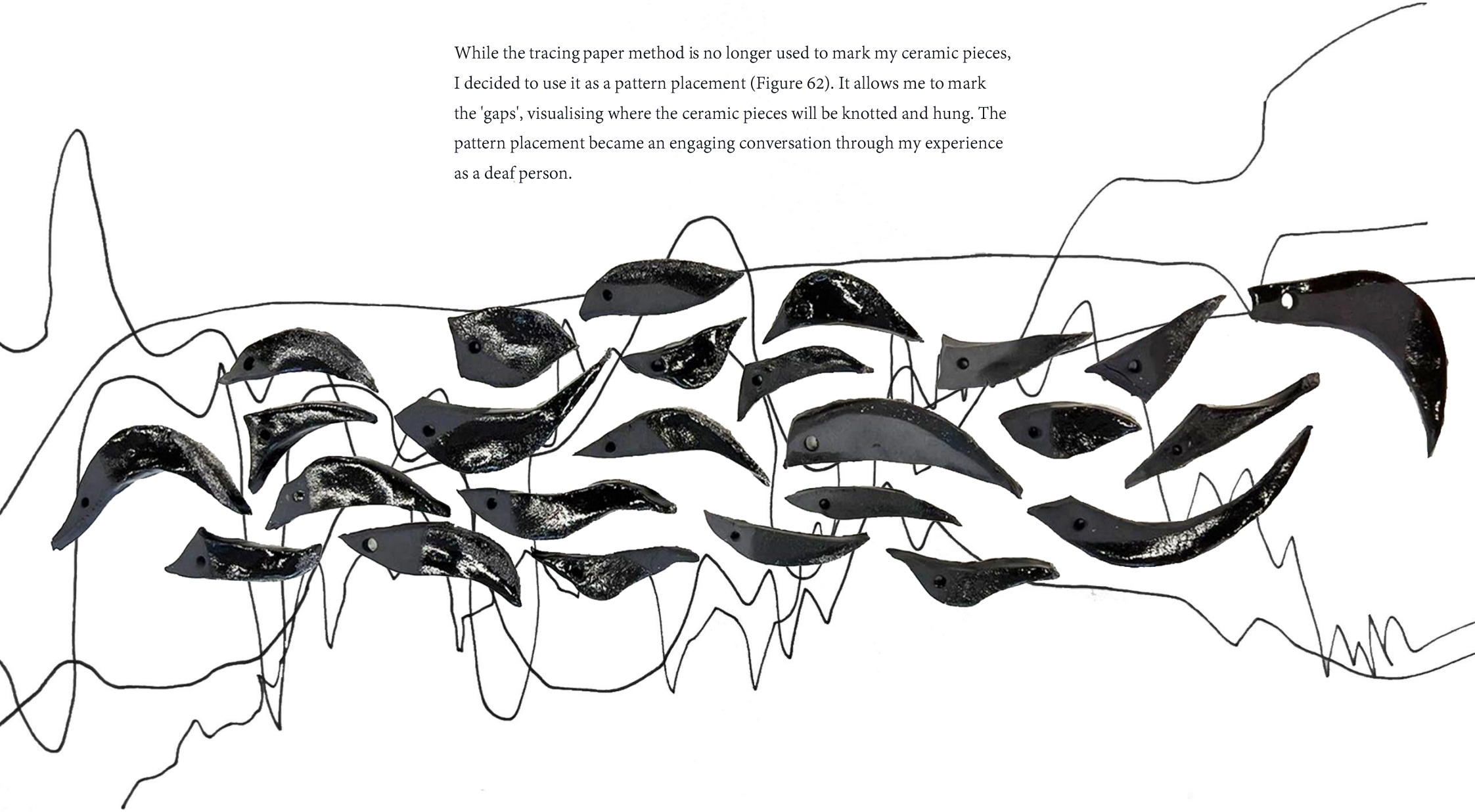


Figure 62. *Muffled Sounds:* Layering of Soundwaves as Pattern Placements.

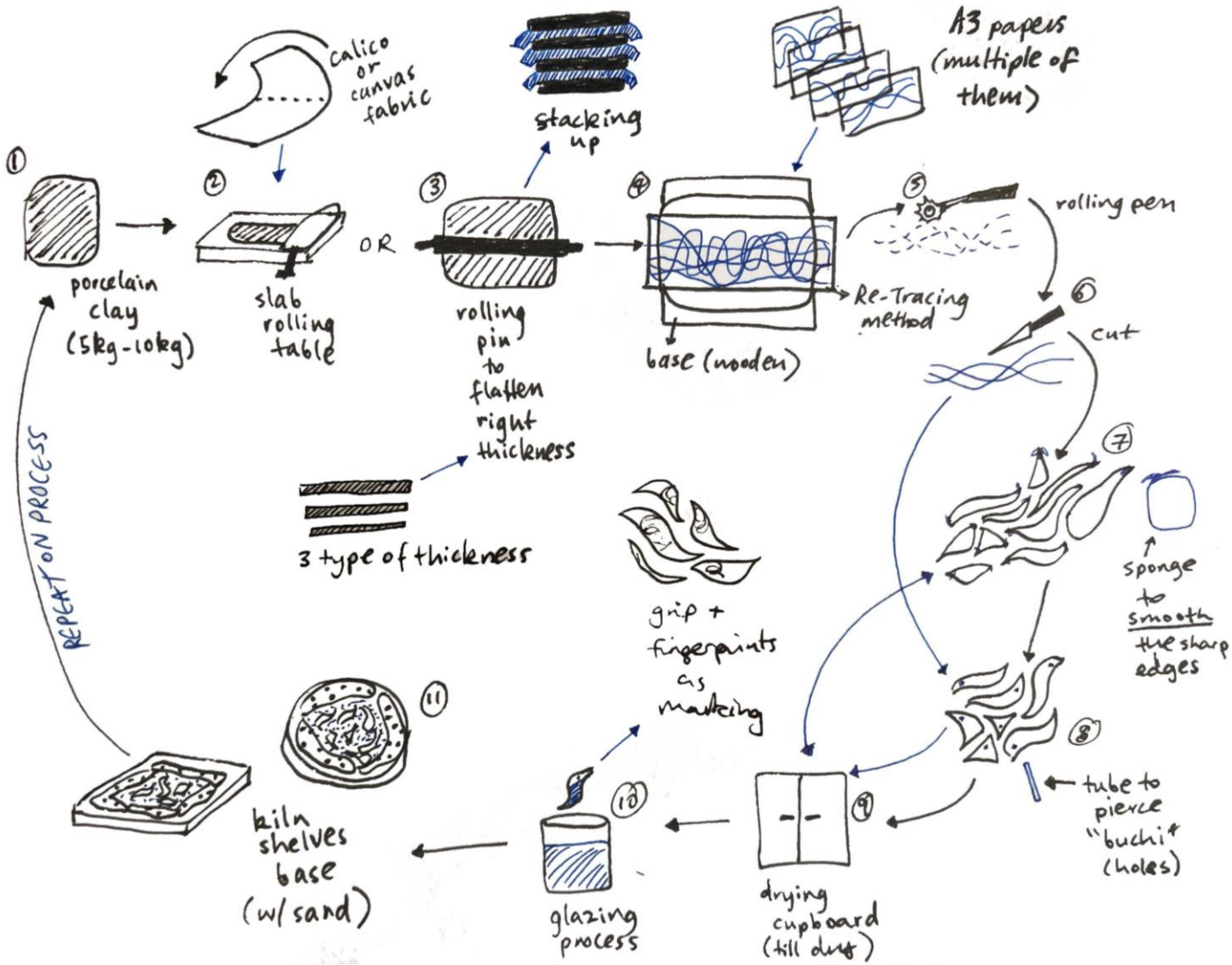


Figure 63. *Refined Diagram Log for Soundwaves*: Ceramic Shapes.

My manipulations of the imagery distorted these soundwave patterns, influencing the abstract three-dimensional ceramics to convey a liminal position. Figure 63 (above) shows the recorded ceramic process through an improvisation of the basic process by subtracting or adding steps such as tracing paper. This helped to simplify and refine the process. The gaps of sound should therefore "be concerned with *routes* rather than roots" (McCrone, 1998, p. 34). This resonated with me as I tried to decipher the digital recording and complete the gaps but realised that the gap meant letting go of the idea of translating the sound. My tactile interaction with ceramic shapes was illustrated as soundwaves, the final preference for the installation design, which works tactically and visually.

Figure 64. *Marking Our Fingerprints*: Hands of the Makers.

4.3.4 Traces of the Maker(s)

I underestimated the time scale of the repetitive process of ceramics, needing to allow others to engage and assist me in the making (Figure 64, seen above). Every porcelain piece I create with the help of many hands feels like a journey of making through engagement, interaction and connection. The way I perceive the gap of sound "morphs, shapes and makes meaning through communication across and between people" (Brueggemann, 1997, p. 341). As Galpin (2016) mentioned ceramics are a barrier but also a bridge as my liminal position, allowing me to form connections between both worlds.

The marks left behind were from rolling the clay, tracing, picking pieces out, piercing holes and leaving them to dry. But the process did not stop there: once the pieces had dried, the makers continued to touch the ceramic pieces to glaze them with their fingerprints (Figure 65). The ceramic medium conveys familiarity, however each haptic interaction with it is unique. A ceramics tactility is "an extension of my sense of touch and, when shared, an extension of other people's touch" (Driscoll, 2020, p. 185). Every ceramic piece looked similar but also unique. Each hand articulated the sensation of feeling through touch and marking as an engagement in a tactile conversation, leading up to Phase IV: *Final Installation.*

Figure 65. *Makers*: Glazing Process as Finishing Outcome.

Figure 66. *Soundwaves*: Paper Clay Shapes.

4.3.5 Scaling Up

I investigated how to utilise the ceramic pieces as a hanging installation through the introduction of a frame. The reason why I chose to use the frame was primarily because of the installation process for the final exhibit. Initially, I used a 900mm medium density fibreboard (MDF) frame as the radius circumference for the concept test installation (Figure 67). Eventually, I decided to replace MDF with plywood because of the latter's laminated thickness, making it stronger and more durable.

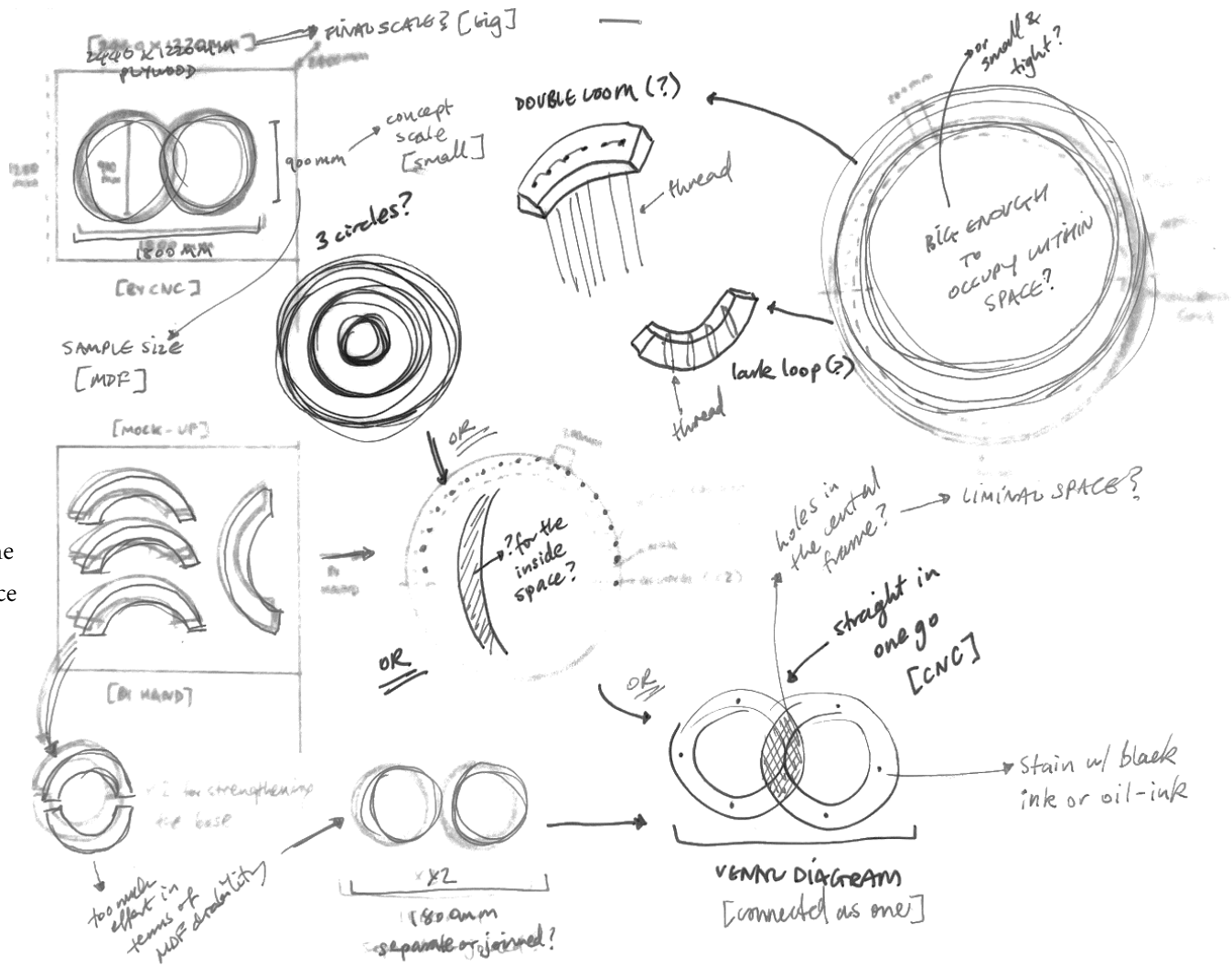
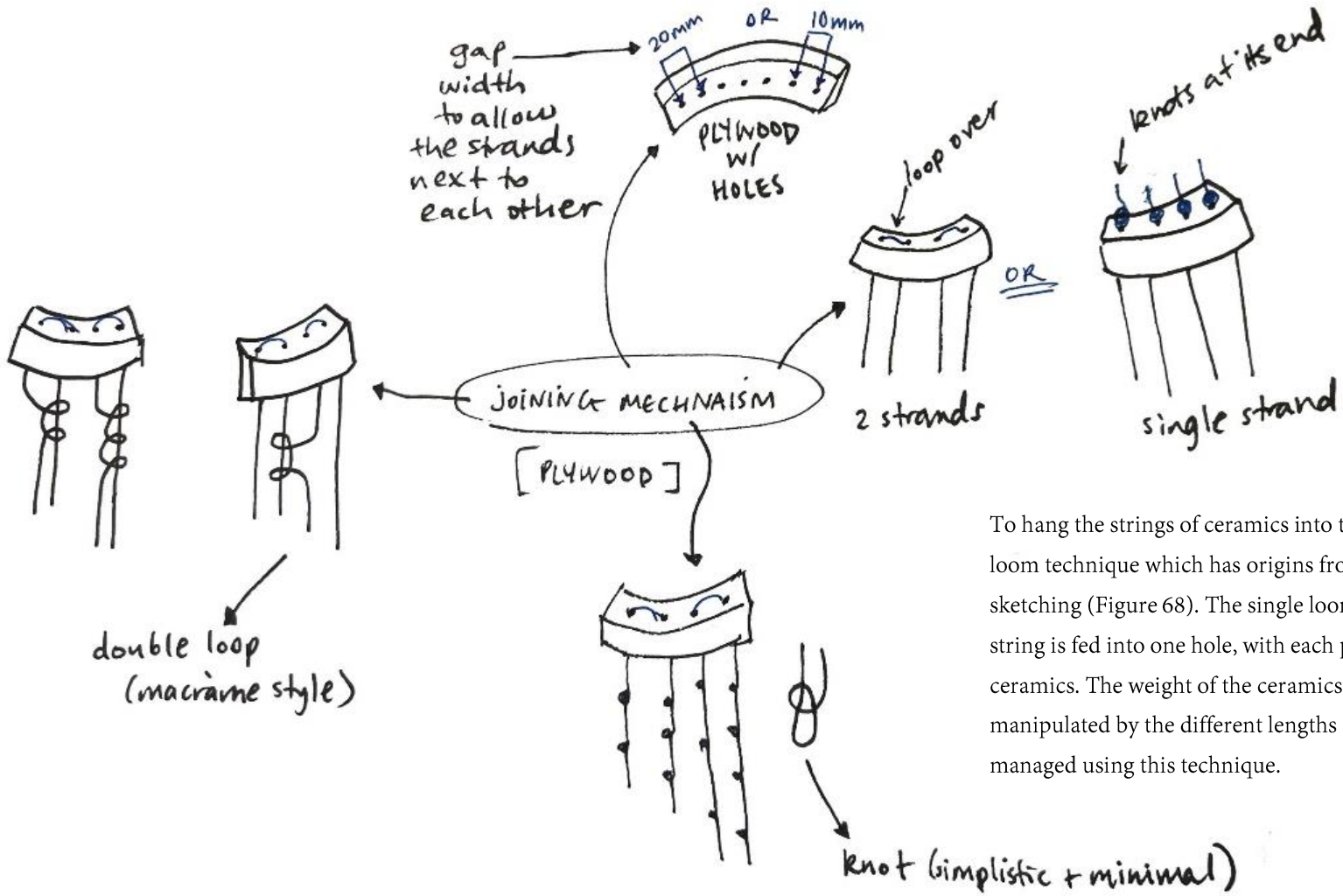


Figure 67. *Frame Diagram*: Sketches.



To hang the strings of ceramics into the frame, I utilised the single loom technique which has origins from weaving practices through sketching (Figure 68). The single loom is defined as a tool where one string is fed into one hole, with each porcelain bead, to balance the ceramics. The weight of the ceramics and the thread patterns manipulated by the different lengths created, could be better managed using this technique.

Figure 68. *Single Loom*: Sketches.

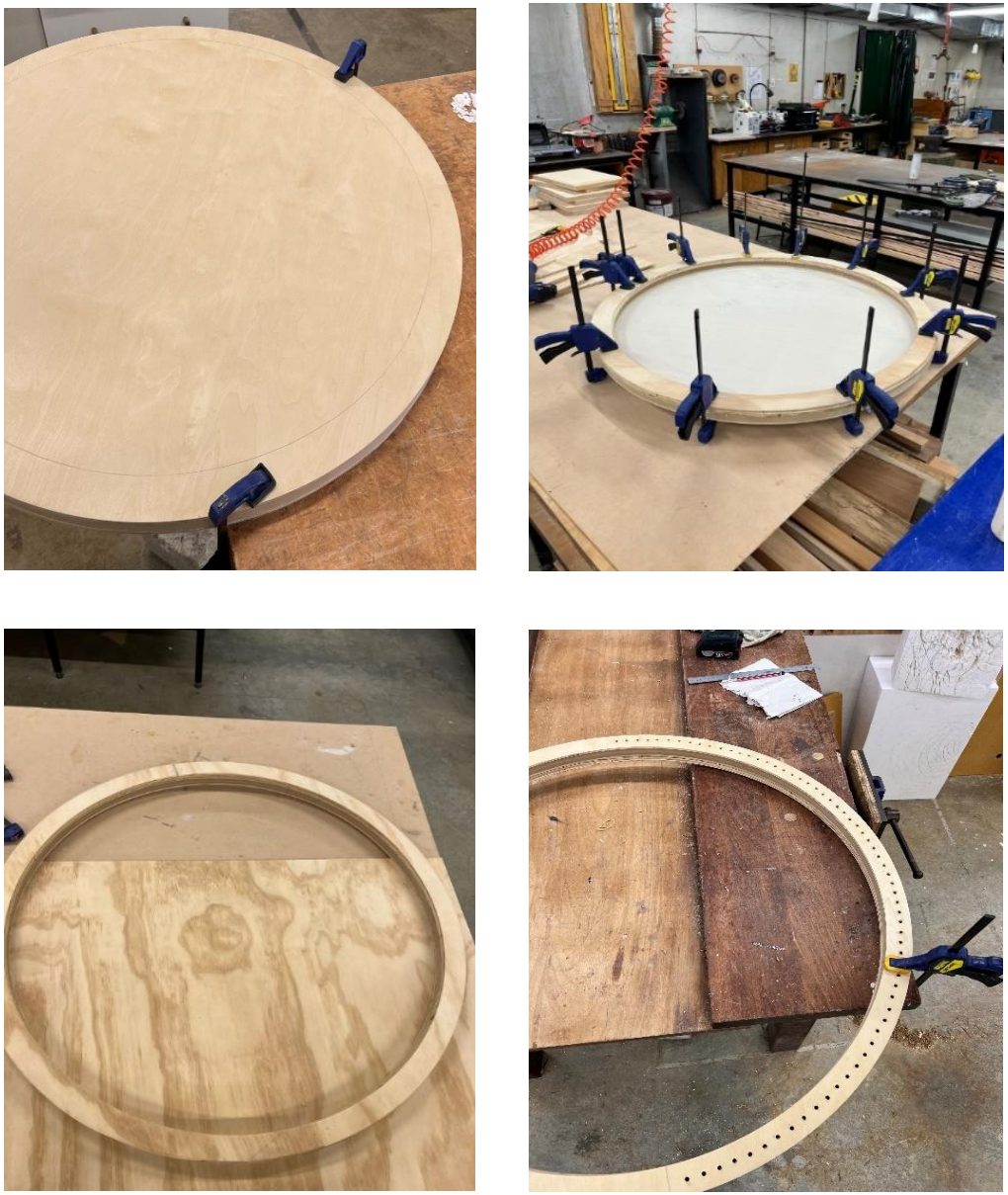


Figure 69. *Sample Frame:* MDF Prototype.

Reflecting on the previous experiment (Figure 69), I continued to explore the potential afforded by a frame. I noticed the radius of 1800mm wide is too small to allow a person inside the circle. The size of the frame was important because I intended to feel sound in a three–dimensional space (Driscoll, 2020). A larger frame provided more area for the vibrations of sound. The diagram indicates the envisioned installation space through a revelatory scale and dimension seen below (Figure 70).

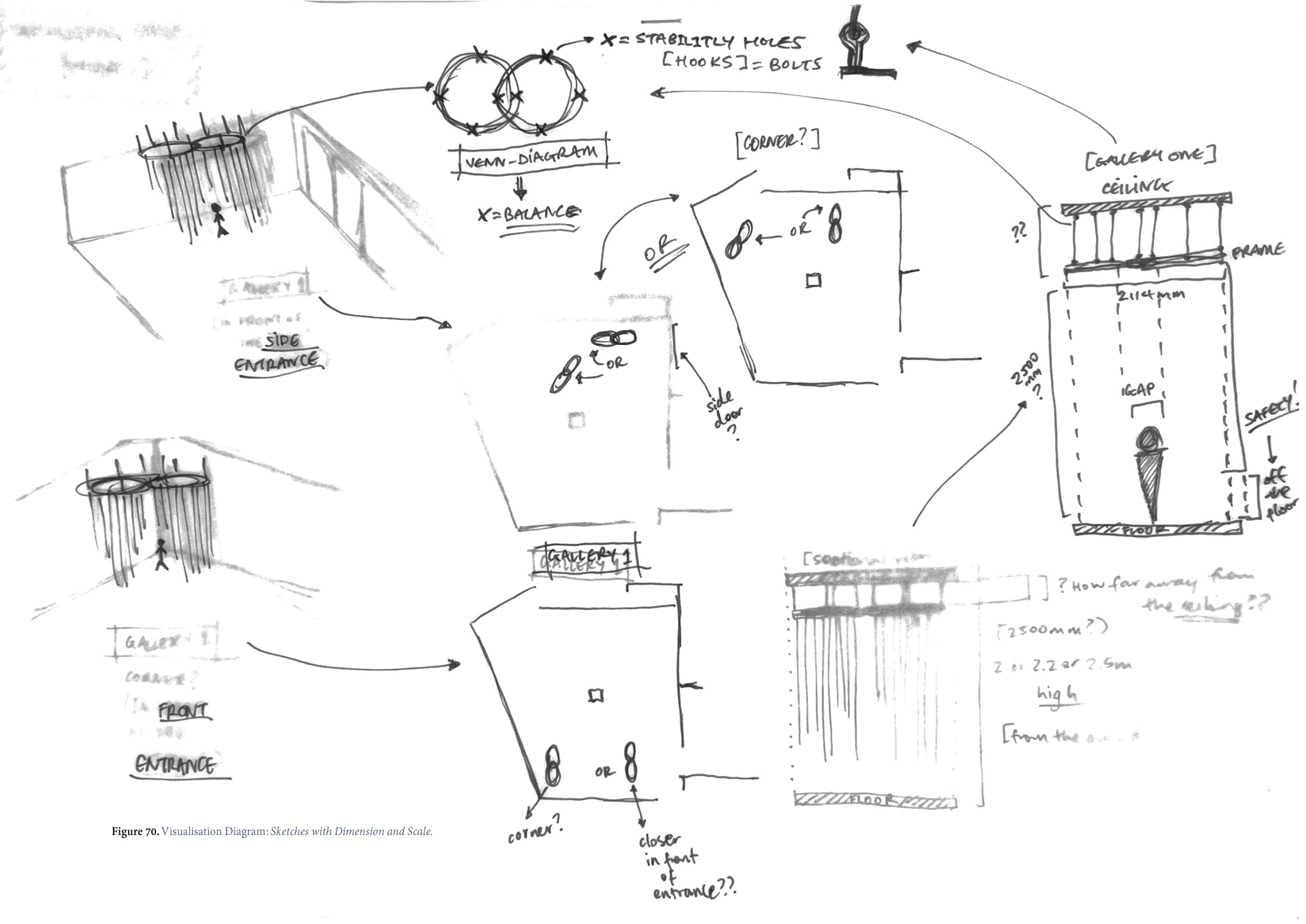


Figure 70. Visualisation Diagram: *Sketches with Dimension and Scale.*

To the final design iteration was designed with the double circular frame to allow the viewer to be surrounded by liminal space and "listen up, out, through and around" (Ceraso, 2014, p. 120). The double venn-diagram strongly related to my liminal position as I weighed the ceramic pieces on both sides: left and right (Figure 71). This tangible interaction echoes my experiences of wavering between both worlds; the installation became a vehicle (Maarit, 2006) to articulate my liminal positioning between two worlds. The gaps experienced in verbal communications are explored through an interactive installation, *The Gap Between Worlds* at St Paul Street Gallery 1– can be viewed through this video link.

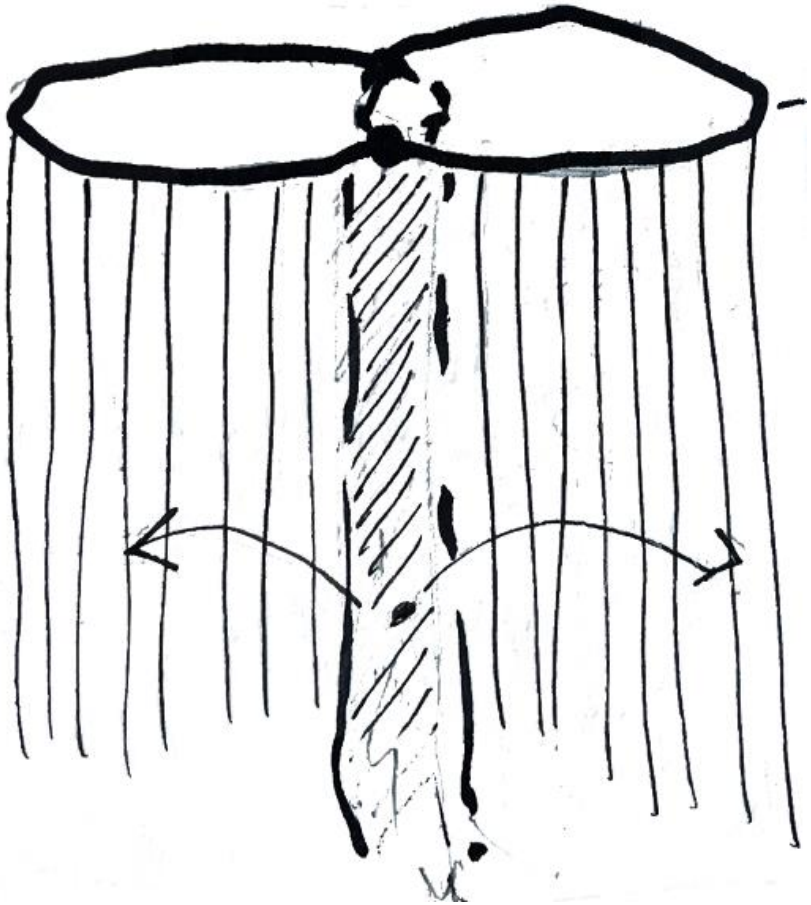


Figure 71. *Venn – Diagram*: Frame Sketching of The Final Installation.

Chapter 5. *Conclusion*

Figure 72. *Building Final Frame*: Plywood Material.

5.1 Reflection

My research question asked – ***How can ceramic practice demonstrate my experience of being between two worlds: deaf and hearing?*** What began as an investigation into the processes of connecting ceramics and gaps of sound, ended as an installation which located me within the liminal space between the two different worlds of hearing and d/Deaf. Exploring this question became a journey of self-discovery. As I unravelled thought processes and implemented them into this creative practice, I realised that I had never addressed the personal barrier I had constructed between my d/Deaf and hearing personas. The ceramic medium became a combination of conscious questioning and reflection, developed through and into an interactive installation.

A re-interpretation of *gaps* in sound as ceramic components has shaped my artistic expression of what it means to experience and interact with not only one world but both. The materials of porcelain and paper clay allowed a sharing of my audial experiences with hearing viewers. At the beginning of this project, the question that was asked to me was, 'is it hard to read lips?' Lipreading was once a mundane activity I took for granted, but through this investigation, it has shifted into a sensory experience. This shift allowed me to pay attention to not just lipreading but also body language, facial expressions and gestural movements; allowing me to fill in the gaps I was experiencing to "compensate for my diminished auditory capacity" (Ceraso, 2014, p. 109). It is not hearing alone that makes my sensory experience meaningful but how I make ceramics with hearing loss can reveal a fragmented and incomplete space. I realise that not only did I occupy the liminal space, but I also *fit* in. I am fully engaged in the

lipreading experience, involving much more than my ears. My liminality allows me to feel the integration of the two worlds.

The repetitive body of ceramics conveys tactile immersion, inviting viewers to interact with the world from a perspective other than their own. I wished for viewers, especially from the hearing world, to reflect on their own experiences with sound. Hearing people heavily rely on their ears, which prevents them from making the most of their other senses. The multiple ceramics as an interactive space encourages them to engage with their hands or even the tips of their fingers. The large frame with four– thousand ceramic pieces emphasises and represents the fragmented nature of my liminal position. This is my experience with deafness and my liminal position, but it may not be the same for others regardless of where they fall in the hearing continuum. What I have gained from this project is an understanding of the liminality I lacked, not only for myself but for others who are hearing, as well as those in-between. This investigation could be developed through further study; one method would be to polish the form of the ceramics to replicate soundwaves better. If I had the time and resources, this branch of research could have been a metaphorical route to explore – however it would have needed additional research.

My project, *The Gap Between Worlds,* encompasses raw emotions based on my experiences with gaps in communication, constructed by re-interpretation of these gaps. My investigation allowed me to deepen not only my theoretical understanding but also to discover acceptance. The gradual acceptance I have found against the gaps of sound and my liminal position, through ceramics, has truly been an educational and a profound lived experience.

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Appendix A: *Final Installation* (Phase IV)

Figure 73. *Transporter Frame*: Moving From Space to Space.

Figure 74. *Touch Gently*: Smoothing The Sharp Edges of A Ceramic Shape.

Figure 75. *Fragmented Sound*: Dried White Porcelain.

Figure 76. *Marking And Marked*: Phoebe's Glazed Hand.

Figure 77. *Kiln Sand*: Smoothing The Sand.

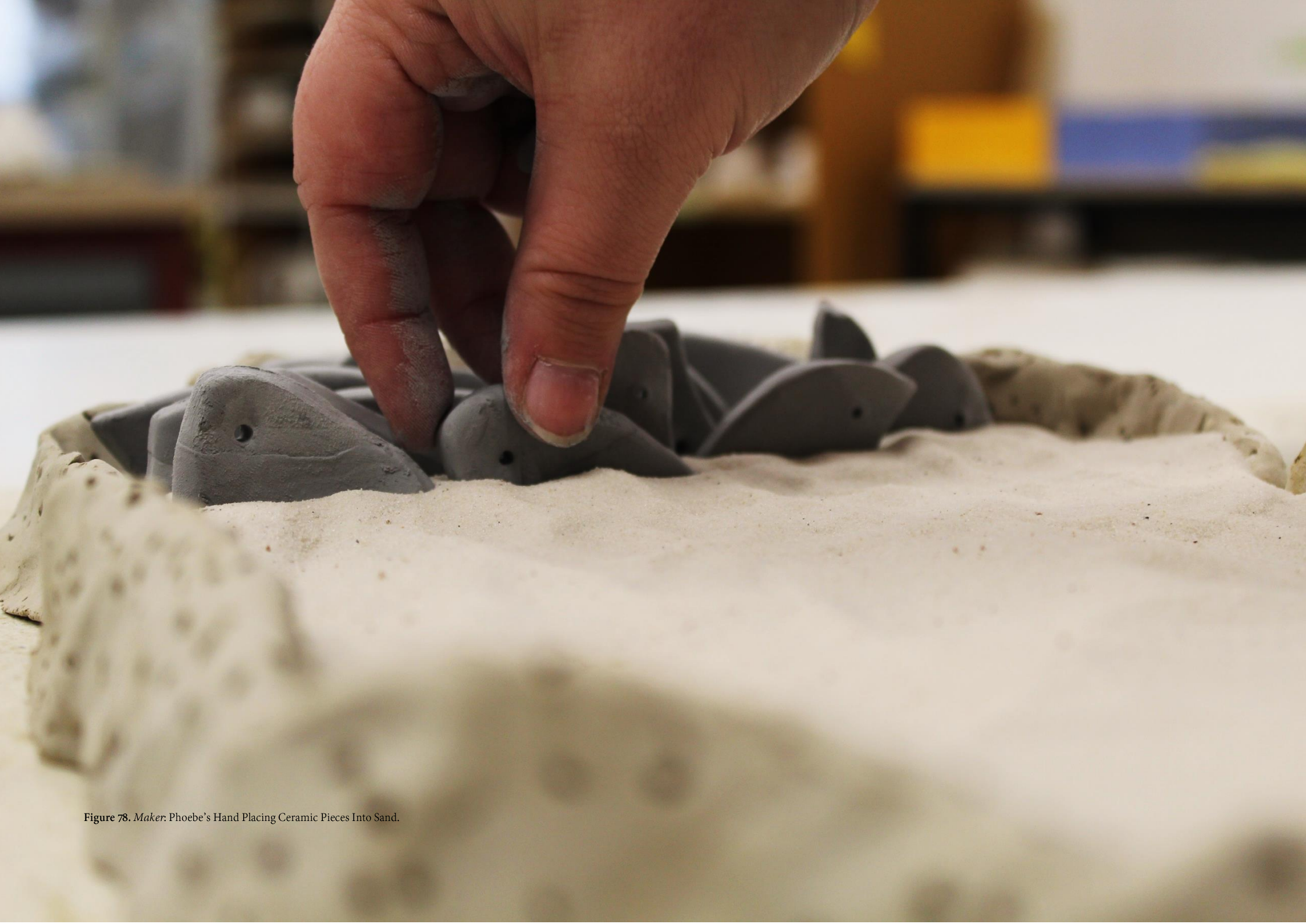

Figure 78. *Maker*: Phoebe's Hand Placing Ceramic Pieces Into Sand.

Figure 79. *Fragmented Sound*: Mass Production.

Figure 80. *Final Installation*: My Whole Body.

Figure 81. *Touch and Touched*: Interactive Installation with the Viewers.

Figure 82. *Hearing World*: Black Porcelain Pieces.

Figure 83. *Hearing World*: Viewer's Hand Engaging With Ceramic Pieces.

Figure 84. *Deaf World*: Paper Clay Pieces.

Figure 85. *Deaf World*: Isolated Piece.

Four- thousand handmade and glazed ceramic pieces have replicated the shape of soundwaves, all coming together into an interactive installation to show the gaps that are *felt* when lipreading as my day-to-day experience.

Figure 86. *Deaf World*: Open Perspective.

Figure 87. *Both Worlds*: Liminal Space Between Two Worlds.

Figure 88. *The Gap Between Worlds*: Final Installation.