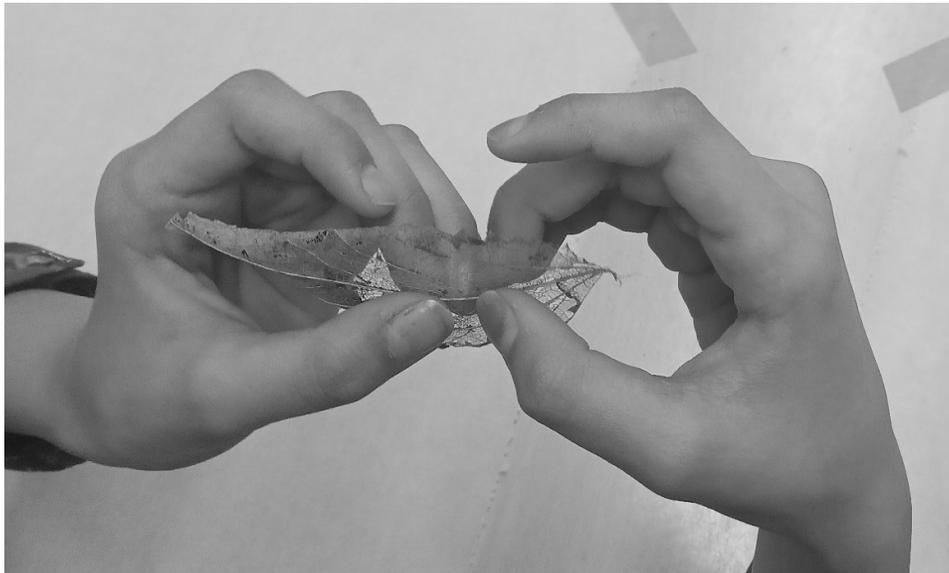


HAPTIC OBSERVATIONS

An exploration of haptic based engagements in
Arts based Education



from Being to Becoming

Haptic Observations

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Arts based Education

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Abstract

We live in an era that has limited our moments of *being* with, wondering with and making with real, touch-able materials. Our awareness of our fingers' gestures is becoming extinct but we still hold an urge to touch and explore the *real thing*. Haptic Arts-based didactics stimulate the sense of touch and turn our attention to *here* and *now*, allowing us to translate abstract contents into tangible artful creations.

This explorative study has the form of 5 case studies, which have been conducted with different audiences and at diverse locations, under the framework of a workshop series entitled: Haptic Observations. The research's main study is to explore how the Haptic Observations workshops foster peoples' personal perceptions. It does so by structuring the workshops under the notion of Attention as a form of Education and letting participants follow process-driven art-making practices, exploring the *not-knowing* and being receptive to the *new*. Some of the workshops of this series study the notion of indirect haptic impressions and explore how haptic experiences could be fostered when touch is not possible. As an educational practice, it invites participants to follow a protocol of actions which aims to navigate them through *framed observations* towards composing textural and morphological understandings.

Having the position of a nature-based artist I am interested in connecting Haptic artful engagements with nature. At the heart of my pedagogical tools are located natural materials and clay. Within this trajectory, I broadly investigate the impact of these materials on Arts-based Haptic Learning. This investigation aims to showcase the multifarious abilities of such materials while considering sustainability in education. As an educational practice, it invites participants to *active touch* the natural elements and the clay, letting the materials whisper their stories to human hands.

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Part I

Situating myself in this research

1. The tree barks



Figure 1 Tree barks

When I first started this Masters programme, it was very blurry to me how I situate myself in my educational practices. In the process of *becoming* a haptic practitioner I had to situate myself in my current position as a nature-based artist and haptic-based educator, to respond in relation to my educational values, the participants of this study and the resources. I could visualize this process of responding and positioning, as tree's barks, that they uncover their layers through time and depending on external conditions.

1.1 The bird nest and the child

The notion of response-ability has been described by Donna Haraway as “a praxis of care and response” (Haraway, 2016). In my trajectory, this praxis started by caring and responding on my positionality as a haptic learner by bringing back a memory from my early childhood.

When I was around four years old, I participated in a workshop in which I created a bird's nest from little branches and clay. I still vividly remember how excited I was that day. While I was making my nest my mother was telling me about the migrating birds and that every March swallows are relocating in Greece because of the warmer climate. After the workshop I was hoping that one of them will visit my bird nest that Spring. So, the next day we placed the bird's nest in the ceiling of our balcony. I was checking on it every day, until one day the nest became the home of two birds. I was watching them

almost every day, I knew what time they were flying away looking for food, when they were sleeping, how they were eating their food and drinking water. One day, only one of the birds flew away to search for food, I immediately thought that the other one was sick. Surprisingly, several days after, the bird gave birth and now the family had some newborns. I saw them eating their first meal from their mother's mouth and taking their first flying lesson. Not all of them made it, some of them died when they tried to fly. For over five years, the same family was staying in the nest every Spring. And then another family came and left again. Those birds, did not give me only happiness because they stayed in the nest that I made, but also made me experience the outcomes of the workshops that I participated in as a child for years.



Figure 2 The bird nest: 2001- 2002

In this memory I locate the first layer of my positionality for this study. Being a haptic learner and later a nature-based artist I found myself developing a form of perceiving my surroundings which was based on a *growing ability to observe*. What I describe here as the growing ability to observe is linked to the Education of Attention, which addresses attention as a form of education. According to E. J. Gibson, attention as a form of education involves a learning situation which the person learns to decide which variables to attend and on which to ignore (Adolph, 2015).

Caring and responding on my *here* and *now* position, I realised that in order to explore my hybrid positionality as a nature-based artist and haptic-based practitioner, I would need to unfold my artistic practices into my educational ones. In doing so, this research study has the form of a haptic-based workshop series entitled Haptic Observations, which addresses observations as a manner of learning and giving attention to learning objects.

1.2 Educational pillars

In the process to form my educational values I start by responding to my positionality as educator. Maintaining a safe learning environment in which everybody feels able to share, with respect to each other, their beliefs and experiences (Holley, 2013) is on what I work towards. However, it would be unrealistic to say that the utilization of such a space is not challenging. Particularly, in the settings that I work in, where I hold the position of a collaborator, in which I have not built relationships with the participants and I do not know the dynamics of the group. A gesture that resonates with me from my first facilitation and has helped me to encounter with those challenges is to always take the *first risks*. The first risk refers to Bell hooks' quote "In my classrooms, I do not expect students to take any risks that I would not take, to share in any way that I would not share" (hooks, 1994). In the same text, hooks suggested that by taking the first risk, as educators, we hold the potential to create an environment that motivates others to feel open to participating and sharing. Furthermore, in the way the activities are designed there is always an *escape door* included, which allows the participants to decide the ways and levels of participation by holding the control of how much they want to engage with the subject. This situation sets an environment that respects personal choices and boundaries and helps the overall research to make suggestions that are not based on guided choices. Furthermore, both feedback moments and conversations allow the participants to share their difficulties during the making process, and contributes to the transformation of the class to a temporary community. In addition, communicating with my publics about the participation principles helps in facilitating a space, in which one feels confidence with sharing.

The participation principles are:

1. Everybody can share when and if they feel comfortable with sharing.
2. There will be anonymity on what is shared.
3. None of the activities are mandatory and steps can be skipped if the participants are not comfortable mentally or physically.

Lastly, at this point I make clear that the photographic material will be focused on hands and their faces will be covered if needed.

1.3 Co-researching

Responding on the way I approach my participants for this study; my position is aligned with Paulo Freire's orientation "Instead of taking the people here as objects of my research, I must try on the contrary to have the people dialogically involved also as subjects, as researches with me" (Paulo, 1982). I approach my participants as the co-researchers of this study by discussing with them about the interests and difficulties of this research and letting them know the background of the workshops before they start participating in them. Those gestures often have revealed insights that I could not observe without their contributions. Since for this research I collaborated with five different groups of people, which I did not have the chance to meet before the workshops, I did not know what previous experience my participants might have with art making. For that reason, the workshops have been developed under the principle that for someone to follow them, no certain level of previous knowledge and art making experience is required. Furthermore, for this project I worked with people with migration and/or immigration backgrounds, so making sure that the participants could follow the activities regardless of their linguistic differences was one of my priorities as a facilitator.

1.4 Utilization of the research events

For this project, I had to steer the financial part of the workshops I facilitated under my role as a volunteer for the involved organisations. In the first research event: Inviting Natural Materials, the materials were provided by The Wijkz Den Haag. For the Crafting your Neighbourhood workshops, I did not have sponsorship from external organisations, so in this case I provided the materials. Later, the workshops Perceivable Observations and the Molding Natural Forms got funded (students transportation and materials) by The Social Heroes Eindhoven University of Technology (TU/e) students' team (StEHVen). The Social Heroes is a part of the StEHVen, an initiative from the TU/e, Fontys and the Municipality of Eindhoven with the aim of Supporting and promoting students who organize social activities, which connects student communities and the Eindhoven city. Connections, features and financial support are supported by them. In the same workshop, the Van Abbemuseum allowed me to use the exhibition space as the education space of the workshops, as well as, provided free entrance for all the participants, including the teachers. Lastly, The Land Our Hands Remember workshops materials' expenses and space were covered and provided by the Van Abbemuseum.

Part II

Connecting the Haptic learning approach
with arts, nature and clay

2. The Sense of Movement: An introduction to the Haptics

In my quest to study the Haptic Learning approach as a notion I had to isolate and analyze the meaning of haptic sensing and the relation of Haptics with active and passive touch. Tracing back to the concept of touch, there is a lot of research in the field of psychology, which supports that as human beings we experience two types of touch: the Active and the Passive. Early on, Gibson in a psychological review described active touch as “an exploratory rather than a merely receptive sense”. In the same review, Gibson pointed out that “passive touch involves only the excitation of receptors in the skin and its underlying tissue... But active touch involves the concomitant excitation of receptors in the joints and tendons along with new and changing patterns in the skin” (Gibson, 1962). Nevertheless, Gibson did not discuss haptic and tactile perceptions as two different types of sensing. However, later this separation was given attention from Minogue and Jones, who connected the notion of active touch with haptics, as they pointed out that haptic experiences include active touch (Minogue & Jones, 2006). Furthermore, several psychologists saw a need to differentiate haptic perception from tactile perception as the former involves “the active, serial exploration of a stimulus and because it involves the movement of different parts of the body” as Gallace and Spence mentioned in 2009. Additionally, Gibson (1962), Minogue and Jones (2006) and Gallace and Spence (2009) came to the same conclusion that body movements are necessary for active touch.

A recent contribution to the meaning of haptic sensing came from The Graspian, a company that “Introduces a gripping tool equipped with advanced tactile sensors”. The Graspian also came to the point where they needed to explain haptic sensing as detailed as possible due to their application in robotics. They arrived at the conclusion that haptic sensing is related to any sense of touch and is a combination of two sensing abilities. One part of haptic sensing is tactile sensing, which is the detection of force on the skin surface, whereas the other part of haptic sensing is kinesthetic, meaning the sensing of body movement and muscle strength.” (“What Is the Difference Between Haptic Vs Tactile Sensing?”, 2021). The Graspian added the kinesthetic sensing as a branch term at the above description. Several sources mention that historically the term kinesthesia was first discussed by Bastian, H. Charlton in the article: The “muscular sense”; its nature and localization (Gibson, 1962; Proske and Gandevia, 2018; Bastian, 1888). The article is a discussion around the nature of the so-called “muscular sense” and its cortical localisation. Bastian, referred to kinesthesia as “the sense of movement”, a sense that is connected with the Active Sense. Reading this article, one could link the “active sense” with active touch as Bastian refers there is a corresponding area between the sense of movement and sense of touch (Bastian, 1888). In a review by Proske and Gandevia, as they mentioned “a modern usage has expanded the meaning of the term kinesthesia to include both the sense of movement and the sense of position of the body and its parts” (Proske & Gandevia, 2018) The Graspian seems to share the same view with this practice Proske and Gandevia, as they also see kinesthetic sensing as “the sensing of body movement and muscle strength”. (What Is the Difference Between Haptic Vs Tactile Sensing? 2021).

The concept of kinesthetic and haptic sensing and their relation with active and passive touch have a long and complex analyses and several different meanings, which may vary with the context and field in which they are used. However, the above analysis contributed to the situation of this research into the broader fields of kinesthetic and haptic sensing. Furthermore, the clarification of the above meanings and terms in relative fields is necessary in order to step in the discussion of Haptic Learning and active touch in education.

Reflecting on the above studies, I have arrived to the conclusion that the Haptic didactics refer to the learning situations that attention is on *hand perceiving* and *hand making*. The persons perceive and engage with the learning objects by *active* touching them. The process could be described as reciprocal and the learner is cognizant of the touching action. Through active touch the learner identifies, manipulates, changes and observes the learning surface/object/pieces. Furthermore, the activities follow hands on [art] making practices, in which the learner uses their hands to materialize their abstract perceptions. The Haptics involve the tactile and the proprioceptive modalities (Ed Hall, 1999). The Proprioceptive modalities refer to the body awareness sense, which is linked with kinesthesia as body movements and muscle tension should be performed. In the Haptic Learning, the attention is on hand making and hand perceiving (“Body Awareness and Body Sense- Proprioception”, 2017).

3. [My] Haptic didactics in relation to “poor pedagogy” and Education of Attention

In the process of this experimental study, I realised that my haptic based educational practices are connected with the Education of Attention. These educational practices stem from my way of art-making, which is referred as a *growing ability to observe*. In my practices the notion of observe-ability could be framed as observational learning, under the meaning that one grows their ability to perceive framed observations which carry understandings and new pieces of knowledge. As a process, it requires the learner’s attention to frame and respond to what is observed. In my attempt to translate this narrative into my practices, I have developed a protocol of actions, which aims to give the ground to the participants to perceive the learning pieces and mediate the learning process based on their personal interests.

In E-ducing the gaze: The idea of a poor pedagogy (2010), Jan Masschelein mentions that such a pedagogy “helps us to be attentive, which offers us the exercises of an ethos or attitude”. It does not need a certain methodology; however, is based on open-ended structures. The “poor pedagogy”, does not transfer knowledge but forms the ground for one to be revealed in a process of becoming aware of what is happening *here* and *now*, and open with exploring the *not knowing*, the uncertain and the unfamiliar. It is a practice of exposure and vulnerability as Jan Masschelein and Tim Ingold mentioned. (Masschelein, 2010; Ingold, 2016)

4. Earth in the form of clay

Depending on the content of the soil, clay could appear in various colours (“Clay”, 2007). As a material it is plastic, meaning that it could become moist easily. But, as we are working with it, it becomes dryer and less malleable. When we add water, it gains its softness back. If we add more water than is needed, it becomes sticky and oozy. If we let it be for some time, it completely dries and becomes firm, *it is becoming* something different. In working with clay, we do not need any tools, only our hands. As a material, it comes from the earth and is connected with a specific land. If it stays wet, clay could be reused infinite times and it does not decay through making with it and through time. When we are making with clay, there are moments of *being* with the material. During those moments there is material exchange between our hands and the clay. Flesh of our hands, now exists in clay, and material from the clay exists on our hands and under our nails. What I find deeply fascinating about clay, is that *it has a memory*. Every time we make something with clay, and then we destroy it, the clay still remembers all the hand gestures that we did while making with it. Our destroyed creations and their stories, stay with the material forever. When it is used again, all the previous memories co-exist. When another person, works with a piece of clay, that someone else worked before, the clay knows all the previous stories, but the makers do not. The clay turns our attention to hands and when making with it we develop our awareness of our own body (van Boeckel, 2020).

5. My path as a nature-based artist

My relationship with nature, began during my Bachelor's thesis. The Be-Become series was an art-based research which was exploring ways that nature inheres in the body. The project was based in the perception that human body and nature operates like a circle, from birth and growth to decay and deterioration. The Be-Become anti casts series materialized this perception. In the making process I was starting to use my body to make anti-casts and in a later stage, I was attaching lichens and moss into the cracked areas. These cracked areas occurred because of the plaster's nature, which creates fissures quickly while I detached the casts from the body parts.



Figure 3 Ana Mendieta: Untitled (from the Silueta series), 1973-1977

Ana Mendieta experienced a traumatic cultural separation, when she left her homeland and much of her family behind. Such an experience had a huge impact on her art. Through her Silueta series, she created ephemeral contemporary art practices. Flowers, tree branches, moss, gunpowder, and fire were used to create this series of “bodily traces”. The Silueta series integrated her interest in Afro-Cuban ritual and the pantheistic Santeria religion by grounding her relationship of the female body, nature and the spiritual connections between them. Mendieta’s ephemeral approach of nature and the female body, grounded the Be-Become series as a practice of appreciating nature in my body (“Ana Mendieta. Untitled: Silueta Series”, Guggenheim Museum).

The ways nature functions and modifies herself depending on the surroundings and her expansive tendency are aspects that inspired my later work. In the Metamorphosis series, I was observing the similarities in the repetitive patterns and organic forms in the micro and macrocosm. The series is inspired by the idea that by developing framed observations of natural elements, we are able to make relations between the micro and macrocosm's structure. During the creation of the Metamorphosis series the microscopical and macroscopical organic forms co-inhabit in one piece.

6. Determining the research questions of this study

The overall intention of this study is to develop the Haptic Observation series of workshops by applying haptic didactics and exploring ways in which my artistic and educational interests could co-exist in one workshop body.

In my quest to develop the Haptic Observation workshops, by allowing both my artistic and educational interests to co-influence the former's structure, I became interested in gaining a better understanding of the common ground that the workshops share with each other. In sketching out this common ground I will try to find identifiable features and patterns that the facilitated workshops have in common.

One of my research motivations is connected with my artistic background as a nature-based artist. Through this study I aim to unpack the idea of using natural elements in order to host Haptic Learning experiences. This desire led me to decide on the exploration of many new natural materials that are not only interesting to grasp but also might work as tools which could introduce my participants to the notion of active touch without it being intellectualised. Furthermore, my artistic practice is very much connected with the concept of framed observations, which are linked to the notion of Attention as Education. In this study, I structure the action protocols of the workshops under this framework and I will explore how framed observations could be meaningful, as well as in learning situations that touch is not possible.

In this study, clay is the main art making material. I am particularly interested in observing how my participants experience this material in relation to Haptic didactics and what is the impact of clay in our relationship with nature. In addition, I was curious to experiment with different kinds of clay and to observe the impact of natural clay on Haptics and the participants' perceptions within the learning process.

Translating my aspirations and interests into questions, I have arrived to the following research question:

1. How can the Haptic Observation workshops foster peoples' personal perceptions?

This work has the following contribution to the field:

2. What is the contribution of natural elements in Haptic Learning approaches?
3. What is the impact of clay in the Haptics?
4. How could we achieve haptic forms of learning in environments that touch is not possible?

Through this trajectory, I aim to gain understanding about my practices:

- What is the common ground of the Haptic Observation workshops?
- How my artistic practices influence (are related with) my educational choices?

After trying to map my aspirations and interests in this research, I have realised that the facilitated workshops have two main different research orientations. The Interesting Natural Materials, The MoNaFo and The Land our

Hands Remember workshops are all intended to explore the contribution of natural elements in Haptic Learning approaches and the impact of clay in the Haptics. Furthermore, the Moving Your Neighborhood and the Perceivable Observations workshops are more focused on the examining ways of achieving haptic forms of learning in environments that touch is not possible. However, all the workshops aim to help me gain a deeper, more concrete understanding about my practices and on how can the Haptic Observation workshops foster peoples' personal perceptions.

Part III

Situating my research in the broader field
of Arts Education

7. The absence of Haptics

Tracing back tactile forms of learning in the cultural field, one can find many museums and institutes that offer tactile museum experiences, dedicated to make their spaces more accessible for blind and partially-sighted visitors (Charlotte Coates, 2019). There is a lot of variation in the forms of the tactile experiences; 3D replicas and relief replicas of museums' artworks textile objects and other textural tools referring to the artworks' textures are some of the tactile forms of learning and tactically explore exhibitions.

Through my perspective, the above tactile forms assist in the blind and partially-sighted visitors' connection with the artworks. They could be described as a language which serves in situations that the persons cannot physically view the artworks. However, there is the tendency of providing those tools as multisensorial and tactile experiences for able-bodied public as well. Until now I have arrived at two reasons that motivate this tendency. The first reason is connected with the limitation of haptic experiences that are offered in art educational contexts. As a result, the tactile tools are the most associated to the multisensorial and haptic oriented learning. After reviewing the literature, working in the cultural sector and having conversations with people in the field, I came to the realization that this tendency is also related with the lack of awareness about the difference between haptic and tactile sensing and learning. This misunderstanding creates the impression that tactile and haptic sensing are synonyms to each other. However, according to previous research (seen in Chapter 2: The Sense of Movement: An introduction to the Haptics) and my perspective there are fundamental differences not only because of the intentions of approach, but also of *how* we facilitate those forms of learning. These differences are based on the fact that tactile objects can be seen as an interactive language and haptics could be seen as a reciprocal action between the learner and the learning objects. While I could not find a source that there is a connection between tactile sensing and active touch, the haptic sense could not be achieved without active touch (Minogue and Jones, 2006). This is based on the idea that the haptics allow the learner to manipulate and change the characteristics of the studied object. In practice, the learner should even be allowed to break the replicas in pieces in order to explore their inside qualities. Additionally in Haptic Learning, the facilitation, prompts and invitations introduce the learner to the idea of active touch and guide them to sense "tactile properties such as hardness, softness and friction" (Tim Lloyd and Susan Bull, 2006) and observe textural and morphological characteristics of the studied materials.

8. Six(6) Case studies of Sensory and Experience-based Learning

When I first started studying about the Haptic Learning approach, I believed that the literature review was the key in my puzzle to investigate the theme of Haptics and the notion of touch under the cultural and educational context. I started searching on scholar platforms for educators and researchers that have already done experimental research in the Haptics and in relation to Arts-based education. The literature showed that by physically touching the learning object, it encourages curiosity and strengthens the learner's interest and motivation and improves their ability to explore. Furthermore, research has been done around the study of if by integrating haptic strategies in the learning process, the learners are supported to develop better understandings. Reflecting on the evaluation process of the outcomes, the suggestions were based on the spent time, situational interest (excitement of attention), as well as on surveys, memory and knowledge tests¹. When I had already composed my literature review a realisation moment made me understand that my research does not hypothesize if Haptic Learning could foster perceptuality, exploration, new knowledges and understandings. However, I am more interested to learn how these are achieved. I believe that both scholar platforms and the above mentioned evaluation methods are beneficial for research projects that are not related with the personal perceptions of the participants. However, in my path to explore my educational orientations, the work of six Arts Education practitioners has contributed. In the following chapters I discuss how the STEAM educational offering and art educational works of other educators and researchers inspired this study.

¹ Some examples are: John J. Koran's "Attention and Curiosity in Museums." 1984 text, Andrew Alvarez's "Please Touch: The Use of Tactile Learning in Art Exhibits" 2005 text and Magdalena Novak's & Stephan Schwan's "Does Touching Real Objects Affect Learning" 2020 text.

8.1 (Re-)Configuring STEAM in Future-Making Education: Discussion

The Haptic Observations workshops series are related to STEAM's principles of education under the perspective that Art making is not the tool/vehicle for learning about other fields nor it intends to showcase art techniques.

In the book: *Why Science and Art Creativities Matter* (2020), L. Colucci-Gray and P. Burnard describe STEAM as “the combination and synergistic interplay of different subjects, generally identified as science, technology, engineering, and mathematics (STEM) *plus* the arts”. The notion of STEAM has been discussed and applied previously under the scenario of interdisciplinary collaborations. Although, in order to develop a more complete understanding of STEAM as re-configuring, there is a need to form “the educational space as a site for pluralist dialogue across different fields of practice and inquiry”. STEAM practices do not follow a certain methodology and could not be fitted in formal curricula. Although, I believe such practices are impactful specifically because they do not follow a specific structure, which gives the ground to interpretations and turns the educational focus from product-driven to process-driven.

One of STEAM's approaches as an educational offering, is on focusing “on the idea of education as stimulating thinking as practices of *future-making*, but enabling people and communities to respond resourcefully and creatively to ongoing changes”. This and more specifically “the idea of education as a moment of participation” are located in the heart of my pedagogic pathways. Such an educational practice, opens us up to the potential to be exposed and receptive to new knowledges but, does not project the end point nor promotes that knowledge has one shape.

Further, they mention that “We argue for much greater understanding of the nature and the logics of knowing in the arts and sciences, their different and multiple creativities and how they shape and cultivate the ways in which we experience the world. Importantly, we seek to inquire into not only how arts and sciences purposefully *connect*, as in the manner of putting things together to create a finished product, but how they intra-act, that is, how they stimulate different forms of logics, rationality and affect; how they become part of an inquiry that is embedded within the world” (Colucci-Gray and Burnard, 2020).

8.2 Linking the Missing Links: An Artful workshop on “Metamorphosis of Organic Forms” by Jan van Boeckel (2020)

The Linking the Missing Links: An Artful workshop on “Metamorphosis of Organic Forms” is an art-based environmental practice in which the participants imagine and sculpt how organic forms “might either evolve or disintegrate” through time. The workshop, through its content and the emerged conversations, values art making practices as forms of learning about nature and climate change. Jan van Boeckel introduced the idea of a protocol to this workshop: a *guided process*, which aims to give structure to the 3 phases of the workshop. The Phase I: “Growth or Decay?” invites the participants to sculpt an organic form that should refer to a plant, an animal, an insect, a mushroom or even bacteria. Afterwards, they arrive at their neighbour's creation and they sculpt how the

person's, to the left to them, organic form could unfold, bloom, decay or deteriorate in time. In the same manner, all the participants clockwise, change their position and they sculpt another version of their neighbour's organic forms. During the Phase II: "Missing Links", the participants sculpt the *in between* phases of the organic forms. These "links" are located in between the organic forms of the left-hand side participant and organic forms of the right-hand participant. The missing link refers to the organic "hybrid" form "between the two disparate sequences". The Phase III: "Social Sculpture" is the last phase of the workshop, in which the participants co-curate a landscape of their clayed organic forms.

The workshop lets the participant surrender in a subliminal, process-ended art making that is seen "as a practice of facing complexity, uncertainty, not knowing". In doing so, as an educational practice, is referred to so called "poor pedagogy" as it intends not to reveal its aims but to invite the participants to explore and imagine the process, without predestining the path. (van Boeckel, 2020).

8.3 What my Hands Know workshop by Stéphanie Baechler (2023)

In What my Hands Know workshop participants use their hands to explore by touching and making with clay the properties and qualities of this material. This art making experience fosters playfulness and turns the attention to *being* and making with the material. It also focuses on hand gestures as an action to highlight the importance of touch in our current, disembodied daily reality.

As it is mentioned, "the title refers to our interest in embodied knowledge and to hands as tools and transmitters of information between the inner and the outer world." As an art making practice, it fosters individual intuitive-based experiences because of their explore-driven nature. Such learning processes develop the participants' knowledge about the materiality of the medium (clay) and their awareness of their own bodies (Baechler, 2023).

8.4 Sea Monsters Conquer the Beaches: A Marine Debris Project by Karin Stoll, Wenche Sormo and Matte Gardvik (2018)

The Sea Monsters Conquer the Beaches is a community, interdisciplinary art project that addressed the marine litter environmental problem and used marine debris as artmaking materials. The project was developed for educational institutions at all levels in the community of Rana, Norway in 2015. The project's aims were to increase knowledge, engagement and awareness about the marine litter issue by collaborating with schools, kindergartens and the local community. Under this framework, location-based workshops were facilitated and among other actions the involved school participated in a community art project

Specifically, the activity that inspired the Haptic Observation workshops was the Sea Monster collective sculpture. For this activity kindergarten students visited the local beach and collected debris, litter and left-behind objects

which were studied further in class. The students learned about the collected litter and objects by contemplating the consisted materials by them. Afterwards, they used the litter for a collective art making sculpture. Their creations showed a sea monster with two heads and the body of an old found bicycle frame.

The activity allowed the students to observe and experience the consequences of marine pollution by physically visiting the polluted location. Phenomenon-based learning values observational and haptic perceptions as concrete learning experiences and promotes the phenomenon's awareness (Karin et al., 2018).

8.5 On Sensorial Experiences at the Beach: Thinking with Haraway to Explore an Unfolding Sensory Knowing of Marine STEAM by Catherine Francis (2020)

The activity started with the participation of the school class at the Great British Beach Cleaning Event by the Marine Conservation Society. The students visited the beach and they collected litter and left-behind objects. When they returned to the school class, they placed all the collected litter on a big table and they were evaluating the litter in order to create a collective Mandala. As Catherine Francis mentions that from the faces of the students during the first moment of touching and exploring the litter, one could say that they very much disliked it. However, Francis noticed a shift in their attitude as the exploration was processing. After a while, they were holding the litter on their palms and making gestures with confidence. Some of the them even closed the litter up to their faces with curiosity. During the exploration moments Francis encouraged them to used their bare hands to touch them as Francis intended "to give the litter the chance to touch the children as they touched it, to enrich the physical contact zone". This sensorial experience helped the students to build an understanding about the textures and the properties of the litter and debris. During the making of the Mandala processing the students were feeling more comfortable with *being with* and making with the litter. By the end of the Mandala's creation, the kids hoped that they could keep the Mandala in the class, so to show it to their friends and families. The way of approaching the litter was shifted totally and they even felt proud of making an artwork of litter leftovers and left-behind objects. "The destination of the litter was now important to them; it mattered" (Francis, 2020). As an activity, it supported the students "to become more entangled" and open-up to see in the litter the potential of becoming an artwork, giving the moment to the untold stories. Further, as C. Francis wrote "The children's comments and enquiries about the qualities, origins and final destination of the litter/art as they played with it and created their mandala were critical in my recognition of a renewed and embellished praxis of care and response" referring to Haraway's response-ability. Under this scenario, the students bodily engaged with the other, the non-human and the human, as they were asking about the motivations of people to throw their litter on the location and consequently pollute and damage the beach (Catherine Francis, 2020).

8.6 Is This a Pond? Developing an ecological view through STEAM Pedagogies in Science Education by Laura Colucci-Gray (2020)

In activity the students were questioning how a body of water in a park could be called. Is This a Pond? Could this be pond? And what really does make it a pond? The students started the activity by walking and observing the pond through different perspectives. They followed an observational prompt “in the manner of Buber (1920)” with the aim to “*get a feel for the system* in their own bodies.” The prompt invited the students to observe this body of water through the eyes/perspective of different non-human bodies. A sketching exercise followed and the students were asked to sketch out the location by choosing what to include in their sketches as well as the used techniques and the colours. During this exercise they were observing and sketching the *boundaries* and they approached “drawing as a text”.

The aim of the activity was to “stimulate awareness of different vantage points, in order to clear one’s perception of preconceived embodied memories and to stimulate new connections.” This educational practice allowed the participants to focus and to become aware of their own perception abilities. In the project it was highlighted how the use of language often mediates our perceptions. Laura Colluci-Grey in this chapter, referred to the term “diffraction” as Barad (2007) and Haraway (2016) used it: “to express the inherent entanglement of memories, affect and visual/sensorial material involved in any act of observation.” The activity stressed the narrative of *the inherent entanglement of memories*, by questioning with the students if this is pond *or maybe not?* As the situation let the student to wonder what is this water body and, in the process, to draw the *boundaries* of the water body, they understood the notion of a boundary as a situation that “is always related on *how* we perceive the other” (Laura Colluci-Gray, 2020).

8.7 To tell the story of one 1m2: A collaborative practice with Lotte Gulpers

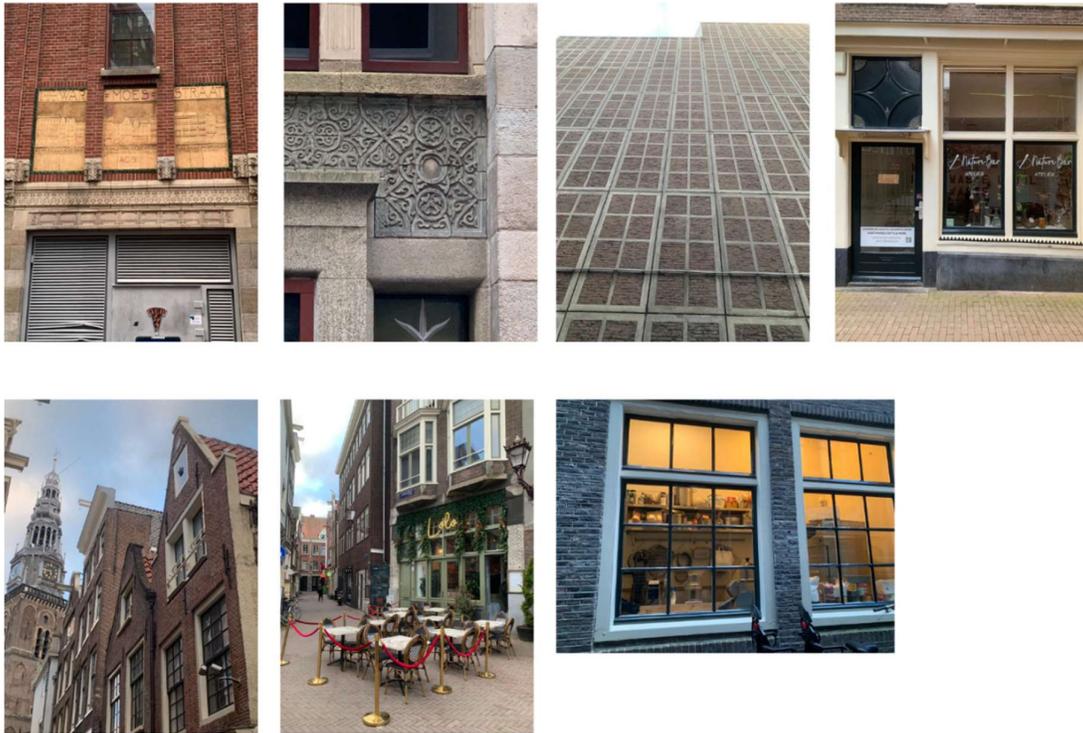


Figure 4 The neighbourhood as is captured by Lotte Gulpers

The “To tell the story of one 1m2” invitation was a part of a day long program at the W139 gallery and curated by the Master Education in Arts [MEiA] 2021-2023 class. Lotte Gulpers and I came up with the idea of the “To tell the story of one 1m2” prompt, in which we invited the participants to go for a walk outside of the gallery and to observe the neighbourhood by constantly perceiving their surroundings through their senses. When they found a 1m2 that speaks to them they should note down everything that can be observed there, collect and sketch or take an imprint of something that really intrigues them. After 20 minutes they had to come back to the gallery space and wrote a fictional story having as a main character the object, animal etc. that they observed or collected during the walk. The prompt is inspired by the Souvenirs from Your Neighbourhood prompt by Susanne Venbrux (2020).

As a prompt, the “To tell the story of one 1m2”, aims to invite their participants to meet the landscape of the neighborhood, by framing their observations and composing their own narratives of the non-human species and elements they found. Its process-driven nature allowed for new findings and understanding of a location that is mostly unknown to the participants. It lets them compliment and attend materials, objects etc. that in their day-to-day life are overlooked and almost forgotten. The participants could use clay to take imprints of or to collect found objects and natural pieces. As an invitation, it intends to link those observations with tangible and touchable materials by physically feeling parts of the neighborhood and questioning the tension we feel when doing *uncommon things*- that make complete sense to us, in a public space.

9. Outline of my Research Strategy

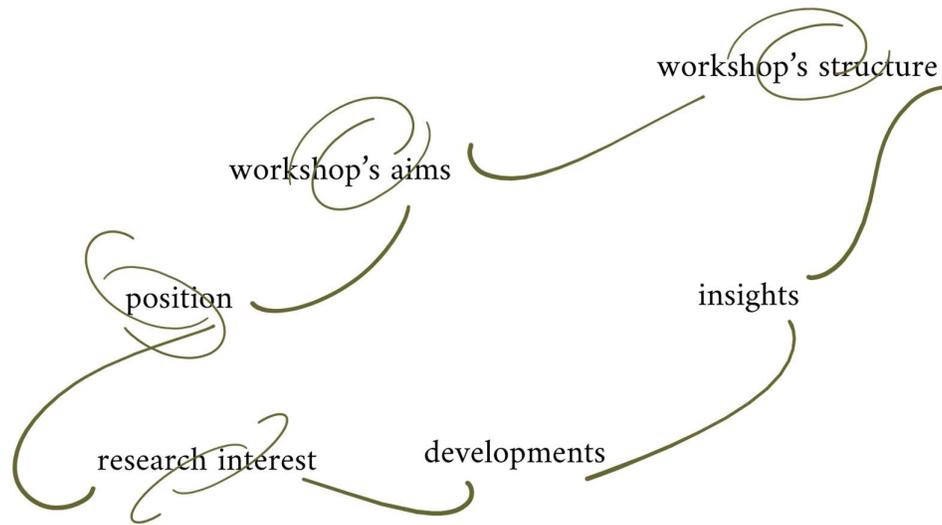


Figure 5 Research strategy: Mind map

So far, my research strategy could be described as a wave which every time it completes a loop it takes in new elements, leaves behind some old and maintains others. It is a non-consecutive process with reconfiguration on the circled steps. The insights and developments are based on participants' feedback and responses, documentation and my observations during the workshops, so they are considered as the *stable* factors.

Starting by specifying my current research interest(s) I shape my position to the current project. As my position is not the same in every project, I outline my role by considering the needs of my audience, the needs of this research project and the structure of the working space. Practicing my position for every project, for me, means to take care of different aspects and carry different responsibilities, which are not only related to the research project itself, but also to the actions that need to be done in order for this research to be realised. Sketching the overview of my position helps to translate my research interest into an educational practice. The fundamental aims' pillars of every workshop are composed by my current research interest, my artistic practices and the framework of the current project. At this stage there is some configuration of my position and the aims of the workshop, however, they have not been completely defined as the workshop's structure and format could be influenced in the future. While the workshop's structure is being developed, there are always parameters that I could not project-ahead before, so there are many back-and-forths within the previous factors and many decisions could or should be reconsidered. At this phase, the linear situation I described before is becoming much more tangled and not easy to track. The workshop's outline is sometimes formed mostly by my research interests, while other times, other factors are more influential in its design (for example the context of my educational practices). During this phase, I also let my instinct, previous experiences and other educators' experiences to help me take some decisions when it comes to the content, working materials, and facilitating practices. During and after I have facilitated the workshop, I document and unpack the session's insights that are a combination of responses,

feedback from my participants and analysis of my personal observations. Since the format of the workshops is based on personal engagements and on their improvisations, I do not categorise their responses nor do I look for patterns, but I search for distinctive characteristics on their responses. I review which of the materials/elements interest each participant more, which of the materials/elements excited the participants overall the most and the characteristics of those materials, are there any materials/elements that were difficult to handle during the making process etc. If they are working with other materials such as paper, pencil, crayons I am observing during the making process how they handle them, if the materials are efficient or they would need a bigger or smaller range. After the workshop I look on the pencils and crayons tips for the ones that were used the most. In the making process I also make notes about the ways that they used the materials and in which level the activity keeps them engaged. Afterwards, I review my notes from the sharing and feedback moments and I make my final conclusions and suggestions for further developments. The composition of their feedback and the developed areas slightly change my research interest and the research questions which I carry with me in the next workshop.

The analysis, reflection and conclusion have been shaped from my observations, memories, observations and feedback of the participants and informed outsiders, written notes, audio recordings, interviews and ongoing conversations with participants. The structure of the analysis, reflection and conclusions does not aim to extract quantitative data, but reach a level of confidence in what I support.

Part IV

Five case studies of

facilitating Haptic based workshops

Haptic Observations: Inviting Natural
Materials

10.1 The setting

The first time I facilitated a haptic-based workshop was at The Wijkz Den Haag. The Wijkz, apart from a variety of neighbourhood-based programmes, organises after school activities for children. (“Onze missie”, 2022) The programmes are open for kids from five to fourteen years old and all the students were sharing the same learning space. I started my volunteering at the organisation as an assistant facilitator and after some time I got the chance to coordinate and facilitate the Inviting Materials workshop in which 9 kids, seven to fourteen years old were participating and the total duration of the workshop was approximately 1 hour. The materials for the workshop were provided by the Wijkz Den Haag organisation. The natural elements have been collected and dried by me.

10.2 Unpacking the motivations and intentions of the Inviting Natural Materials workshop

In the Inviting Natural Materials workshop the participants were following haptic-based learning processes which allowed them to meet, explore and share stories by *active* touching specific natural pieces. By introducing to them the natural elements, and inviting them to grasp and touch them freely I aimed to form a learning environment in which they approached the activity not only as a learning, but also as an explorative situation. This educational activity is characterized by its open-ended process; however, it still has a structure in the form of an actions’ protocol which guide the participants to touch and grasp the elements. Further, this protocol divided the workshop in three main phases. The workshop started with a very composed phase, which allowed the participants to grasp the elements and simultaneously introduced them to their morphological, structural and textural characteristics. Besides of the educational purposes, it brought playfulness and created an environment in which they felt open to share stories, comment while they explored them and organically step into the creating phase.

By working with clay and using natural elements as tools, the workshop intended to make the participants surrender in a form of making that neither has expectations nor certain outcomes. Furthermore, we are living in an era that hurts the environment every day and if we could use natural elements, such as branches, nuts and dried flowers we could not only limit the usage of harmful materials but also show the possibilities of the natural ones to our participants. I decided to include clay, an inviting material by its own, to this workshop with a view to give attention to hands and the human urge of making directly with hands, having no extra materials in between. Both the clay and the selected natural elements were full of textures and scents that are often limited in our daily life. More specifically, I was working with a group of kids that I noticed how much attached to social media they were so, I was looking for a material which gave them the potential to become attentive, by isolating the sense of touch.

The content of the second phase was related to imaginary or existing living species. The focus here was on the facilitation of process-driven artful engagements. My intention was to create a learning situation in which everybody could engage on a personal level. By framing the context and distantly guiding them in the creating process, I intended on the formation of a learning situation in which the students did not feel lost but could still

engage in a personal level. The making process was mediated by the students as it was entirely up to them to choose which fictional or real living species they want to study further, which sculpting technique they want to experiment with and how they want to work with the natural element. Further, by choosing *what* they are sculpting, they also decide what the rest of the group will learn from them during the sharing moment.

Reflecting on the content, I asked them to use one of the natural elements that they previously observed, in order to spend more time with the element and potentially gain a better understanding about its characteristics, explore its inside, experience its limitations and learn about its properties. Additionally, by using the elements in order to give appearance characteristics to their sculptures, they were making connections between other natural elements, patterns and textures and potentially experiencing how close the natural patterns and textures could be with other living species.

10.3 Phase I – Active touch

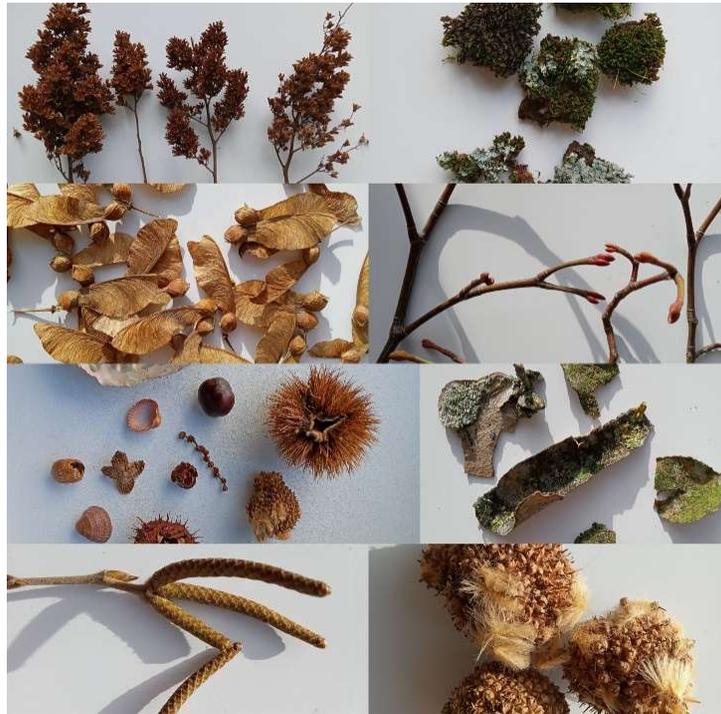


Figure 6 Composition of the natural elements

I started by introducing to them some natural pieces. I asked them to explore them by holding and touching them. Then, the kids were asked to choose two of them. The first one should be something that they have seen before and they feel familiar with and the second one should be something uncommon for them. After they had picked their materials, they had some time to explore and observe them more attentively. I noticed that the kids, while coming across some materials that they knew, got excited to share stories about where they have seen them before and what else they resemble. I observed them making a lot of gestures, like shaking or pressuring with their thumbs when they were exploring the elements that were unusual for them.

10.4 Phase II – Sculpting living species and natural elements

The making phase started when pieces of clay in the size of a fig were given to every one of them. I asked them to use the clay and the natural elements freely, for instance as tools or as ornaments. I invited them to include into their creations one of the natural element's characteristics, such as its texture, structure or abstract form. During the making phase, conversations happened. One of the kids shared how fascinating she found playing with the clay and she wanted to keep her clay piece watery, so she was constantly adding water. Another child was describing the way he used a branch in order to make lines and patterns on the clay surface. And another participant continued saying that he preferred to insert them inside the piece of clay in order to give structure and build upon the branch. Then, another participant mentioned that he used the magnolia's bud to add a tongue for his snake and a girl added that she was making imprints with the "hairy" end of the magnolia on the clay.



Figure 7 On the left, one of the participants is trying to attach a flower petal to her creation. In the middle, another student is sculpting the snake's body by using the magnolia's branch as its skeleton. On the right, the student is mixing some fluffy elements with clay in order to change the colour of the clay and to make it harder and steadier

10.5 Phase III – Story telling of the clayed creations

The last phase was a sharing and feedback moment. I started by sharing what I created and how I used the natural elements. After me, the other participants continued sharing what they have sculpted and how they experienced the activity. The youngest kids mentioned that they found the clay hard to handle. Among the stories one child shared that they created a blooming tree, by using real flower petals and a branch as a tree trunk. Another participant shared that she used the pine tree's nuts and a leaf to give outer characteristics on her self-portraits. A participant shared that the idea behind his creation, was to sculpt a dragon, but the clay was very soft, even after inserting a branch inside. So, he sculpted a snake with a fluffy tongue.



Figure 8 Close up: A blooming tree, a snail as a self-portrait and a snake

10.6 Inviting Natural Materials: Analysis and reflection

The workshop, provided the space for the participants to develop their awareness about the natural pieces by haptically meeting and experimenting with the idea of using natural pieces as sculpting tools, clay connectors and ornaments. In addition, it discusses how natural elements can foster nature-based art making, working towards a more sustainable learning environment.



Figure 9 Mapping the participants' creations

During the workshop I observed the students enthusiastically sculpting their clayed artworks while they were explaining the stories of their creations. Recalling those moments and observing the students' creations, I noticed that each person had their own influences and interests projected into their pieces, even though the starting point material-wise was similar. Furthermore, the students developed their understanding about how specific natural elements could assist in art making. I have mapped the students' creations based on Structural connectors/characteristics, Appearance characteristics and Textural characteristics. The structural connectors/characteristics refer to the natural elements that have been used as connectors of two clay pieces and/or as the skeleton of the sculptures. The appearance characteristics describe the creations when the natural elements were added to the them in order to complete the appearance. The textural characteristics describe the creations when the natural elements were used as tools in order to shape the textures of the creations. I do not try to look for patterns nor categorise their creations based on what they have created however, I try to read the documented material through the perspective of how the natural elements were applied.

The activity challenged the students to encounter the idea of finding ways of linking the natural elements with the clay. A situation which not only made them to experience the functions of the natural pieces but also to trust the process of making with pieces that have not been used for art making before. Zooming into the links the students created between the natural pieces and the clay I learned that haptic-based education, using nature as a way of learning about and making with natural pieces, brings playfulness, inspiration and innovation in the learning

environment. Such haptic practices grow our awareness of the materiality of the touchable objects and translate non-tangible observations and abstract concepts into real touch-able connections among textures and materials.

With this workshop I was interested in exploring which of the natural elements were more likely to be haptically approached and used by the participants. During the workshop, it was observed that the students were enthusiastic



Figure 10 Being with and making with the natural materials

to touch, squeeze and crunch the natural elements and were more eager to learn what they touched when a natural element was unknown to them. The students had the tendency to prefer exploring the natural elements, which had sharp edges such as the chestnuts and the gumballs' shells. In contrast, for the making process they used elements with fluffy, silky qualities (Figure 10). The ones that had a smooth surface such as the chestnut itself, were not fascinating and they have not been used in the making process.

The impact of clay in the Haptics was another area studied in this workshop. Based on their responses and my conversations with the students, clay brought playfulness and excitement from the moment that it was introduced to them. I noticed that the students stepped into the making phase eager to start making with the clay. For this workshop I used air dry clay, however I suggest that natural clay is better for haptic activities. The main reason is that it could be handled more easily because of its softness.

The student responses, of this first workshop of my trajectory of *becoming* a haptic based educator, empowered my intuition as a nature-based artist and inspired the content of the upcoming workshops. Furthermore, after this workshop I became more interested in experimenting with natural clay and to explore if this earthy material strengthens our awareness of and connection with the natural world.

Haptic Observations: Crafting Your
Neighbourhood

11.1 The setting

During the Move Your Neighbourhood project, the second event of my research was hosted. The overall project was directed by the Stichting Move organisation. The organisation collaborates with schools in the Eindhoven region and facilitates workshops and activities with the aim of contributing in the creation of a more culturally and socially inclusive society (“Missie en Impact”, 2023). The MOVE together with the schools run a 6 weeks project and carry out ideas with the aim to improve their students’ neighbourhoods. As part of my volunteer work for the Move Your Neighbourhood project I coordinated and co-facilitated the Crafting your Neighbourhood workshop, in which 22 students of the Tariq Ibnoe Ziyad Islamic school participated. The Crafting your Neighbourhood workshop was the first activity of the Move your Neighbourhood project and its focus was to let the students explore what already exists in their neighbourhood with the potential to identify what is missing as well. After that, the participants had collective brainstorming sessions on how to apply the available budget to improve their neighbourhood. The workshop materials were provided partly by the school and partly by me and the aforementioned available budget was managed by the Stichting Move organisation.

11.2 Unpacking the motivations and intentions of the Crafting your Neighbourhood workshop



Figure 11 Walking together: Going to the mosaic

The Crafting your Neighbourhood workshop is a location-based educational project, in which the students explored and re-met their neighbourhood by walking, observing, sketching and collaging. During the workshop there are individual and collective moments which intended to let the students discover parts of their neighbourhood through personal interests and by making framed observations. By including collective moments, the students listened to their classmates' interests and explored aspects that they had not observed themselves yet.

The workshop had the form of a guided walk. We visited a building and a mosaic wall. Both of the places were chosen because of the variety of patterns and textures on their surfaces and characteristics that made the observational process playful and engaging while also hosted indirect touch experiences. Unpacking this first phase, I followed a guidance way of facilitation that could be described as *binoculars*. By first asking them to see the building as a whole, my intention was to not rush the process but to give them the time to view the building roundly. I continued by asking them to make more specific observations, at this point my role was to guide them on the observational process however, I did not suggest what to observe. At their own pace, they spotted a specific area and they analysed it in a morphological and textural level. By asking them to choose only one area I aimed to make this phase less chaotic and to investigate if by letting them approach the characteristics of the building through observation, they were able to develop a textural understanding around them. Afterwards they took notes and translated their observations into sketches.

The next phase was built up by the idea of sharing stories through art making. The students learned about the process of making a mosaic by explaining to them the basic steps and the needed materials. Afterwards, they created their personal narrative of the mosaic. The storytelling could have the form of a sketch, a text or notes. The aim of the activity was to create the circumstances for them, on the one hand to learn about mosaics as an art form of making, and on the other hand to compose their own version of the mosaic's narrative. By giving to every student their own kit the activity aimed to build a context in which they feel comfortable to let their thoughts and observations run freely. They could write, hide, scratch, mark, keep and share their thoughts and creations.

At the end, I invited the participants to create a collage with their findings and observations. The purpose of this was to give materialisation to the idea of collectivity and how individuality is positioned within it. The collage supported the ground for the students to collaborate and reach a consensus on what they need as a group for their neighbourhood.

11.3 Phase I – Framed observations



Figure 12 A moment during the sketching phase

I started by inviting the students to first observe the overall building's structures, patterns and shapes. I continued by asking them to start making more and more framed observations by focusing on one point of the building. For example, to look at its windows' characteristics, to think about the differences in the textures and which materials and techniques have contributed in the creation of those textures. I noticed that the students were eager to share what they were observing right after they found a new characteristic. After a collective brainstorming moment, they selected a specific frame that they are interested in documenting by making some quick sketches on their kits.



Figure 13 A moment during our small tutorials

Some of the participants, were hesitating to start sketching, and kept saying that they do not know how to draw or they believed that they are not good at it. When these moments happen, I use my own paper block and give small group tutorials trying to simplify some drawing techniques to encourage them to explore their own way and style of sketching.

11.4 Phase II – The story of the mosaic



Figure 14 A sharing moment between two students

When we visited the mosaic wall, we first gathered in front of the artwork and I started a conversation about what is a mosaic, where can we find art pieces like this and which is the overall process of making a mosaic. The introduction had the form of a conversation and the students directed/oriented the discussion by commenting and asking questions. After some time, I invited them to write and/or illustrate their own narrative of the mosaic. During this phase, a lot of in between conversations happened, discussing with me and with each other their thoughts on societal issues and how they are related to societal structures of the past.

11.5 Phase III – Collective collage

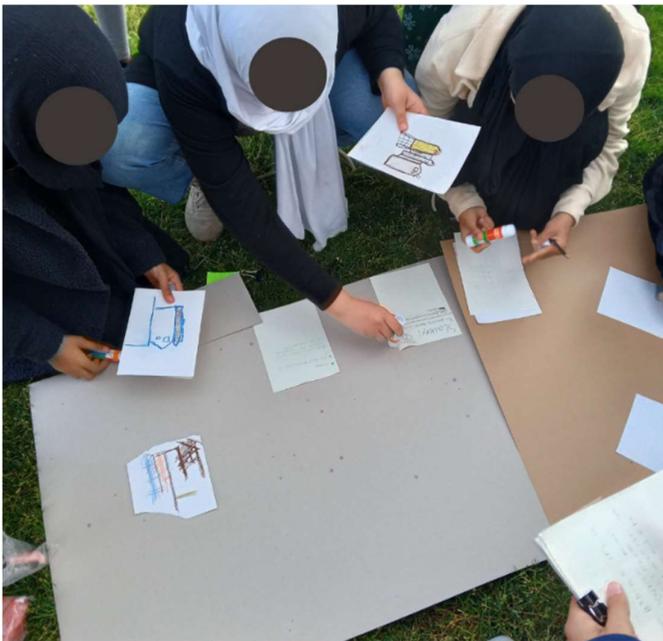


Figure 15 In the making process of the collective collage

The last phase had the form of a collective collage that we started at the park close to our previous stop. During the collage making, the students found common patterns and key words on their notes and mapped their thoughts and observations.

11.6 Crafting your Neighbourhood: Analysis and reflection

The Crafting your Neighbourhood workshop was the first attempt of this study in hosting haptic learning experiences through *indirect* touch. The *binocular* observation way, that has been explained earlier, guided the participants to make framed observations in their attempt to understand and capture the building's textures and patterns without using the sense of touch.

From the conversations with the participants, I realised that the variety of soft and hard writing pencils and crayons helped them to capture the textures, colours and shapes of the building. They found that working with crayons is easier to describe textures, and working with pencils is more comfortable to make the pre-sketch and create more defined lines.



Figure 16 Photos of the collective collage

The Crafting your Neighbourhood workshop by being an outdoor and site-specific project, allowed the students to observe and pay their attention to parts of their neighbourhood that did not have the chance to meet before or they were overlooked. Their attention was not only turned to what is missing from the neighbourhood but to what is already around them as well, a situation that allowed them to appreciate the place in which they live. This awareness was developed progressively. From the level of personal awareness that they had developed before the workshop, to the individual observations and findings until the collective collage, which contributed to the collective awareness.

One of the pillars of The Sea Monsters Conquer the Beaches project (Karin et al., 2018), as it is mentioned was “to give participating individuals ownership of the problem and knowledge of how to rectify this situation”. Providing the participants with the experience of choices/decisions and their consequences/fruits was one of the Move project’s aims. The Sea Monsters Conquer the Beaches’ way of fostering challenges and letting the learners realise and experience a phenomenon, contributed in the manner that the Crafting your Neighbourhood project approached the students. This was based on the pillar that participants individually and collectively are grounded in their neighbourhood’s landscape and thus gain an understanding of their responsibility, as a collective, to improve their neighbourhood.



Figure 17 Walking together: Going back to school

Haptic Observations: Perceivable Observations

12.1 The setting



Figure 18 Classroom's view

For the next two workshops I collaborated with the International School RISE in Eindhoven and the Van Abbemuseum. The first workshops with the title Perceivable Observations took place at the Van Abbemuseum and the second workshop with the title Molding Natural Forms (MoNaFo) took place at the school's class. In both workshops 20 ten to twelve-year-old students have participated and the total duration of each workshop was one hour and 30 minutes. All the materials' expenses and travel costs were funded by the Social Heroes Technical University Eindhoven's (TU/e) team (StEHVen).

12.2 Unpacking the motivations and intentions of the Perceivable Observations workshop

The Perceivable Observations workshop has attempted to facilitate haptic-based learning experiences in a museum setting. The students explored selected artworks by studying their materials, as well as their structural forms and functional characteristics through indirect haptic impressions. In order to host indirect touch perceptions, a kit with pencils and textured paper along with prompts have been introduced to the participants. The prompts/invitations had the form of open-ended collective and individual questions, which formed collective and individual ways of engagement with the content.

The prompts asked for the students to imagine themselves as the makers of the artworks. Such a situation aimed to let them get the feeling of perceiving the artworks by standing on different viewpoints. It shifted their role from museum visitors to makers with the intention to host moments of indirect haptic perceptions.

The artworks were chosen due to their variety of patterns, materials, techniques and textures on their surfaces. Due to the combined nature of some phases, the workshop followed a protocol of actions. The educational practices aimed to bridge the gap between the artworks – as untouched objects, and the stories that the artworks tell us in an individual and collective level.



Figure 19 Phase I: Studied installation (Joep Jacobs, “Overview Dwarsverbanden”)

12.3 Phase I – Exploring the materials

When we entered the exhibition space the students got excited to learn about the installation, they could not stop asking questions, laughing and reading the texts. I first started by asking them to go closer and walk around the artwork and look carefully at the existing materials. I continued by inviting them to observe different textures on its surface and to think about the connections of textures and materials. But also, to activate their smell by searching for the *hidden* materials that could be recognized by their scents. I noticed that during the first moments they hesitated to go closer to the installation, but after a while they were making more risky gestures. In the in between moments a student said that they just smelled something like nail polish but could not find it, I suggested that maybe it was the plastic colour that they were smelling, then another child added that we could also smell the mould in the wooden parts, and the conversation continued for quite some time. The students used their kits to take some notes.

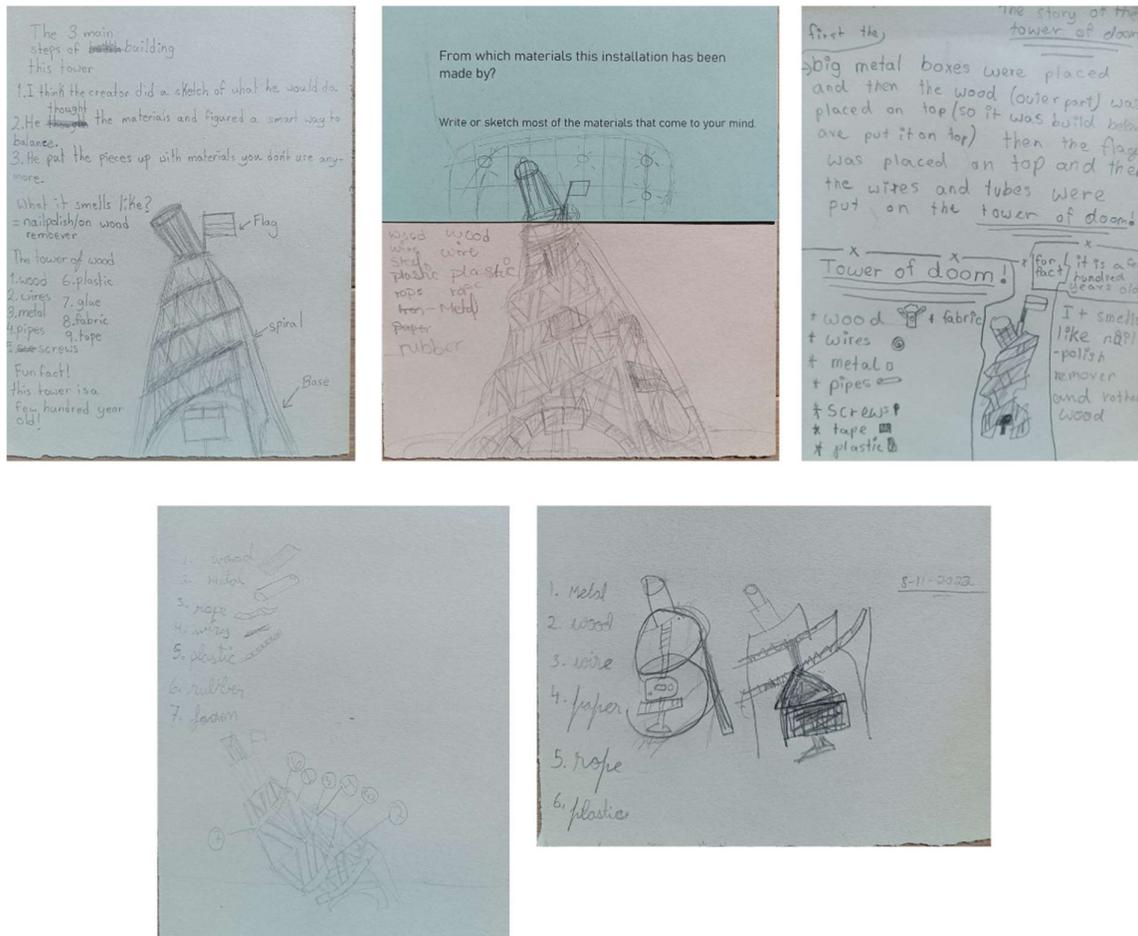


Figure 20 Phase I and Phase II: Students' responses

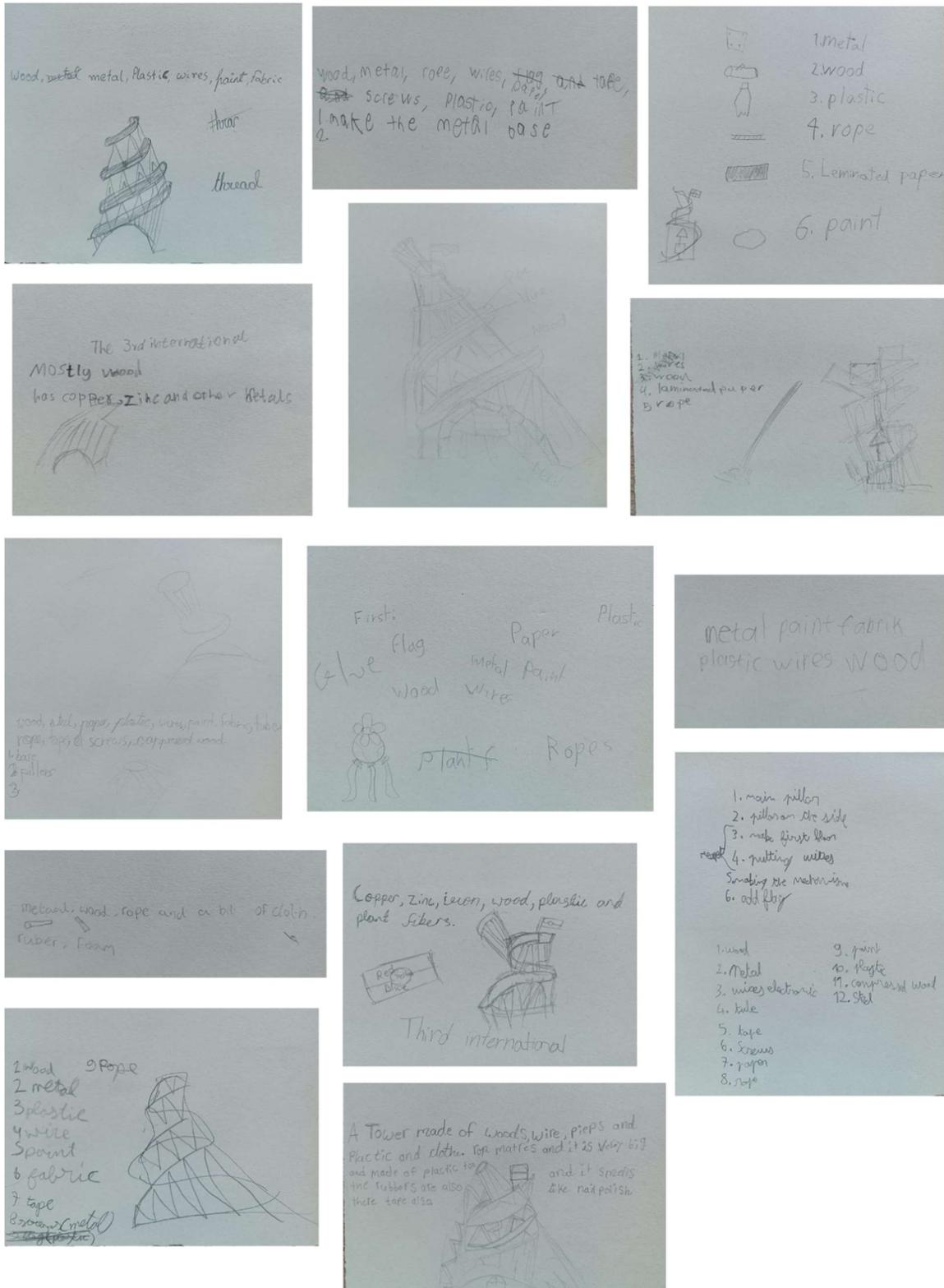


Figure 21 Phase I, exploring the materials: Students' responses

12.4 Phase II – Imagining the synthesizing stages

I started by opening a conversation regarding the spiral geometry that the installation is characterised by and I asked them to think about the practical aspects and the synthesizing stage of the installation. After having a conversation, I invited them to think as the maker of the installation and imagine how it has been created. In doing so, they were making quick sketches of the imaginary building steps. During this time, I was giving some drawing tutorials in small group settings. I noticed, at the beginning, many of the students were feeling unmotivated to start drawing and, as they said later, they felt that hesitation because they thought that they could not draw. With the small group tutorials, I was showing them simple drawing techniques that they could use in order to give depth or shadow. The tutorial lasted until they felt comfortable enough to grab a pencil and start sketching.

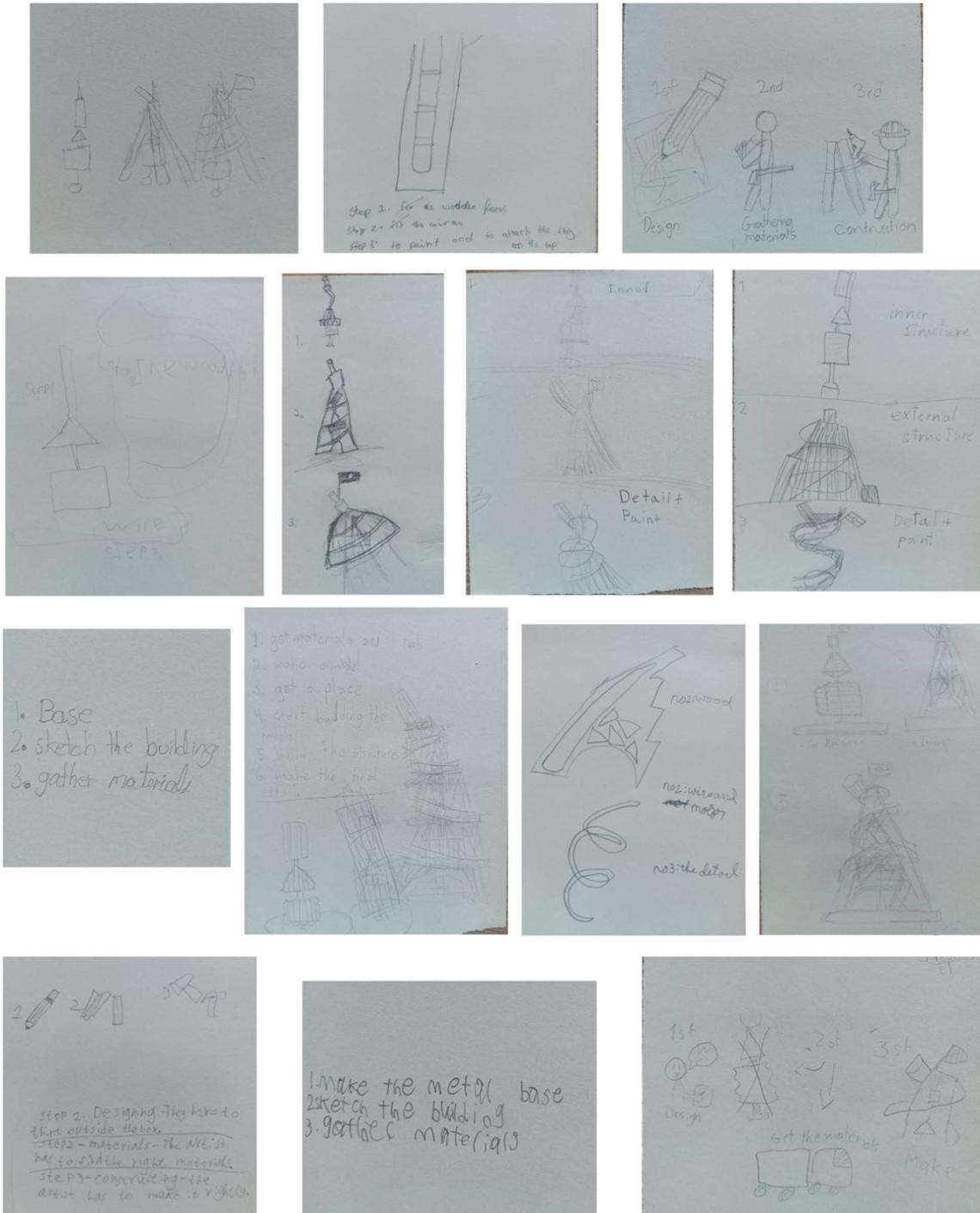


Figure 22 Phase II, imagining the synthesizing stages: Students' responses

12.5 Phase III – Exploring the two aspects of “The Captive: Here’s a Heart for Every Fate” by Mercedes Azpilicueta



Figure 23 “The Captive: Here’s a Heart for Every Fate” by Mercedes Azpilicueta: The two aspects of the tapestry, 2019

I introduced them to the activity by explaining what is a tapestry. I continued by inviting them to observe and choose one of the figures/objects/animals that interests them the most. I invited them to observe the figures carefully, by approaching them closer and by searching for textural qualities and structural forms, I continued my invitation by talking about the softness and itchiness of some parts of the tapestry, but also about the distinctive stitches and pigments that can be observed. During the exploration phase there were continuous conversations, both in smaller and bigger groups. When they had all chosen the figure that they wanted to study closer, I invited them to use the one side of a wooden square as their canvas and to sketch their figure/object/animal. The prompt invited them to perceive the figure first as a form, and then to start looking for more distinctive characteristics. Afterwards, I asked them to find where their figure/object/animal is located on the other side of the tapestry and to sketch it on the other side of the wooden square. They worked with pencils of different softness and hardness, in order to create relations between the different textures and colours.

12.6 Perceivable Observations: Analysis and reflection

In the process of reflecting on the workshop, Wilma, one of the Van Abbemuseum's volunteers, contributed with her observations during the workshop and her written feedback points.

Wilma's feedback point regarding the workshop:

"The exercises helped the students to engage with the artworks. No-one was bored or inattentive. You kept their attention, made them active, helped them observe and relate with the works and you fed their enthusiasm: not easy with such a big group. The students discovered a lot of new things (e.g., a rabbit in the wallpaper, different colours in the tapestry) and voiced their discoveries."



Figure 24 Participants' perceptions of the tapestry on wooden squares (image 1): On the left side of surfaces (front side of the wooden square) is the front side of the tapestry and on the right side (back side of the wooden square) is the back side of the tapestry

Through the Perceivable Observations I explored further the idea of indirect touch as a facilitating way of hosting haptic-based activities in a space that touch was not possible. In doing so, the Perceivable Observations created the context for the students to experience the museum as a *making* and learning space.



Figure 25 Participants' perceptions of the tapestry on wooden squares (image 2): On the left side of surfaces (front side of the wooden square) is the front side of the tapestry and on the right side (back side of the wooden square) is the back side of the tapestry

We shifted the aspect of the exhibition room from a space where we mostly listen and read about the art pieces, to a space that we also make. Through that shift and by following a protocol of actions, the workshop invited the students to connect with the art pieces haptically, even if they did not physically touch the learning objects. The protocol of actions gave emphasis on the materiality and the features of the artworks, letting them to slowly make close and framed observations, which helped them to develop their understandings about the pieces. The Phase I invited the students to search the installation's materials and to not view the artwork as a whole. This gesture, activated their senses allowing them to receive information that revealed the materiality of the art piece. The Phase II's learning focus was not to accurately sketch the stages of the installation but rather to challenge their curiosity and turn their attention to the process of making. As a gesture, it let them respond to the unfamiliarity they hold with playfulness.

Unpacking the material of the tapestry and transferring their characteristics on the wooden surface was the invitation of the Phase III. By observing the students during this Phase and looking at their creations it appeared quite clear for them that the tapestry is composed by a variety of textures and stiches and its front side is reflected on the other side. Further on that, looking at their creations, they also captured the facial expressions and emotions of the figures without trying to make their figures look delicate. As an insight, it highlights the participants' attitude towards the practice, which turned their attention on the *here* and *now* instead of the end-completed result. As educational practice, it allowed the students to make this realisation by observing a specific frame and experience the materiality of the pencils on the wooden surface. As the activity was progressing, they became more aware of how the different qualities of pencils perform on the wooden surface, because of the open-ended nature of the invitation, they approached the art piece in a very personal manner and even if they were observing the same figure, the attention was focused on different aspects of it.



Figure 26 Participants' sketches of the tapestry's figures

Haptic Observations: Molding Natural
Forms (MoNaFo)

13.1 Unpacking the motivations and intentions of the Molding Natural Forms workshop

The Molding Natural Forms workshop has a strong connection with the Inviting Materials workshop I facilitated previously. In both of the workshops the core idea is the same, as the participants first haptically explore the natural elements and afterwards, inspired by their morphological and textural characteristics, develop artful clayed engagements. With the MoNaFo I aimed to design a workshop that has stronger correlations with the nature's functions and phases: from growth to decay.

During the Phase II, the students were asked to imagine fictional or existing life moments of the natural elements they explored before. As a phase it has a specific structure however, the interpretations could be unlimited as their personal interests led this process. By inviting them to imagine, rather than to recall, I aimed to create a learning situation which its focus was not to sculpt the natural forms accurately. I intended to shape an atmosphere in which they could surrender to the process of making and let their hands experiment with the clay.

The Phase III, aims to guide the students in exploring similarities between other natural elements and/or living species. The participants are searching in the natural world for other species that have common characteristics with the natural elements that they first haptically explored. As Jan van Boeckel mentioned in the subchapter “The Ability to Inhabit Uncertainty”, the Metamorphoses of Organic Forms workshop had “several instances where participants were encouraged to dwell, at least for some moments, in the doubt about how to go on. Again and again, they are faced with new challenges” (Jan van Boeckel, 2020). This largely inspired both of the phases II and III of the MoNaFo workshop, which aimed to foster challenges that reveal personal choices by letting the participants experience uncertainty and moments of unfamiliarity and wondering. During those moments the students mediate their own learning, studying aspects of the elements that are interesting to them personally and share their experiences with each other during the feedback moment.

13.2 Phase I – Active touch



Figure 27 A student closely observing a skinless leaf

I started by placing in every group table some of the selected natural elements and I invited the participants to first explore them by making gestures with their hands. While they were exploring the materials, I noticed how excited they got to touch every one of them but also to share stories related to the elements, commenting and laughing with their classmates. The students were holding the natural pieces with care and attention and were doing small gestures while they were touching them.

13.3 Phase II – Unfold, bloom, decay or deteriorate



Figure 28 Phase II: Early stages of sculpting

As the workshop progressed, I asked them to choose the natural element that they are interested in experimenting with the most. For this phase they should imagine and sculpt, the next or the previous stage of the element. The creation could be totally fictional or could be inspired by one of the element's realistic stages.



Figure 29 Phase II: Moments of sculpting

13.4 Phase III – Combining characteristics



Figure 30 Table's view

In the last phase I invited them to think about another natural element or animal from the micro or macro world (A), which potentially has the same texture as the previously chosen material (B). They were asked to shape in one body the A's form and structure and mold the B' texture.



Figure 31 Phase III: Close-up: How participants sculpt and use the natural elements

After having conversations with the participants, I noticed that sculpting the stories of their non-human creations was very common. The protagonists of their stories were the actual natural elements that they first explored in Phase I, the clayed natural elements from the Phase II and the non-human species of the Phase III. The stories have been materialized through different manners and plots. Some students' stories were visual. In those cases, they attached the natural element on the clayed living species. In other cases, they evolved the clayed natural forms into the living species, as part of their stories, creating hybrid non-human species. Some other participants, kept all the three pieces and connected them through a common story.

13.5 Molding Natural Forms (MoNaFo): Analysis and reflection

In the heart of Inviting Natural Materials and the MoNaFo workshops are the natural elements, which are the studied objects, the making tools and the invitations' source of inspiration. The Inviting Natural Materials workshop gave me the first insights about which qualities of natural elements made the participants curious to haptically explore and with which of the elements they were engaging during the making process. The MoNaFo workshop adds more insights on this matter as well as it explores how a haptic educational practice can foster understandings about how nature functions by discovering the natural elements' life phases.

The invitations/prompts have been built upon the natural elements, an aspect that gave the ground and turned their attention to the elements themselves. The students were holding the natural elements, with care, which in our everyday life are almost unnoticed, and became important for them. Such a shift in their attention influences their perceptions. As the elements were the studying material and the protagonist of their stories.



Figure 32 Students' creations along with their notes

Another aspect of the workshop was the tension between the clay and their fingers. Exploring, making and *being* with the clay was impactful for the participants' relationship with the material and in increasing their awareness and understanding of the materiality of clay. They also experienced their finger gestures and the impact of those gestures on the clay.

In the book *The Thinking Hand Existential and Embodied Wisdom in Architecture* (2009), Juhani Pallasmaa referred to Tapio Wirkkala's explanation of his relationship with materials:

"Making things with my hands means a lot to me. I could even say that when I sculpt or model nature's materials it has an almost therapeutic effect. They inspire me and lead me on to new

experiments. They transport me into another world. A world in which, if eyesight fails, my fingertips see the movement and the continues emergence of geometrical forms.”

Tapio Wirkkala’s words resonate with me as an artist who lets the natural elements whisper their stories. It is the elements that *guide* my fingers as I sculpt their narratives. In this educational practice, the combination of the unfamiliarity with the natural elements, making with clay- an intuitive material and the workshop touching on the biological aspect of natural elements, gave the ground to the participants to create their own narratives of the natural elements and to develop their relationship with the non-human.



Figure 33 Moments during the making process: On the first two photos, the students are using the natural elements as stamps, to give textural characteristics to their creations. On the last two photos, the students are using their fingers to sculpt the clay

By recalling their stories and reading the students’ notes, I have noticed a difference in their approach during Phase I, when they first started meeting the natural elements. The sense of uncertainty with the activity was noticeable. As they were exploring, making and *being* with the elements, their relationship with the materials flourished. Looking closer at the Phases of the workshop, during the Phase II they gained comprehension of the qualities of the elements and understanding of their morphological and textural characteristics, a situation in which the learner experiences their realizations. Further, the Phase III, opened the invitation for exploration to the natural world, inviting them to witness by observing closer and experiencing physically, how many similarities and correlations exist among the living species in the macro and micro world.



Figure 34 A composition of the participants' living species and natural elements along with their notes

On this workshop, apart from the natural elements and the clay, the students could use a variety of wooden tools, sponges and silicone spatulas. Recalling our conversations and based on their notes (Figure 34) it can be noticed that it was very probable to experiment on the clay with their hands and the provided tools. While the usage of tools can help with gaining experience on working with clay, it also reduces the amount of time that someone spends touching the natural elements, and could have an opposite effect on the extensive exploration of the natural elements. This observation suggested my next workshops on limiting the tools in my attempt to foster skin-to-clay art making processes.



Figure 35 Moments during the making progress: Participants are giving structures and textures with the wooden tools and the spatula

The MoNaFo helped me also to understand the documentation strategy that I need to adopt for process-based educational practices. Documenting mostly the gestures and hand movements of my participants could showcase their engagements and approaches during the workshops much better. Further on that, asking the participants to photograph the creations of their neighbors and having a photographer during the activity, allowed me to document their process through their viewpoints and to be present at the room as a facilitator.

Haptic Observations: The Land our Hands

Remember

(LaHaRe)

14.1 The setting



Figure 36 26 of March: A moment during the clay workshop

The Land Our Hands Remember workshop has been facilitated two times until now. The first facilitation happened on the 26 of March 2023 and the second on the 21 of May 2023. The Land Our Hands Remember workshops are a part of bigger project that the Van Abbemuseum hosts for the newcomers groups. The workshop on the 26 of March was in collaboration with the Van Abbemuseum and the Stichting De Huiskamer organization. An organization which supports refugees by providing to them a variety of courses and activities for personal and professional development. (“Missie”, 2023) Their goal is to help refugees feel societally secured and included. In the workshop around 15 people participated. The workshop on the 21 of May was in collaboration with the Van Abbemuseum and the Stichting Ik Wil. The foundation’s mission is on “building an inclusive and supporting society” by organizing neighbourhood-based activities, in which the participants explore their interests and work further on them (“Onze Missie”, 2020). In the second workshop around 34 people participated.



Figure 37 21 of May: A moment during the clay workshop

14.2 Unpacking the motivations and intentions of The Land Our Hands Remember workshop



Figure 38 26 of March: Composition of all the natural elements

The Land our Hands Remember is a haptic-based workshop, which its focus is on letting the participants create and share their own connections between their home-land and the land that they have around them. During the workshop the participants are introduced to the idea of active touch, something that we highly miss in our digital world, by exploring textures and structures of selected natural elements. During the clay activity the participants gave form to other natural elements that their hands remember from their homeland. The workshop's learning focus is on sharing stories, talking about our home-land and learning from each other. The clay activity turns the attention on our hands, the sense of touching clay, *being* with and creating with clay -an ancient, innate and satisfying material. The workshop gives the ground for previously potentially untold, human and non-human stories from nature and the culture of our home-land.

14.3 Phase I – Introducing the natural elements



Figure 39 21 of May: Composition of all the natural elements

In both facilitations of the Land our Hands Remember workshops, I first placed all the natural elements on a big surface and I invited them to go around and take the one that speaks to them. I let them open, uncover and touch the elements. After some time, they all hold one of the elements on their hands. Some of them were talking with each other and some others were quietly discovering the elements.

14.4 Phase II – Bringing the natural elements in the museum



Figure 40 Moments during the guided tour

The first time the workshop was facilitated I asked them to bring the kit with the natural elements attached, in the museum during the guided tour that they attended before the workshop. There were a lot of moments that the tour guide gave the time to look closer to the artworks and go around the exhibition rooms. Mostly, those were the moments that they did some gestures and explored their natural elements. Conversations organically happened and some of them shared with me that they were looking for patterns between the artworks and the natural element, some others for scents and other participants for textures. One of our participants told me that he was constantly looking for patterns around him and this prompt gives a more personal note to the tour. Also, some of them decided to focus on the artworks instead or read the artworks' texts.



Figure 41 Moments of exploring the natural pieces

14.5 Phase III – Clayed memories

The third phase found us in another room of the museum, sitting in a circular setting. I started by asking them to take some more time to haptically explore their natural elements. I suggested them to *see* the element through their hands, to navigate on the elements surface with their fingers.

After some time, I gave to them a small piece of clay in the size of a fig. In the meanwhile, I asked them to recall



Figure 42 Early gestures on the clay

other natural elements that they remember from their home-land. During the beginning of this phase I noticed how excited they were to start making with the clay. They immediately started squeezing the pieces of clay while they were thinking.



Figure 43 Close-up: How the participants hold and manipulate the clay

As the workshops were progressing, the participants were meeting their neighbors and conversations happened in smaller group settings. My role during the making phase, was mostly to walk around the room, talking with the participants and giving tutorials in small groups.



Figure 44 Moments of making and talking

14.6 Phase IV – The natural elements through the makers hands



Figure 45 26 of March: Telling the stories of the clayed creations

I first started with sharing my story of my home-land and the person next to me continued with their story. They naturally started taking turns in a counter clockwise manner. Conversations happened organically. They all got involved in some way, either by asking questions or by sharing more stories based on others' stories and so on.



Figure 46 21 of May: Collective sharing moment

14.7 The Lands our Hands Remember (LaHaRe): Analysis and reflection

Reflecting on the last event of this trajectory, it is clear for me that the Inviting Natural Materials and the MoNaFo workshops have evolved to the LaHaRe workshop. These three workshops turn the attention of the participants to the natural elements and the clay. However, the LaHaRe did not view the natural elements as its main learning object but it is mediated by the human and non-human land stories. To the analysis and reflection of the LaHaRe workshop has contributed a conversation that I had with Michelle, one of the participants of the workshop.



Figure 47 Moments: Fingers' gestures when sculpting the flower's petal

"...you don't find innovative ways if you have given us tools, the tools kind of tell you what to do as well but then, here I like the challenge that you are supposed to come up with something and it's just you your mind your hands... actually I did have to take a minute to think what is an important thing that I want to bring to this workshop and it was so cool to see also everyone else who had these whole stories behind the things, they managed to pictured them with so much imagination...it is challenging working with your hands..." - Michelle

The LaHaRe being an intuitive-driven experience, let them surrender to moments of uncertainty and allowed them to become aware of their own fingers' gestures and experience the results of their gestures on the clay. As they were experimenting with it, it guided them to consciously perform hand movements that unfold the clay piece into their creations. As a process, it turned their attention both to their fingers and the clay. As the workshop was progressing, the piece of clay was becoming their memories from their land and *now* the clay was important to them. I could see this careness on the way they were telling their stories and, on their gestures, while they were packing their clayed creations to bring them home. With the only tools being their hands and the natural elements, they developed a relationship with the materials that is grounded on their personal direct experiences of *being* and making with them.



Figure 48 Moments: Fingers' gestures on clay

“I think that was so nice to hear especially the people who took it really personally and they built amazing things and with so much detail and attention... showed me also what seems to be important to them... these non-human elements that always speak to us, and you saw it in the people’s stories, the tea pot literally influences your life it’s an object with a soul like just as much as a human, it has an impact on you it influences your life it stays in your memory...” – Michelle

The LaHaRe workshop highlighted the agency of telling *our own stories*. It gives the ground to possibly unheard stories, experiences and knowledges that *we* did not have the opportunity to share with others. It also develops the listeners’ awareness of other cultures, traditions and lives by standing from the viewpoint of the person who tells the story. In this two-pronged situation, the person who learns shifts their position to the person who mediates.

“Here you have an every-day personal account of the person from this country it is a bit more human because for example how Africa is often depicted, all of these pictures of starving people and poverty, that’s the image you get but if I come here and I tell you we have beautiful hills you already have a whole different idea of it” - Michelle

Michelle’s words highlight the urge and need of bringing more land awareness in our society. The LaHaRe cares about others’ stories and creates the situation for these stories to be heard by the person who comes from their land. As an educational practice, it allows the participants to rethink their potential preconceptions but also to develop new learnings about others’ cultures and experience how their land could be connected with others’ lands.

“The workshop has the power to remind you of these places... it reminds you more of a land or feeling a sensation, a bit deeper than manufactured materials I think that even unlocked more emotions that anything else for me.” - Michelle

The natural elements on this educational practice, held the role of the connector between their home-land and the land that is around them now and invited them to look for textural and structural similarities between natural elements of their home-land, but also gave the ground for metaphorical connections that were inspired by personal knowledge, ways of thinking and experiences (Figures 52, 54).



Figure 49 Moments: Sculpting the 7 hills

The clay gave materiality to those narratives, transforming spiritual, immaterial and metaphorical notions into something tangible and touch-able. As a medium, it allowed them ‘to access like a bit of yourself and put it in the material so the clay on the topic of culture, it was really interesting...’ as Michelle mentioned. The clay gave materiality to their narratives, transforming spiritual, immaterial and metaphorical notions into something tangible and touch-able. Further, looking at their clayed creations, the participants developed distinctive art making ways of approaching them even in the cases that they explored the same natural element. On the figures 51 and 53, I have laid out the studied natural elements in correspondence with their creations (Figures 52, 54) so to let their art-making engagements be showcased.



Figure 50 Moments: Hands’ gestures when sculpting a vase

The LaHaRe as an experience-based practice requires a receptive and caring attitude of the *here* and *now*. It requires from me, as the facilitator, to ground the participants into this reciprocal form of perceiving and *being* with the materials. After I have facilitated the workshop twice, once with 16 people and the second time with 34, I realised that in order for the workshop to let the participants ground themselves, but also let myself to facilitate and support this process, a smaller group setting is preferred. In smaller settings, the workshop flows more organically and I am able to give the required attention to the participants achieving a more participant-centered facilitation approach. Further, with the smaller group, we were transforming the learning environment into a *temporary community*, the pace of which was not under rush and everybody was able to listen to others and be listened by others. The participants were describing their stories in a more detailed manner and there was a constant flow on the conversations.



Figure 51 Moments: Hands on clay



Figure 52 LaHaRe 26 of March: The collection of the natural elements



Figure 53 LaHaRe 26 of March: Participants' clayed creations



Figure 54 LaHaRe 21 of May: The collection of the natural elements

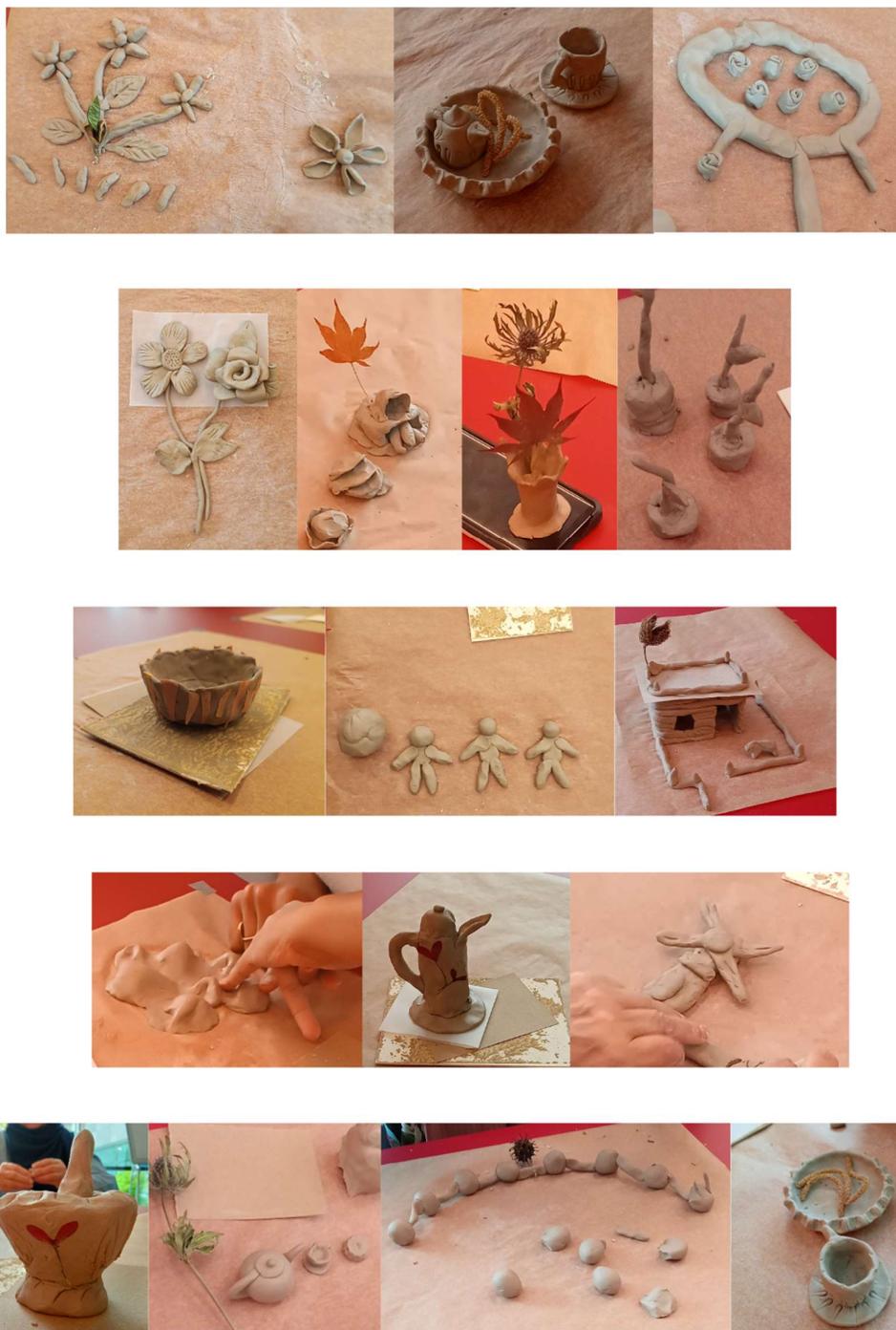


Figure 55 LaHaRe 21 of May: Participants' clayed creations

Part V

Epilogue: from Being to Becoming

Throughout this pathway of becoming a haptic-based practitioner I realised that the Haptic Observations did not share a common pattern regarding the learning objectives but rather are grounded in the notion of perceptuality and awareness of *what* is observed *here* and *now*. My practices lie on intuitive making and observing as a form of learning, a notion that is highly connected with my practices as an artist. Translating this into an educational strategy, the composition of the protocol of actions, the process-driven invitations and the earthy nature of the materials foster educational practices that care about human and non-human knowledges and respond by allowing the persons to experience moments of uncertainty, vulnerability, appreciation and awareness. As an educational practice, it does not have one and specific learning outcome either, however it tries to stimulate interests by holding moments of interactions between the learner and the learning object and it invites one to become aware about learning as a *real thing*, through tangible experiences. On these tangible experiences one could develop their abstract perceptions into touch-able creations and generate new learnings around their own perceptions.

To me, there is the same tension when I touch clay and touch the nature. A tension that is grounded on the human, intuitive urge to feel connected with the Earth. This human need molded the Haptic Observations as a practice of resilience against alienation of the nature and promotion of sustainability in education. In our digital world it is forgotten how we feel the touch-able connection of our hands with natural elements and clay. How we feel when touching the texture of them on our [soft] skin, their moistness and pollen's powder between our fingers. How we feel when the clay dries on our hands and cracks when a small gesture is performed. We have forgotten how it feels *to be* and make with these materials, something that has limited our awareness of *how* our fingers respond when touching them. Clay and natural elements are important for the Haptics in the stimulation of our inherent urge of touch that we miss in our disembodied normality.

Our hands as the keepers of our embodied knowledge[s]

Embodied knowledge(s) are the pieces of knowledge which inhabit in the body and the pieces of knowledge that have been absorbed through the body (Sodhi, 2008). An unexpected insight that emerged from the LaHaRe was how embodied memories become touch-able [again]. Furthering my curiosity to understand how does a new knowing become embodied in the field of Arts-based Haptic Education in a deeper level.

“...I think it always brings another level of respect for an object when you are allowed to be more intimate with it, if you spend enough time with If you are allowed to touch the leaves spend time with them, I think you come to understand them better you come to appreciate them a bit more at least in my experience.” - Michelle

Appendix

Clayed narratives:

A composition of Lands' memories, the clayed stories have brought back.

Disclaimer: The following stories, are presented to the best of my abilities to recall them, but they are not precise copies of the conversations.



Figure 56 The participant holds the flower. The photo was taken by another participant

Story 1

The participant created a flower that her grandmother used to always have in her garden. They were calling this flower the dog flower, because if the flower's petals are pressed, it looked like a barking dog. She continued sharing that every time she spots a flower like this, she still presses the petals together and thinks about those past moments.



Figure 57 Story 2: A moment when the participant was sculpting

Story 2

The participant created a nest full of eggs. The inspiration was taken from her father, who used to be a birdwatcher. After his retirement he still likes to go in the woods with his camera and take photos of birds. The participant shared that even if she does not like birds, [she is actually afraid of birds] she really likes those pictures her father takes.



Figure 58 Story 3: Table's view. On the front, the participant when she was sculpting the noodles



Figure 59 The noodle soup that the participant created

Story 3

The participant started by sharing that she is coming from Indonesia and she created a noodle soup as in her country people love eating noodles. She even used some clay and show us how they give shape to ramen.



Figure 60 Story 4: Trees on the mountain: Participant's creation



Figure 61 Lichen on wood: The natural element that the participant explored

Story 4

The participant shared that she is coming from Afghanistan and for her, this creation holds the meaning of the refugees' flag: Trees on the mountain. For her this natural element symbolizes the big father.



Figure 62 Story 5: Table's view. On the front the clayed boat with the gum tree's ball



Figure 63 Story 5: The gum tree's seed that the participant explored

Story 5

The participant shared that he is coming from Afghanistan. In his story the gum tree ball represents the flowers that travel from Afghanistan to the Netherlands by boat. For him those flowers are the refugees who travel with boats to other countries and leaving their homeland's war behind.

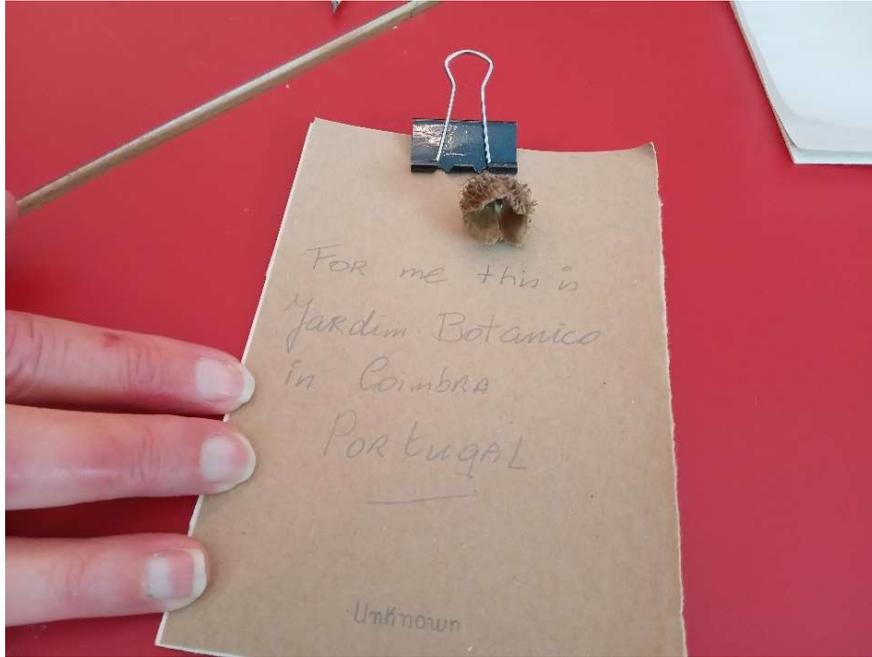


Figure 64 Story 6: Coimbra, Portugal and fagus sylvatica

Story 6

The participant shared that this fagus sylvatica nut made her feel nostalgic as she has seen this before at the Botanical gardens in Coimbra, Portugal, which feels as her second country.



Figure 65 Story 7: The participants during the making process. The photo was taken by another participant



Figure 66 Asian maple leaf

Story 7

The participant shared that this Asian maple leaf made her recall autumn season because of its orange color. She tried to recreate the form of the leaf but ended up making a hand. In the inside part of the palm, she created a spiral, which is often connected with the person's energy.

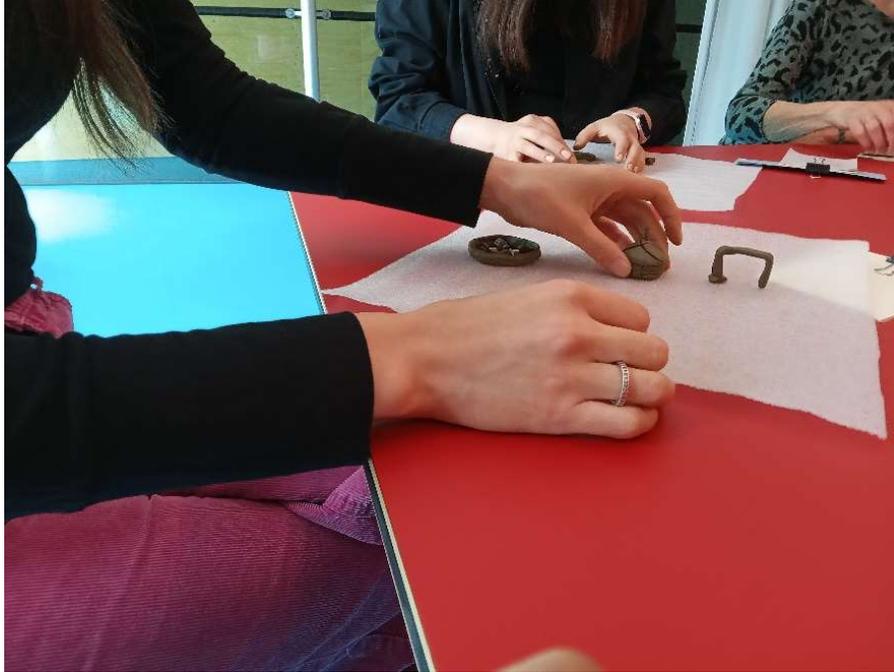


Figure 67 Story 8: The participants in the middle of the making process of the nomadic yurt. The photo was taken by another participant

Story 8

The participant shared that she comes from a nomadic population in Mongolia. She told us that she sculpted the yurt, that she was born in. Afterwards she talked about the everyday life of nomadic people. The participant said that they travel a lot with horses and ships when the seasons change. Also, she created a horse, because Mongolian people have a strong relationship with horses.



Figure 68 Story 9: The participant is sculpting the figure. The photo was taken by another participant



Figure 69 The piece of magnolia that the participant studied.

Story 9

The participant started by saying how nice the magnolia branch smelled and shared that she attached the magnolia branch to add arms on a figure that she created.

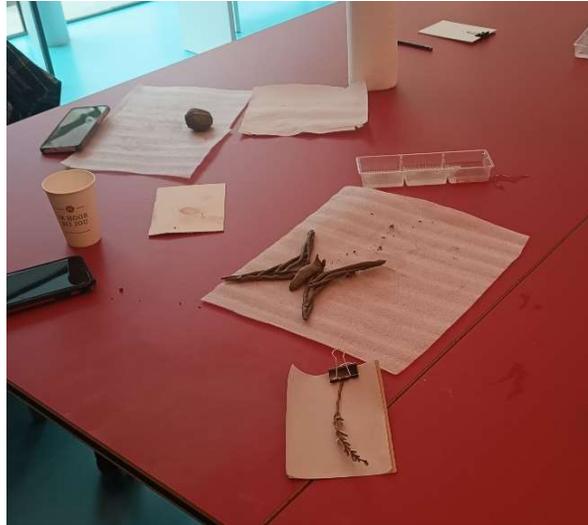


Figure 70 Story 10: The clayed ornament that the participant created



Figure 71 Story 10: The participant is sculpting the ornament. The photo was taken by another participant

Story 10

The participant shared that he comes from Iran and they usually decorate handmade ornaments, which they hang outside of their doors. The participant created one of those ornaments, which he recalled by looking at the branch he explored before.



Figure 72 Participant in the process of giving materiality to his memories from the beach



Figure 73 Maple seed: The natural element that the participant studied

Story 11

The participant talked about some memories he has from a beach in Somalia. The participant shared about the texture someone can find on the rocks of this beach and the hours he spent there as a child.



Figure 74 A moment during the making process

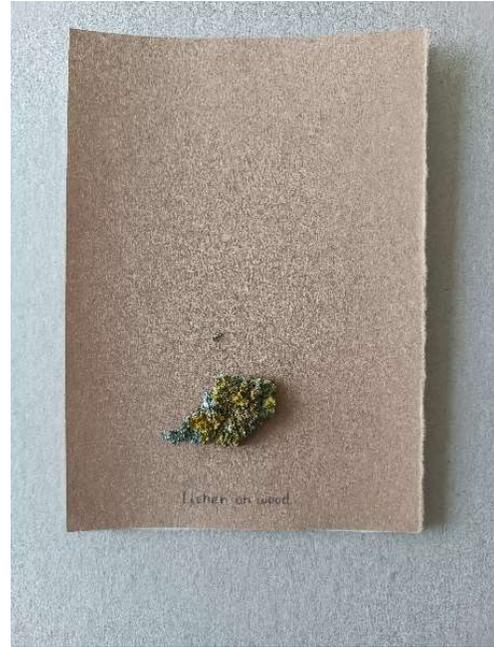


Figure 75 The piece of lichen that the participant explored

Story 12

The participant shared that he comes from Germany and likes hiking and nature. The lichens that the participant had as a natural element reminded him of the collective sculptures made by stone, that he often finds when he goes for hiking.



Figure 76 A moment when the participant was sculpting the baklava



Figure 77 Ginkgo leaf: The natural element that the participant studies

Story 13

The participant shared that she comes from Turkey. The natural element reminded her of a Turkish desert called baklava, as the leaf has a lot of tiny patterned strips, like the delicate dough strips on baklava.

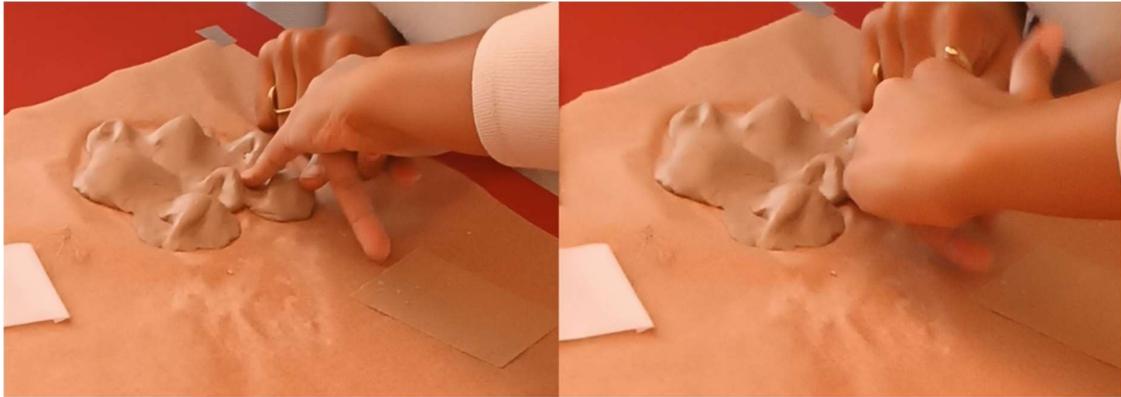


Figure 74 The participant's gestures during the sculpting process



Figure 79 The skinless leaf the participant studied

Story 14

The participant shared that she is coming from Uganda and she picked a dried leaf because it reminded her, the Land of her country, “as dried leaves are everywhere”. The leaf reminded her of how everything around us is connected. The leaf is connected to the trees and the trees are connected to the ground and the ground, being part of the earth is connected to her.



Figure 80 The participant during the making phase



Figure 81 The vase and the flowers

Story 15

The participant shared that she comes from Uzbekistan and she created a set of teapot, cups and plates because the tradition of her place is connected with hospitality. She continued saying that when a visitor comes at your place, as the homemaker you should always treat the visitors with a cup of tea, cookies and their national dish: rice, meat and carrots. According to the tradition the visitor should also bring traditional bread. She also created a vase for the wild flower that has been explored during the workshop: *“...and this is a vase for your flower. If you say yes, I can bring this to my home I will remember of this workshop”*



Figure 82 Mango trees: Ongoing process



Figure 83 The maple trees' seed that the participant explored

Story 16

The participant shared with us that she comes from the Maluku Islands and the ecosystem of her land is in a very bad state right now. She continued with saying that she just came back from a visit that she did in her homeland and feels very heavily because of the situation. During her last visit with the people who live there, they planted 5 hundred mango trees to help their ecosystem.



Figure 84 The clayed mortar the participant created



Figure 85 The red maple tree's samaras the participant studied

Story 17

The participant's shared with us that she comes from Palestine and she created a mortar because people from Palestine use it very often to shatter and make spice powder. She continued sharing that for Palestinians spices are a big part of their cooking tradition.

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