

IF I COULD TURN BACK TOUCH



**FOSTERING EMOTIONAL ENGAGEMENT THROUGH
PHYSICAL CREATION IN HIGHER EDUCATION**

GRADUATION PROJECT

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IN A TIME

WHERE DIGITAL TOOLS

AND SCREEN-BASED INSTRUCTION

DOMINATE EDUCATIONAL SETTINGS,

THIS RESEARCH TURNS ATTENTION BACK TO THE TACTILE,

THE TANGIBLE,

AND THE PHYSICAL.

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DEAR READER

In *Teaching to Transgress* bell hooks (1994) writes:

"I have wanted to make the work I do accessible to as many people as possible. That's why I've always written in a very personal and intimate style." (bell hooks ,1994, p. 1)

The writing in this text is heavily inspired by bell hooks, who challenged the idea that academic work must be detached or impersonal to be taken seriously. As you read through this text, you may notice a reflective and personal tone in my writing. This is very much intentional. Writing in a way that mirrors my thought process allows me to connect more deeply with the subject matter. It also encourages critical self-reflection as part of my learning. I hope this approach not only makes the text more accessible and enjoyable to read but also shows how my academic exploration is shaped by personal insight, curiosity and reflection. While the content remains rooted in research and analysis, the conversational style reflects the way I actively think through and make sense of what I'm learning. Additionally, I have included drawings I created during the research and writing process for this thesis. While writing, I realised I could not always find the words to describe what I wanted to get across. Sometimes I knew exactly what I felt or meant, but trying to put it into the "right" sentence would slow me down or make me overthink things. The drawings you will encounter were made in Paint quite quickly. I deliberately avoided trying to make "nice drawings"; instead, I focused on simply and visually expressing what I meant. They are not meant to replace words but to support them. Also, I just really enjoyed doing it. As a child, I would spend hours in Paint making drawings and sharing them with my siblings. It also offered a welcome break from writing and helped me stay connected to my thoughts in a different, more intuitive way.

IN TRO DUC TION

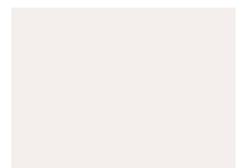


Figure 1 Arriving at my research question



1.1 MY JOURNEY

There's a Dutch expression: "met de deur in huis vallen." Literally, its translation is "to fall with the door into the house," but what it means is to get straight to the point. So here we go.

I didn't set out to become an educator. After obtaining my BA in Leisure Management in 2018, I wasn't sure what direction to take. After my graduation defence, my supervisor turned to me and asked, "So Amira... what's next?" I said, "Honestly, I have no idea."

We started talking, and eventually, she asked, "Have you ever considered teaching?"

That question triggered something. It reminded me that, as a child, I wanted to become a primary school teacher. I let go of that idea years ago, largely based on the advice of family and friends who didn't think it would suit me. But at that moment, the idea suddenly felt right again.

Shortly after, my supervisor mentioned that a position had opened at the very programme where I had just graduated. It felt like the puzzle pieces fell into place, so I decided to apply. Unfortunately, my application was not considered because I had not obtained a master's degree. However, through my graduation supervisor, I got in touch with another institute within the University of Applied Sciences (Hogeschool Rotterdam). Soon enough, I found myself teaching at Rotterdam Academy, starting with the AD Entrepreneurship programme. In this position, I facilitated project-based learning modules and provided coaching to students. Slowly, I became more involved and experienced in students' personal and professional development.

When I started teaching, I had to find my way into what being a teacher meant and what kind of teacher I wanted to be. This was the first time I worked in education, which meant everything was new. Looking back on my experiences, I could say I was focused on carrying out the curriculum and explaining the intended learning outcomes as best as possible, without necessarily considering and focusing on the actual 'learning' itself. This started to change when I took a course to obtain a teaching qualification. Here, I was introduced to the book by John Biggs and Catherine Tang (2011): *Teaching for Quality Learning at University*. By studying this book, I gained more knowledge about how to build curricula and the concept of constructive alignment. Their framework helped me understand how learning outcomes, lesson activities, and assessments should intentionally support one another to create coherent and meaningful learning experiences.

Alongside my teaching endeavours, in 2021 I began working at Depot Boijmans Van Beuningen as a tour guide and later art educator. This was super exciting because it was the first Depot in the world to open its doors. Within this job, I combined my love for art, education, and creating memorable experiences for visitors. In the Depot, I was able to help visitors connect with art in a personal,

meaningful way. Sharing my favourite artworks, engaging in conversation, and connecting with visitors made the job worthwhile. Experiences from my educational practice I applied, and vice versa. For example, I was used to speaking to groups of multiple sizes, which was very helpful in this context.

In 2024, I transitioned to the AD Event & Experience Management programme. This two-year programme teaches students how to design and implement impactful concepts in the event industry. They explore the concept of a customer journey, uncover key needs, and craft engaging experiences and events. Throughout the programme, students gain experience managing complex projects, collaborating with different stakeholders, and bringing people together to create memorable and experiences. Within this context, I teach project-based and skill-oriented modules that blend creativity, research, and real-world applications.

At the same time, doing the Master Education in Arts invited me to think more critically about the systems I work within. Paulo Freire's ideas (1970) on the banking model of education and his plea for problem-posing education made me think more deeply about my practice. His work made me reflect on how institutional education often reinforces passivity rather than agency. I wrote about this insight in a letter-writing exercise we did at the beginning of the MEIA programme. Reading passages from Freire's *Pedagogy of the Oppressed* made me realise how important it is to engage students on a deeper, more personal level. It made me question not only what we teach, but how we invite students into the process of learning. In this thesis, I mainly focus on the how. You may wonder why. In my research process, I came across an article called "The Emotional Practice of Teaching" by Hargreaves (1998).

"Good teaching is charged with positive emotion. It is not just about knowing one's subject, being efficient, having the correct competencies, or mastering the right techniques. Good teachers are not simply well-oiled machines; they are emotional, passionate beings who connect with their students, filling their work and classrooms with creativity, challenge, pleasure, and joy" (Hargreaves, 1998, p. 835).

My interpretation of this is that teaching involves not only the mind but also the heart. I have always been able to connect with students, and upon reflection, I realised that this connection is the very reason I teach. Understanding who I am teaching, and allowing students to know who is teaching them, is fundamental to creating a meaningful learning environment.

That being said, my struggle has more to do with the way in which curriculum content is taught. I realised I longed for a larger variety of lesson activities. Entering the MEIA programme, I discovered that working with physical materials — which is more common in art education — as a tool for learning excited me. I longed for something more than PowerPoint presentations and my laptop. Not saying that digital tools aren't helpful, but I want a balance between digital tools and analogue ones.

Therefore, I want to focus on the how. This means I am not particularly interested in changing the curriculum content, especially since the AD Event & Experience Management programme is still relatively new (only two years old), and changes are already happening organically. Instead, I am much more focused on expanding my own teaching toolbox, with the aim of applying practical pedagogical acts directly within the classroom.

This reflection is the starting point of my research, in which I explore how working with physical materials and tangible, hands-on tools can support emotional engagement in education. The reason I chose to focus on emotional engagement will become clear in Chapter 2.

I'm interested in how using physical materials in the classroom can open up different modes of thinking and conversation, and how it might foster more meaningful learning experiences. These insights made me arrive at the following research question:

HOW CAN WORKING WITH PHYSICAL MATERIALS IN THE CLASSROOM CONTRIBUTE TO THE EMOTIONAL ENGAGEMENT OF MYSELF AND MY STUDENTS?

By investigating this relationship, I aim to better understand how the use of physical materials in my teaching influences the emotional dynamics within the classroom. I also see these materials as a medium for reflection, acting as a stepping stone for students to think about a particular topic. Ultimately, I hope to contribute to more emotionally enriching teaching practices, both for myself, my students, and potentially other educators and anybody who finds it interesting.

So, who should read this research? My first answer would be anybody who finds it interesting. But hey, this is a master's thesis, so let me elaborate. This research is intended for educators, artists, and practitioners who work with adults outside the arts, design, or creative fields meaning people who often encounter learners unfamiliar with hands-on making or material-based learning. It speaks to those who seek to introduce embodied approaches into educational or community settings where making is not yet a common practice.

I hope that sharing my own insights will offer practical inspiration and theoretical grounding for those looking to expand their toolbox as well as engaging learners in new ways.

1.2 INSTITUTIONAL CONTEXT

The interest in materiality and making is not only personal. In recent years, so-called 'makerspaces' have been popping up left, right, and centre. We see them in formal educational institutions as well as societal or cultural organisations (Bosman, 2017; Mostert-van der Sar et al., 2023). In formal educational institutions, like schools and universities, makerspaces are utilised for curriculum-based learning, skill development, and interdisciplinary collaboration. On the other hand, spaces like public libraries, creative hubs, and community centres focus on informal ways of learning and community engagement (Vincent, 2023).

This year, the concept of the makerspace has entered the institution where I work as well. During the annual RAC (Rotterdam Academy) practice week, students from all programmes within the RAC collaborate on real cases provided by different organisations in Rotterdam. The Municipality of Rotterdam, local festival organisations and churches were among the case providers. The goal was to develop practical solutions and present them at the end of the week. For the first time, a makerspace was introduced. Here, students could work with physical materials to develop practical solutions. When I heard about this, I was curious how this space was set up, if students were there, and what they were making. I decided to take a look. When I walked into the space, there were tables filled with different materials and tools like cardboard, glue, paper, aluminium foil, different types of foam, scissors, and probably much more. I also noticed a fellow teacher present, working on their laptop. I continued walking, realising that the room was quite empty. A handful of students were present, so I decided to approach them. When talking to them, I found out that they were mainly students from the civil engineering programme. They were making a neighbourhood of the future assigned by the Municipality of Rotterdam. Notably, students from other programmes within the RAC were largely absent.

I decided to stay for an hour or so. In that hour, I saw students walking in and out, not really sure what this space was and what to do with all these materials. Next week, when I saw my own students, I asked them if they had used the makerspace. My students responded a little confused, saying things like: "What were we supposed to do there?" and "No, I really did not see the value in making something." These responses could be attributed to the fact that there was little to no guidance and facilitation. In the hour I was present, no guidance from a teacher was provided. I even asked the teacher present if students were getting any help and the answer was no. It was more of an open space concept. Frankly speaking, I find this strange. I believe that when introducing something new, it is essential to provide proper guidance. Perhaps my colleagues were unsure how to facilitate such processes, and as a result, materials were simply placed on tables with the hope that something meaningful would emerge. I think the absence of structure and guidance could be contributing to the uncertainty and students leaving. In addition, most students within the different programmes are not used to working in this way. I am not surprised by their confusion upon entering the space.

This shows me that the mere presence of a makerspace is not enough. Facilitation and stating a clear purpose of such a space needs to be clear. Students need to feel welcomed in the space and should be provided with help.



Figure 2 Rac makerspace sign

Figure 3 Part of prototype by Civil Engineering students



While this observation illustrates that my institution is interested in 'making' as a concept, my research is not about the makerspace itself or how to facilitate such a space per se. Rather, I aim to translate the institutional ambition into the classroom setting to explore how working with physical materials, directly in my teaching practice, can support emotional engagement for both students and myself.

This positioning underscores the relevance of my research, bridging institutional goals with classroom practice, and highlights my commitment to exploring pedagogical strategies that bring the potential of physicality into meaningful educational experiences, and to see how this influences emotional engagement.

1.3 CONTRIBUTION TO THE FIELD OF ART EDUCATION

In the process of doing this research, I came across a video in which artist William Kentridge is being interviewed. It is filmed in his studio in Johannesburg. The video is titled: 'Art Must Defend the Uncertain'. At one point in the video, he says the following:

"I think there's a polemical and political role in art. In defending the uncertain. In having critique in all forms of certainty. Whether it's on authoritarian politics or certainty of knowledge. Of making ambiguity and contradiction it's central lifeblood. Showing that these are not just mistakes at the edge of understanding but the way in which our understanding is constructed. Of making us aware of constructing meaning rather than receiving information. These are all things that are natural to art they're our kind of models of how understanding the world could be." (Tate, 2018)

When I watched the video, I thought to myself: 'Wauw'. What a beautiful way of verbalising the connection between uncertainty, art, and meaning-making. I also see parallels with what I am doing in this research. I invite my students to interact with materials and make something with them. I invite them into a space where the outcome is not yet known. I provide an invitation and make sure the exercises are in line with the intended learning outcomes. Yet in the exercises, there are no guarantees, not even that reaching a conclusion will be possible. Along the way, they may discover other valuable insights through their interaction with the materials. As a researcher, I too am entering uncharted territory. I'm attempting something I've never done before, just like my students.

Firstly, not much research has been done on how making with physical materials can be implemented in higher education outside the arts, design, and science fields. After roaming on Google Scholar for hours there was not much to be found. This research aims to help fill that gap. Secondly, I aim to offer the field of art education a way of showing how its embodied, material ways of learning can matter beyond the arts. This research positions itself within a broader pedagogical movement that moves away from purely abstract, cognitive learning. It advocates for an integrated approach in which the body, emotion, and matter are central, and learning is understood as a relational and creative process.

For me, it shows that what happens in art education can branch out to other disciplines. It can change how we think about learning, aligned with the views of William Kentridge and other artists.

1.4 RESEARCH METHOD

This research is grounded in my own educational context and experiences as a teacher in the AD Event & Experience Management programme at the Rotterdam Academy. The classroom serves as both the setting and subject of investigation. Knowledge is generated through action, critical reflection, and relational encounters. I see knowledge as dynamic, constantly evolving through doing, thinking, and interacting. Students participate openly and voluntarily, informed that they may opt-out at any time without consequence. Their feedback, photographs, and other contributions are used only with consent.

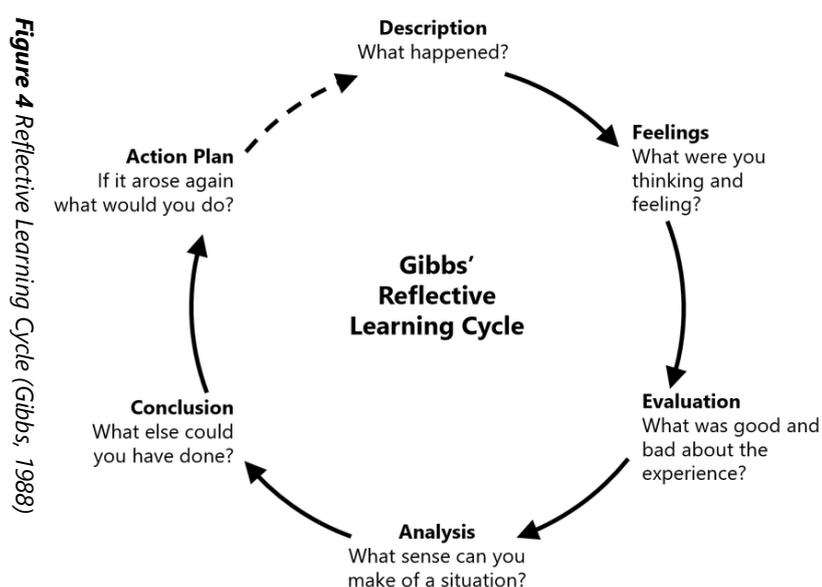
The research is iterative and non-linear, with pedagogical acts, reflection, and literature review informing each other throughout the process. While some activities were conducted before a formal literature review was fully developed, engagement with relevant theories, such as emotional engagement, embodiment, and materiality, deepened as the research progressed. This ongoing dialogue between theory and practice helped shape and refine the research aim, pedagogical activities, and reflections.

There are three key pedagogical acts I purposely planned and carried out which form the focus of my investigation. Each activity was shaped by my curiosity about how physical materials might foster emotional engagement for both me and my students.

Data is collected through various methods:

- Observations of student behaviour and classroom dynamics (by myself and a peer)
- Voluntary student feedback forms
- Informal conversations with students
- Material traces and process photographs as data in themselves
- Conversations within the MEIA learning community

The analysis of that data follows a critical-reflective approach using Gibbs' reflective learning cycle (1988).



I chose this model because it explicitly incorporates feelings as part of the reflection process, which aligns closely with the emotional engagement focus of my research. It encourages slowing down to critically analyse each experience step by step, rather than jumping to quick conclusions. Previously, I tended to observe, interpret, draw rapid conclusions, adjust, and move on. Gibbs' model provides a more structured process by separating description, feelings, evaluation, analysis, conclusions, and action planning. This prevents rushed reflections and allows a deeper understanding of the experience and its impact. However, using this fixed structure can constrain my preferred narrative style, making reflections feel more formal or segmented. Nonetheless, I see this as a necessary trade-off to ensure clarity and thoroughness in my analysis.

By combining theory and practice in an iterative process, this research aims to deepen understanding of the emotional dynamics at play in material-based learning experiences and contribute to a more embodied and emotionally attuned pedagogy.

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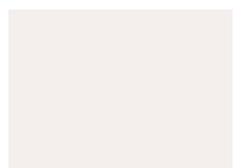
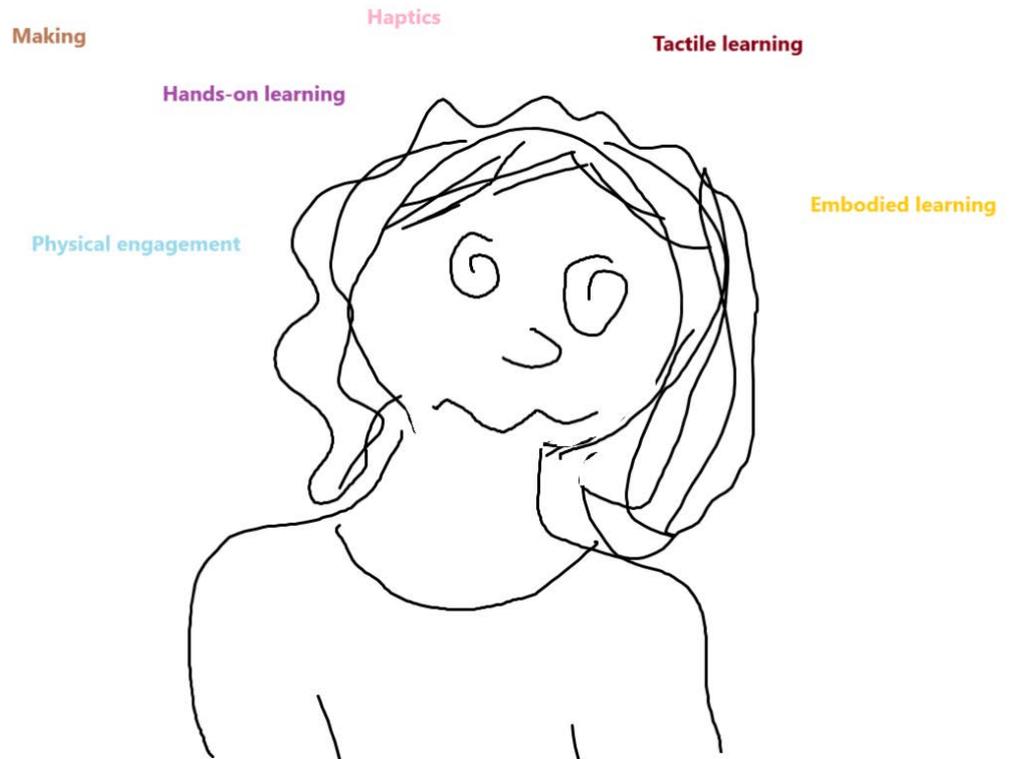


Figure 5 *When theory makes you feel like you need a theory to understand the theory*



2.1 FROM OVERWHELMING TO UNDERSTANDING

Figure 5 is a visual metaphor representing the cognitive overload I experienced while navigating overlapping educational theories such as embodied learning, hands-on learning, and haptics, etc. This process was challenging, to say the least.

In this chapter, I explore the key concepts that underpin my research. It is also an attempt to make sense of what I am doing and what I feel is important in my practice. The focus is on the role of physical materials in the classroom and how they influence emotional engagement for both teachers and students. By examining the interaction between teachers, students, and physical materials, this framework offers a foundation for understanding how these materials shape emotional dynamics and everyday classroom practices. Most importantly, it asks: what can I learn from this, and how can I put it into practice?

2.2 EMOTIONAL ENGAGEMENT

What exactly is emotional engagement?

Since emotional engagement is a key concept in my research I want to clarify what it means. A lot of research is done in the field of engagement. Let's dip our toes into the pool of engagement.



Figure 6 Curious contact

When researching emotional engagement, I came across the concept of affective learning theory. This theory focuses on the emotional side of learning. In my opinion, emotions are not merely side effects but should be taken seriously. Emotions drive important processes like motivation, focus, and memory (Pekrun, 2006). Especially positive emotions like curiosity and joy have a great impact on student motivation and learning. In addition to that, when students feel good emotionally, they are more likely to engage in lesson activities and are open to trying new things (Pekrun & Linnenbrink-Garcia, 2012). A teacher who shows real excitement can positively influence the classroom atmosphere (Frenzel et al., 2009; Mottet & Beebe, 2002).

When defining emotional engagement, it is important to clarify who is being discussed. Let's begin with the student's emotional engagement. To define this, it is important to note that emotional engagement is merely one dimension of student engagement. One of the leading researchers in the field of student engagement, Fredricks et al. (2004), describes it as being multidimensional. It has three separate but connected dimensions: behavioural, emotional, and cognitive engagement.

Behavioural engagement can be defined as the extent to which students take part in academic and school-related activities. It includes active class participation, following school rules, and involvement in extracurricular programmes (Fredricks et al., 2004).

Emotional engagement refers to students' feelings toward their school environment, teachers, and peers. It encompasses emotions such as interest, enjoyment, and a sense of belonging, as well as negative reactions like frustration or disinterest (Fredricks et al., 2004).

Lastly, cognitive engagement involves the depth of students' investment in learning. It includes their willingness to put in effort in understanding complex ideas, using strategies for learning, and demonstrating perseverance in overcoming academic challenges. It reflects a desire to understand and master material rather than just complete tasks (Fredricks et al., 2004). Simply put, these dimensions reflect how students act, feel, and think within an educational setting.

In addition to these three dimensions, some scholars have proposed a fourth dimension: social engagement. This dimension acknowledges a wider context, since engagement is not individual, it is social. It describes how students are connected to their peers within the context of the school. This could mean whether they make friends, learn together, and receive social support. Zepke & Leach (2010) were among the first scholars to acknowledge this fourth dimension. They state that social engagement can influence and be influenced by the other dimensions of engagement. It is important to note that there is still ongoing debate on which behaviours belong to which dimension. For example, an act such as asking a question could be interpreted as behavioural engagement. But what if the question focuses on a deeper understanding of a subject? Is it cognitive then, or both? This overlap makes clear the complexity of the concept of engagement.

A toe dip soon became immersing my whole foot in the blue, pinkish puddle. What I get out of this discovery is that student engagement is a complex concept with different interconnected dimensions. Also, trying to clearly define these dimensions can be tricky because of their connectedness. For me, focusing on emotional engagement means looking at whether there is excitement and fun present in the lesson activities.

2.3 WHAT ABOUT THE TEACHER?

While my foot was fully immersed in the pool of engagement, I came across the work of sociologist Norman K. Denzin. In *On Understanding Emotions*, he states that emotions are deeply embedded in social practices and interactions. He views emotions not as isolated or individual experiences. This means that emotions are components of interaction that shape and are shaped by our relationships and experiences with others. These emotions are not only felt but also expressed and communicated through actions and behaviours, which in turn affect the dynamics of a relationship (Denzin, 1984). This reminded me of what Frenzel et al. (2009) and Mottet & Beebe (2002) also said about emotions and their influence within the classroom. How do my emotions influence my students? Or to be more precise: how does my lack of enthusiasm about lesson activities influence the classroom dynamics? I am realising my influence is huge. If I am not buying what I am selling, how can I expect my students to? I see it as my responsibility to make my classroom an exciting place where students also feel this.

In *The Emotional Practice of Teaching*, Andy Hargreaves (1998) describes teaching as a form of emotional labour. He draws upon the work of Arlie Hochschild, who says that this work requires you to manage your emotions. This means exemplifying certain feelings or holding back others to create an emotional environment conducive to learning (Hochschild, 1993). Yes, I have also 'faked' my emotions, especially on days when I did not feel like showing up to teach and 'put on' a smile. Why? Out of fear that my feelings would influence the classroom dynamic in some way.

However, teaching is also about genuine emotional effort. To be truly excited, labour is required. I don't want to fake my excitement, because I believe that 'faking it' isn't sustainable anyway.

"You can't light a fire in others if your own flame is out."

Of course, there will be days when I must put on a smile, maybe I'm tired or something's going on in my personal life. I'd say those things are circumstantial. What you do have control over are your lesson activities and how you integrate them into your teaching. So, even on a rough day, well-designed activities might still spark real excitement.



Figure 7 To smile or not to smile

When learning about emotions, Sara Ahmed's (2004) work in *The Cultural Politics of Emotion* spoke to me. The following quote shifted my understanding of what emotions are:

"Emotions are not 'in' either the individual or the social but produce the very surfaces and boundaries that allow all kinds of objects to be delineated." (Ahmed, 2004, p. 10)

Ahmed's take is so interesting. Never have I thought about emotions in the way that she describes. In her writing, Ahmed argues that emotions are not simply internal states or forces that exist between individuals, but active forces that help produce the distinctions between self and other, familiar and unfamiliar. She also says emotions are not merely expressions but productive in nature. They shape the way objects, experiences, and relations come to matter.

She also talks about the concept of affective economy. It refers to the notion that emotions are not individual feelings, but are also shaped by—and shape—social and cultural contexts, just like Denzin (1984) states. Emotions become a currency or a form of exchange that governs relationships, power dynamics, and collective experiences. Ahmed's work is deeply rooted in critical social theory, and since I work in an institutional space, I find discussing her work relevant. In the classroom, emotions can shape how students relate to me, to each other, and the materials provided. The way emotions move through educational spaces can define who feels "at home" in lesson activities, who feels excluded, and how certain ideas are legitimised or dismissed.

Reading Ahmed's work made me think about who decides what is of 'value' in a material-based lesson activity. Do I? Do my students? Do we do it together? What if I see value in something happening and my students don't or the other way around? These questions are so important to ask myself while conducting this research, specifically the practical part.

This body of work can help me better understand the emotional dynamics that influence engagement and learning in my classroom. They will function as questions to reflect on the pedagogical acts.

2.4 EMBODIMENT

I was introduced to the concept of embodiment through Bessel van der Kolk's work on trauma, particularly in his influential book *The Body Keeps the Score* (in Dutch, *Trauma Sporen*). I read the book in 2020 out of personal interest and soon became fascinated by the mind–body connection described in it (van der Kolk, 2014). Although van der Kolk's work specifically addresses trauma and how it affects the mind–body connection, I see points of overlap with embodied learning. In both frameworks, the body is not a passive container but an active participant in experience. Trauma is not merely a psychological phenomenon; it is felt and stored in the body (van der Kolk, 2014). Similarly, embodied learning suggests that knowledge is not only constructed through the mind but also through bodily experience. In both concepts, bodily awareness plays a fundamental role.

The concept of embodiment isn't "new age" or of this time particularly. In 1945, *Phenomenology of Perception* by philosopher Merleau-Ponty was published. I wouldn't say it was an easy read, and I did not read it in full, but when I encountered a visual on p. 22 of the book, things started to click for me. Let's do an exercise and see if it clicks for you as well!



Figure 1

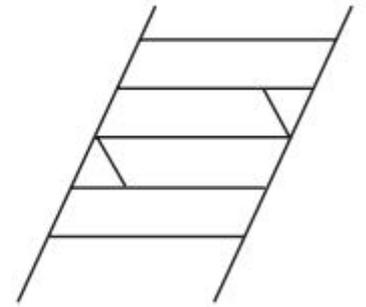


Figure 2

Figure 8 Two figures (Merleau-Ponty, 1945/2005, p. 22)

Take a moment to look at these two figures. I said take a moment, no peeking at what comes next.

What do you see in the figure on the left?

A hexagon, agree?

What does the figure on the right look like?

I want to invite you to find the hexagon in the figure on the right.

It takes a moment, right?

At first, you can't see the hexagon, but then it appears. Not because you "remember" it and project it onto Figure 2. Merleau-Ponty states that your perception actively reorganises what you see in the present moment to find meaning. He argues that perception is not about the brain passively receiving information; rather, your body actively engages with what you see and creates meaning in the here and now (Merleau-Ponty, 1945/2005). He claims that you see with your whole body and the experiences it carries.

"The world is always 'already there' before reflection begins—as 'an inalienable presence'." (Merleau-Ponty, 1945/2005, p. 7)

I found this quote from the preface particularly striking. It suggests that before rational analysis, there is a world we live in. We feel through our bodies, senses, and emotions. Before we understand pain intellectually, we experience it physically. For example, when you stub your toe, you feel pain immediately, long before you analyse what pain is, if you do that at all. These insights changed my view on how I see myself living in this world and how perception is not rational but embodied.

In my current higher education context, learning mostly takes place at a desk, mediated by screens. Although the body is physically present, the notion that we also acquire knowledge through our bodies is largely absent in academic spaces, especially in mine. This is one of the reasons I am conducting this research: to welcome the body back and integrate it into the classroom in a manageable and accessible way for my students. Merleau-Ponty's insight that all perception, and therefore all knowledge, is grounded in embodied experience reminds us that the body is more than just a vessel; it is an organ through which knowledge is lived and made, rather than knowledge being constructed solely in the brain. This disconnect not only limits the full range of human understanding but also risks reducing learning to mental processing, rather than lived experience.

2.5 MATERIAL PEDAGOGY

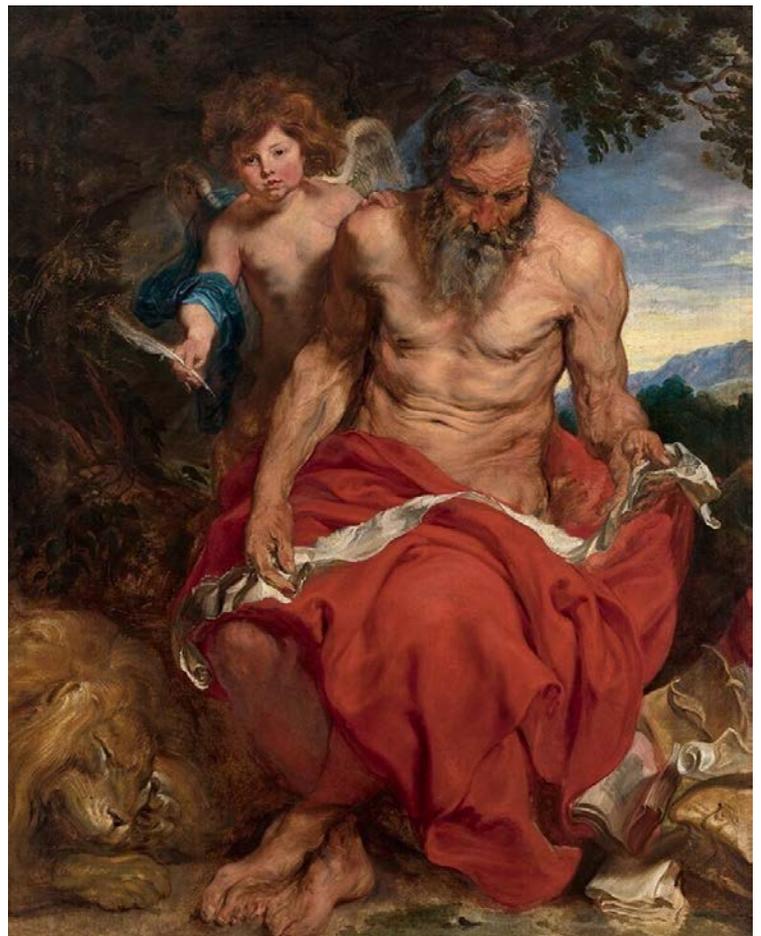
While I was working as a tour guide in Depot Boijmans van Beuningen, I had the privilege of learning about art, artists and the conservation of various materials. This has led to a kind of professional deformation: anytime I visit museums, I can no longer view artworks without closely inspecting the materials used. At one point, one of my favourite stories I told visitors was that of the study of Saint Hieronymus by 17th-century painter Anthonie van Dijck. The study was in the Depot for a while for research to conclude if it was a real Anthonie van Dijck. Spoiler alert: it was. I learned it was found in an old shed in Kinderhook, New York. It must have been in the shed for quite some time because bird poop stains can be found on the back of the study. In 2002, it was bought by the former owner at an auction for 600 US dollars and in 2023, it sold for nearly 3 million US dollars!

The concept of the artist beginning with a study informed the choices I made for the materials used in the pedagogical acts. Drawing inspiration from the artistic practice of starting with a study made from inexpensive materials, I selected low-cost materials to lower the threshold for interaction with the materials. More on the exact materials used and why can be found in Chapter 3.



Figure 9 Study on wooden panels – Saint Hieronymus by Anthonie van Dijck 1615-1618 (Photo taken by me)

Figure 10 Painting on Canvas – Saint Hieronymus by Anthonie van Dijck 1618-1620 Photo collection Boijmans van Beuningen



I think my fascination with materials and my desire to work with them in my educational context partially comes from my time at the Depot. I would see schools coming in for educational programmes. They would start with a tour to get an impression of the building, often accompanied by a workshop in the education atelier. The workshops were what I enjoyed the most because they often involved making something.



Figures 11 and 12 Workshop: 'Het object vertelt',
*"The object tells": Participants chose an object/artwork
and make their own version with different materials.*

As I am writing text, I am realising that my experiences at the Depot in combination with being among designers and artists at MEIA have influenced the topic of this research, specifically the use of physical materials. These parallels stand out so clearly now.

But back to the material and specifically material pedagogy. Remember when earlier I spoke about makerspaces and that just providing materials is not enough for interaction to happen. Philosopher Karen Barad (2003) introduced the concept of intra-action, which explains that entities, such as people and things, do not live separately first and then come together to interact. This means that they are shaped because of their interactions with each other.

This parallel explains why simply placing materials in a makerspace doesn't automatically lead to meaningful interaction. People, materials, and the learning environment all continuously shape one another through their relationships. This concept became visible while I did the observations in the makerspace. The concept of intra-action and insights from that observation will be taken into account when designing the pedagogical acts.

What then is the connection between emotional engagement and working with materials? Merleau-Ponty (1945/2012) gives the phenomenological insight that our mind is not separate from our body. It is rooted in perception and sensation.

"The body is our general medium for having a world"

(Merleau-Ponty, 1945/2005p. 169)

Therefore, tactile and material engagement can activate emotional awareness by anchoring the learner in the present moment of experience. This aligns with Dewey's view. In *Art as Experience*, the intimate relationship between emotion and experience is discussed. Dewey (1934) believes that emotion and thinking are bound together through engaging with the world and reflecting on those experiences. In educational contexts, this perspective suggests that materials are not just passive representations of knowledge but evoke emotional and cognitive responses that actively shape understanding.

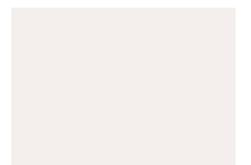
Sheets-Johnstone (2011) talks about 'thinking in movement,' which means that physical actions and emotions are deeply connected. Learners often work through problems not just with their minds but also by feeling their way through, using their bodies and emotions. Circling back to Sara Ahmed (2014), she states that emotions are not internal states but relational and directional. Material carries histories and associations. For me, working with paper-mâché instantly reminds me of making Sinterklaas surprises for my classmates back in primary school. I'm instantly taken back to my childhood—the smell of glue, the mess on my fingers, and the excitement of creating something in secret. These sensory details create an emotional connection that goes beyond the craft itself. These strong childhood associations and a sense of nostalgia are so powerful. I am interested in how I can facilitate these moments in my own classroom. Will students get excited? Will they not? More on the exact pedagogical choices I made can be found in Chapter 3.

In addition, Malafouris (2013) argues in his Material Engagement Theory that materials aren't just passive tools; they actively shape how we think and feel. Emotional engagement doesn't come after learning; it happens through direct, hands-on interaction with meaningful objects. This challenges educational models that focus mainly on abstract thinking and screen-based learning, leaving little room for physical and sensory experience.

In my opinion, education must reintegrate the body, not just as a vessel but as a lived, meaning-making subject. This research represents my first step in doing so.

PRAC

TICE



In this chapter, the practical part of the research will be discussed. This entails three pedagogical acts that will help me answer my research question. I refer to them as pedagogical acts to emphasise their intentional, educational nature. I might use this term at the start of a paragraph for clarity but will otherwise stick to the terms activities or activity to keep the writing more accessible. I will discuss what the acts entail and what pedagogical choices I made. Then I will share what happened, informed by my observations and those of my peer Ronald Bal, photographs, student feedback and informal conversations. You will notice that when describing the activities this is done in an observational way. This is done intentionally to give a vivid picture of how the activities unfolded in practice. I made this choice because in more general summaries spontaneous moments may be overlooked. Describing these details is essential because emotional engagement is very complex, shaped by subtle moments of interaction.

3.1 CONTEXT

My students are enrolled in the Event & Experience Management programme at the Rotterdam Academy, which is part of Hogeschool Rotterdam. This two-year Associate Degree programme is positioned between an MBO and a full bachelor's degree. It is hands-on, practical, and geared towards equipping students for the professional world. Students learn how to design impactful concepts and transform them into real-life experiences. They delve into the concept of customer journeys, understand what people truly need, and craft events and experiences that resonate with various target audiences. Concept development is central to the programme, as students are taught to turn ideas into actionable plans and experiences.

The programme is structured in semesters, with each semester consisting of three main components. Each semester focuses on a different theme, allowing students to explore various aspects of the field. The first component is Knowledge and Theories, where students gain theoretical insights in the field of event and experience management. The second component is Professional Skills, where students develop practical abilities. The combination of this knowledge and these skills is applied in the third component, the Professional Product, where students apply the skills and knowledge in a project-based format. The pedagogical acts conducted for this research took place in the Professional Product modules.

The first two pedagogical acts took place in the module "Event". In this module, students learn how to create and translate their event concept into a real-life event. The acts were conducted in April 2023 and April 2024 with different groups. I designed an activity where I asked my students to make the physical environment in which their self-organised event, set to take place a few weeks later, would be held.

The third act was conducted in the module Customer Journey and took place in December 2024. This was yet again a new group. In this module, we define the customer journey as the entire process a customer goes through when interacting with a brand or organisation, from initial awareness to purchase and post-purchase experiences. My students were researching how to reach a new audience (children) for a museum in Rotterdam called Het Nieuwe Instituut. They were invited to research how to reach this audience (pre-exposure) before they visit the museum, how to get to the exhibition floor (direct exposure), and how to get this audience to stay connected to the exhibition and revisit (post-exposure).

3.2 PEDAGOGICAL CHOICES

My pedagogical choices throughout the three acts are rooted in my belief that learning is an embodied process. Inspired by art education practices and embodied learning theories, I designed three pedagogical acts to create moments where students engage beyond abstract thinking through hands-on interaction with physical materials. All the choices discussed in this paragraph are informed by the earlier discussed theory and my educational experience in the given context.

One may wonder: why choose physical materials and not, for example, a theatre exercise? This question was also raised by my fellow students and tutors at MEIA. After eight years of working with these students, I know them well, and I made the pedagogical choice not to take that route because it would be too big a step into the unknown. I wanted to scaffold the experience of exploring embodied learning by focusing on the hands first instead of the whole body.

Last year, during a lesson, I did a theatre exercise where students had to walk around and embody the emotions of different songs played. It was part of a module aimed at developing presentation skills, and the goal was to raise awareness of non-verbal communication. The student evaluations made it clear that they didn't understand how this exercise would help them become better presenters. During the lesson itself, they were also pretty verbal about the 'the use' of the exercise.

With my students, I noticed that when it's not clear to them what they will learn or how it will help them become better professionals, they start questioning the activities we do in class. In conversations with colleagues, this is often attributed to students feeling uncomfortable and therefore confused about the purpose. I think that is partially true, but there is more to it.

Having worked with these students for eight years, I've observed that they want to get from point A to point B rather quickly. In practice, this means: What is the assignment? What do I need to do to pass? And let me get on with it. If lesson activities don't directly align with that or differ from what they're used to, they question it. I believe this mentality reflects a broader educational culture, where school is less a place for exploration. It is part of a wider culture of consumerism in education, where students are positioned as customers buying a product: "This is what you offer—why should I choose it." This transactional attitude shapes how students approach learning, often focusing on clear outcomes and efficiency rather than process and discovery.

Doing another exercise where the whole body is on display would have been a bridge too far. It would be too much, overwhelm them, and not lead to the emotional engagement I aim to establish. That being said, let's get into the choices I made throughout the pedagogical acts.

For the first two pedagogical acts, I invited my students to create their event space out of Play-Doh. The aim was to encourage them to begin thinking spatially and atmospherically, translating their event concept into a tangible experience. By inviting them to shape the event location, I tried to make them think about welcoming their audience and reflect on how space, atmosphere, and design choices influence the execution of their concept. Drawing from art education practices, I intentionally sought to design moments where students could engage beyond verbal and cognitive reasoning through touch, play, and making. This aligned with my motivation to start the MEIA programme: what can be learned from art education practices and how can I integrate this into my educational context?

The material for the first two pedagogical acts was Play-Doh. I chose this material because of its nostalgic properties and its distinct smell. From neuroscience, we know that scent is linked to memory and emotion. Smells travel directly to parts of the brain involved in emotion and memory, such as the amygdala and hippocampus, which are part of the limbic system (Walsh, 2020). I wanted to engage not only with the visual recognisability of the material but also actively incorporate scent to evoke an emotional response like curiosity and joy, which are emotions known to enhance motivation and engagement (Pekrun & Linnenbrink-Garcia, 2012). By choosing a material that is familiar to everyone, that is low-cost and low-pressure, I aimed to reduce the barrier to interacting with it. This choice was

inspired by artistic studies where artists first make a sketch on cheap paper before starting on canvas. From a pedagogical standpoint, this means moving away from only talking about ideas to shaping them with our hands, making abstract concepts tangible. This resonates with Malafouris's (2013) Material Engagement Theory: the idea that thinking and feeling emerge through our engagement with materials.

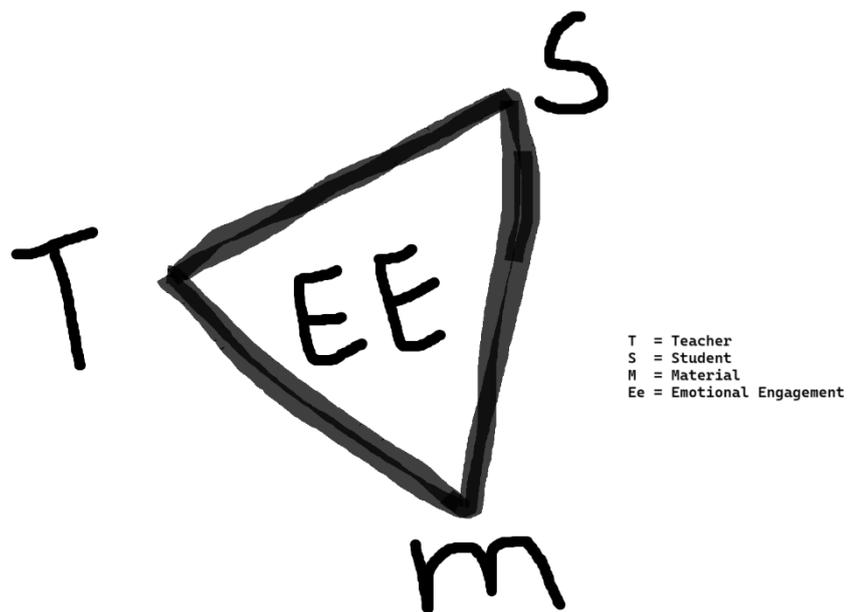
For the third pedagogical act, I wanted to experiment with a set of different materials: materials like cardboard, paint, foam, fabric and plastic. Again, using low-cost materials to lower the threshold to engagement.

Each with different textures, shapes and sizes as a metaphor for the complexity of the customer journey itself. I wanted to expand my experiences and see how, and if, emotional engagement could be fostered with different materials and to see how it is different from the material I worked with before.

Across all three acts, my pedagogical approach was guided by art education principles, including those stated earlier. Additionally, Barad's (2003) concept of intra-action influenced my decision to treat materials as co-teachers, actively involved in shaping the learning environment. Another key pedagogical choice was to actively participate and model behaviour by engaging alongside the students during the activities. This decision was motivated not only by my own enjoyment but also by my belief in the dynamic interaction between teacher, student, and material.

Together, this triadic relationship creates moments of meaningful engagement and shared learning that could not emerge through isolated participation. I continuously experimented with balancing freedom and structured guidance and incorporated small but intentional interventions warm-up exercises, and reflection prompts to nurture engagement and focus in the classroom.

Figures 13: We all work together



3.3 MODELLING CLAY AKA PLAY-DOH 1.0

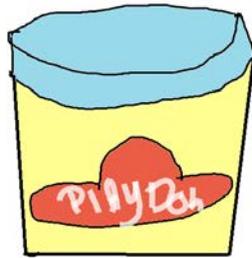


Figure 14 Play-Doh *Can you remember the smell?*

The first pedagogical act took place in April 2024 and was situated in the 'Event' module. In this module, students learn to organise their own event, with the proceeds generated going to charity. The duration of this module is one semester. In this class, I am guiding 19 students; 16 were present during the pedagogical act. Since this was the first time I had done this activity, I was a bit nervous. What would my role be? How much instruction versus creative freedom would I give? What if they thought the exercise was silly or childish? Will it start a conversation, and what do I do if it does not happen?

During the activity, I positioned myself as an interested yet unknowing guide/observer. I asked questions about what different objects and figures represented and tried to make clear that everything they created was valid. If students were disengaged or appeared stuck, I applied modelling behaviour. Interacting with the material myself inviting students to join as well.

ACTIVITY PLAN

Instruction: Create your event location out of Play-Doh - How can you make your concept come to life?
Participants: 5 groups. - A: 2 students B: 4 students C: 4 Students (2 present) D: 4 students E: 5 students
Creating: +/- 30 min

3.3.1 CRITICAL ANALYSES

So, what happened? And how can we make sense of what happened? As stated before, I will use Gibbs' (1988) reflective learning cycle. To conduct this analysis, I relied on my own notes and observations, photographs, and feedback provided by students in semester evaluations.

When I introduced the activity, my students visibly became excited. Most of them started smiling and said things like: "It has been so long since I used Play-Doh" and "So fun!" Some students also said it reminded them of their childhood. One student said: "It still smells the same." After explaining what they were going to do, the process of picking out the colours started. They expressed joy and excitement. This was noticeable from the overall energy in the room.



Figure 15 Signature colours used in Event Conceptbook



Figure 16 Event location group D



Figure 17 Event location group C

While the majority stated interacting with the material like smelling, touching, and picking colours, some students were hesitant. I observed that they had trouble getting started and were looking for guidance from their peers. Group C spent the least time interacting with the material. They made one dining table since their event was a funding dinner. I tried inviting them to make more objects by making another table myself. The response was minimal. When I asked why they did not continue, they said: "Our event takes place at a restaurant where there is no room to move things around."

Around the 30-minute mark, the interaction with the material lessened and students started doing other things for example, talking to students from other groups and going to the restroom. On the spot, I improvised and incorporated a moment of sharing their findings plenary. Because I did not instruct correctly beforehand, one of the groups had already started cleaning up.

Introducing the exercise, I felt excited. I also felt a bit nervous, because what if they did not want to interact with the material? After explaining what we were going to do and seeing the excited response of my students, I felt happy. It felt rewarding to watch students collaborate and enjoy themselves. There was one moment when I felt uneasy. I was interacting with a student, and I was proposing to add something to her creation. After that, they responded nervously and started breaking down their creation. This made me aware of the influence I hold. Towards the end of the exercise, I felt happy and a little bit overwhelmed by how much fun I had.

Overall the activity was a success. I was excited and most of my students were as well. The Play-Doh brought energy and emotional connection into the classroom, encouraging students to interact. It helped break the ice and spark conversations around their event planning and it was refreshing to see them participate in something physical and collaborative, moving away from digital tools.

In addition to my observations, two students, one from group B and one from group E, said the following about the activity in the semester evaluation (I was not present):

"We gained a lot from the clay modelling. It started out more as a funny activity, but in the end, we actually applied many elements to our real event."

"The clay modelling was very enjoyable; it effectively started the conversation about the event's decoration."

Figure 18 Event location group B



Figure 19 Event location group E

This shows that this activity was a stepping stone for that conversation to happen.

On the other hand, in a few students, I observed hesitation, discomfort and therefore a lack of interaction with the material. This imbalance suggests the activity could be intimidating or unclear for some. In the next iteration, I will take this into account.

The emotional engagement I observed points to the strength of tactile methods in drawing students into the learning process. Some students clearly loved working with the clay and even mentioned feeling nostalgic, which reminded me of how positive emotions like joy and curiosity can really boost motivation (Pekrun & Linnenbrink-Garcia). On the other hand, others, possibly unfamiliar or less confident in tactile tasks, felt discomfort. Remember that one student who undid her work? This shows the impact of my words and how, when you do something for the first time, there is quite a bit of uncertainty involved. Some seemed unsure or maybe a bit lost without more guidance or instruction. The lack of structure and openness of the activity may have contributed to this, as some students need more guidance to feel secure.

The situation with this student reminds me of Hargreaves' (1998) idea of emotional labour, how managing emotions is part of teaching. And also Denzin's (1984) and Ahmed's (2004) views that emotions aren't just personal but shaped by the whole social context. So, what happens between us, the group dynamics, and the way I guide the activity all play a big role in how students emotionally connect to the task. I wonder would clearer instruction have helped this student to feel more comfortable?

The activity was a success for many but not for all. It reinforced the value of this exercise but also highlighted the need to scaffold such experiences to include everyone. When discussing the activity and my findings during the MPT class on 25 May 2024, I received tips on this topic from my fellow students. For instance, Marie Panken said that it would help if I did not let the students start from scratch. For example, if you hand your students a piece of paper with a line on it and instructions instead of a blank piece of paper, chances are they feel less intimidated by a piece of paper with a line on it than a blank one. What could be the 'line' in this Play-Doh activity?

In addition, this exercise also made me aware of my position and the power of my words, especially for students who felt discomfort during this exercise.

Next time, I will incorporate a structured starting point, my "line on the page", to reduce intimidation. I'll explore what the equivalent of that "line" could be in a Play-Doh context. I will also follow up the activity with a short evaluation form to better understand my students' experiences while the memory is still fresh. Most importantly, I will work on how to give supportive, empowering feedback during these moments of creation.

3.4 PLAY-DOH 2.0

The second pedagogical act took place on Monday 13th April 2025 and was situated in the 'Event' module, just like in 2024. I iterated the exercise based on the findings from last year and the action plan. This time I was guiding 15 students; 14 were present during the pedagogical act. In this iteration of the activity, all the insights from when I did it last year were considered.

Since this was the second time I did this activity, I felt more confident. Yet again, I positioned myself as an interested yet unknowing guide/observer. I asked questions about what different objects and figures represented and tried to make clear that everything they created was valid. This was expressed in the introduction of the activity but also during the activity. One of the strategies I used to be encouraging was by creating a little clay figure, representing a visitor to the event. I was inspired by a workshop hosted by Irina Shapiro in January 2025 as part of the MEIA programme. In this way, I aimed to bring the students' creations to life and inspire them to continue exploring and working with the material.



Figure 20 *Creating clay figure*

3.4.1 CRITICAL ANALYSES

Again, I will use Gibbs' (1988) reflective learning cycle to make sense of what happened. In this iteration of the Play-Doh activity, my data collection approach was more elaborate, as my research question had become more clearly defined. I invited my peer Ronald Bal to observe the session to provide an additional layer of insight. I asked him to observe the following:

- The level of emotional engagement of the students
- Whether, and in what way, that engagement influences what happens next, such as the conversations that arise

Instructions on how to observe that and the written observation can be found in Appendix 1. To gather data on student engagement, I used a visual method involving sticker scales. After explaining the exercise, I asked students to place a sticker on a scale reflecting their initial attitude towards the invitation, ranging from "Not in the mood" to "Can't wait!" Midway through the activity, they placed a second sticker on a different scale that measured their current level of engagement, from "Not engaged" to "Fully immersed in the task." I chose this method for two main reasons: it prompts students to respond intuitively rather than overthinking, fostering a more honest reflection of their inner state; and it produces an immediate visual overview of engagement. In addition to the sticker method, I also asked students reflective questions to deepen my understanding of their experience (Appendix 2). Photographs and my own observations will also be incorporated into the critical analyses. The combination of these approaches should lead to a more layered set of data that is not solely based on observation and my own reflection.

Figure 21 Cat or racoon sticker?



I began by introducing my research and explaining the purpose of the activity. I explained that in this exercise we would explore emotional engagement through interaction with physical materials. Students were attentive and listened to what I was saying about my research. I found this encouraging because sometimes this group of students can be very chatty, especially after the weekend when there is some catching up to do. The check-in that followed, asking about their mood, was received well. Students started to think about what kind of mood they were in. Doing the same for their neighbour was met with hesitation. A moment of silence followed, and students slowly shifted the conversation towards their weekends instead.

After the check-in was done, I started explaining the exercise. The energy shifted again. Students perked up and looked visibly surprised. Right after my explanation, I asked them to place the first sticker. They could choose between a raccoon, a cat sticker, or both. After that, I invited them to pick their colours and start with the playful warm-up exercise. I asked each group member to create a shared object for one minute before passing the clay to the next person. Not every group did the warm-up. Some students just wanted to play and familiarise themselves with the material. After that, they started building their event location. The energy in the room was calm, focused, and collaborative.



Figure 22 Group B interacting with Play-Doh



Figure 23 Group A interacting with Play-Doh

One student said loudly: "Miss, this is really good for my ADD!". While interacting with the Play-Doh, students started sharing their ideas about the event space. This happened in groups A, B and D. In these groups, emotional reactions occurred, such as excitement, laughter and surprise. Some students also commented on the familiar smell of the clay. However, in group C, some students disengaged, turning to their phones or putting materials aside.

After about 30 minutes, the energy shifted again. Students were finalising their creations and started conversing about what they had made. This happened in groups A and D. In group B, a student made dice and started to play around with them. Group C had already started cleaning up. The session ended quite naturally. Students filled in the feedback form and afterwards took a break. At the start of the activity, I felt quite confident. Since I had done this activity before, I was relaxed and excited to get started. When I started talking about my research, I could feel my students listening; I felt supported. They were present, in the here and now. After I introduced the material and most of the response was excitement, I felt great to be honest. One moment that really stood out to me was when a student asked me if I had a tool to cut the clay. I felt a sense of urgency to find a tool because the student in question is one that, for some reason, I find hard to reach. In my lessons she is very quiet and spends a lot of time on her phone. I was searching for a tool in my backpack and luckily found scissors. When I returned to her table, she had already used her public transport travelling card to cut the Play-Doh! (figure 23). Finally, she was visibly participating in my lesson. I felt super happy.



Figure 24 Student using plastic card to cut Play-Doh



Figure 25 Group C Creation

There was another moment that stood out to me. This one for a different reason. One student came in later during the check-in. Soon after they entered, they started talking to their group members, talking about the weekend. I was a little anxious about whether this would continue throughout the activity and was wondering if and how I would redirect them and the rest of the group towards the activity. This was not entirely the case. Yes, their presence was somehow distracting for interacting with the material, but interaction was still happening. The discomfort I observed and felt with last year's group was not the case with this group. They showed confidence about what they were making and, when I walked around looking at their creations, they were even proud to show me.

Now let's reflect on the check-in. The first part of the check-in landed. The second part was followed by hesitation. When they had to tune in to the person next to them, it felt like a step too big. Suddenly switching from thinking about your own mood to focusing on the person next to you did not work.

Then the warm-up exercise was welcomed but not needed per se. Some students preferred to play with the material themselves. The physicality of the Play-Doh seemed to break the ice and stimulate playful, spontaneous interaction. Students who initially hesitated became more involved once they started working with the material. This became visible when looking at where they placed their stickers at the beginning of the activity and halfway through.

Figure 26 sticker overview beginning of activity – Range: "Not in the mood" to "Can't wait"

<p>Oeen zin in Ik kijk hier eigenlijk niet naar uit.</p> 	<p>Een beetje geïnteresseerd Ik sta er wel voor open, maar echt enthousiast ben ik niet.</p> 	<p>Nieuwsgierig Dit zou weleens leuk kunnen zijn, ik wil het best proberen.</p> 	<p>Ik kijk ernaar uit Ik denk dat ik dit leuk ga vinden.</p> 	<p>Ik kan niet wachten! Ik heb er superveel zin in om te beginnen!</p> 
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Figure 27 sticker overview halfway through of activity – Range: "Not engaged" to "Fully immersed in the task."

<p>Niet betrokken Je bent er met je hoofd niet helemaal bij en voelt weinig verbinding met de opdracht.</p> 	<p>Neutraal Je doet mee, maar zonder veel enthousiasme of tegengien, gewoon oké.</p> 	<p>Geïnteresseerd Je vindt het best leuk om ermee bezig te zijn en je begint ideeën te krijgen.</p> 	<p>Energiek Je bent actief aan het klooiën, denk met me en hebt er echt zin in.</p> 	<p>Helemaal opgaan in de opdracht Je bent geconcentreerd, creatief bezig en je ideeën beginnen echt vorm te krijgen.</p> 
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The student feedback in Appendix 2 shows that working with Play-Doh made the activity more engaging and creative compared to just talking about what it was going to look like. Responses like “It was nostalgic to work with clay again” and “You’re engaged and not distracted by others or phones” indicate this. Many students also mentioned that working with the material helped them visualise their event space better. One student said: “Expressing it visually helped others understand,” which also says something about collaboration and working in a team. For this student, expressing their ideas visually also helped them communicate with other teammates.

On the other hand, some challenges emerged. One group in particular lost focus early on, engaging in side conversations unrelated to the task. They showed disengagement by withdrawing from the materials and using phones, interrupting the collective momentum.

Also, the invitations on the digiboard were not really used. Students in every group preferred doing their own thing instead of responding to the invitations. I also noticed that the reflection at the end was quite short compared to last year’s group. During the activity, students were having conversations not only about what they were creating but also about how and if it could be applied to their real event space. Last year, that didn’t happen; students discussed what they were making but didn’t directly connect it to their real event space until later.



Figure 28 Invitation on Digi board

Looking back at the second part of the check-in, I understand why the hesitation may have occurred. It’s quite a jump from thinking about your own feelings to focusing on someone else’s, especially in a group setting where that kind of emotional awareness isn’t something they are used to in this specific context. It reminded me of what Fredricks et al. (2004) say about emotional engagement needing a safe and supportive space.

The reactions referring to nostalgia, with the clay but also with the stickers, show that memories triggered positive feelings. In the feedback, students also relate this material to their childhood. We

know that positive feelings are important for motivation and engagement (Pekrun, 2006; Pekrun & Linnenbrink-Garcia, 2012). This activity can also invite students who are usually in the background. Remember the student using her public transportation card to cut the Play-Doh?

The disengagement of group C and the fact that the invitations on the digiboard weren't really used made me aware that every individual and group has different needs. Although the invitations were not used by these students, that does not mean I will not use them again. It could be that next year I have students in my class who benefit from these invitations. Also, just introducing a material is not a magic fix. There are many factors that influence emotional engagement: how a group works together, individual moods and interests, and how I guide the activity. This fits with the idea that emotions are complex and shaped by social and cultural contexts (Denzin, 1984; Ahmed, 2004). I also found it interesting that students were talking about how their creations could actually work for their real event space. It seems that physically making something helped them make that step from abstract idea to real plan.

Overall, the activity was received well. The analyses suggest that working with Play-Doh can foster emotional engagement, but it is not guaranteed. Other factors also play a role like individual differences, group dynamics and how I facilitate. So, if I want to use material-based activities well, I need to pay attention to all the factors.

Next time, I aim to explore better ways to engage students who tend to check out. I also want to try a different approach with the reflection questions at the end: joining each group separately to see what comes up. Additionally, I plan to continue monitoring how emotional engagement develops across repeated sessions, to understand whether the impact of physical materials lasts or if innovation is needed to keep it effective. Beyond the activities in this thesis, I want to keep incorporating working physical materials into my practice.

3.5 TRYING DIFFERENT MATERIALS

The third pedagogical act that I am going to discuss now took place between the first and second act. It occurred on the 5th of December 2024. I wanted to explore beyond Play-Doh. In this activity, I introduced a variety of different materials with various shapes and textures.

Two student groups were assigned to each phase of the so-called customer journey. When the activity was introduced, my students had already conducted some research, such as visiting the museum to observe the current audience and performing desk research on online visibility. They had some insights that they could use for the next step: coming up with recommendations per phase. I wanted to explore how these materials could help students engage emotionally with the assignment by moving beyond abstract brainstorming and offering them a more hands-on, tangible way to work.



Figure 29 Classroom set-up



Figure 30 Close-up materials

ACTIVITY PLAN

Participants: 5 groups.

Pre- exposure: A: 3 students, B: 4 students,

Direct- exposure: E: 3 students

Post- exposure C: 4 students, D: 4 students

Explain the activity – 10 minutes

The questions in the figure below form invitations for students to interact with the materials. I explain that this activity is to get the process of coming up with ideas/recommendations started.

PRE

How can you design a playful and interactive object that engages people with the themes of Toekomstmakers and guides them to the museum?

DIRECT

How do you ensure that visitors are seamlessly guided to the exhibition? Consider both children and adults

POST

Imagine designing a machine that keeps visitors connected to the exhibition. What does it look like, and what does it do?

Do the exercise → 1 hour

Presenting and reflection – 20 min

When students are finished, they can reflect on what they have made. I ask every group to share with the rest of the class what they have made and what they got out of the activity

3.6.1 CRITICAL ANALYSES

You can probably guess it by now, but I will use Gibbs' (1988) reflective learning cycle again. In this iteration of working with physical materials, I wanted to try not working with Play-Doh. My data collection approach was more elaborate and similar to that of the second Play-Doh activity.

I invited my peer Ronald Bal to observe the session. The instructions I gave him and the written observation can be found in Appendix 3. I also asked students reflective questions to deepen my understanding of their experience (Appendix 4). Additionally, photographs, my own observations, and informal conversations with students are incorporated into this critical analysis.

When my students walked in and saw the set-up of the space, I noticed some were surprised. Questions like: "Miss, what are we doing?" and "Are we crafting?" arose immediately. After they all sat down, I explained what the activity was. An important instruction I gave was that they were free to use whichever materials they felt inspired by, including those from other tables. As the students began, the atmosphere was high-energy. Most of them jumped straight into working with the materials, enthusiastically discussing ideas within their groups. Some made a plan first while others began making straight away.

I felt very excited to do this activity because I was curious how this group would respond to the activity and the multitude of materials. When I saw the general response and how most students were eager to get started, I felt a sense of relief. At the same time, I was aware that the initial focus they had could be lost. I also noticed a sense of excitement in my students. One student said: "It is nice to do something different," while another student said halfway through: "This is so relaxing, can we do this more often?"



Figure 31 Group direct-exposure



Figure 32 Group1 of 2 pre-exposure

Overall, the activity was a success. Students were engaged, discussed ideas, and experimented with materials. The use of different materials seemed to stimulate creativity and responded to their desire for more variation in the lesson activities. One student noted in the feedback form: "It was fun to work creatively together and make something physically, rather than just thinking about it as a group." Some groups even incorporated their creations into their final recommendations for the museum.



Figure 31 Willy the jellyfish became the mascot of the new exhibition and became part of the advice these students gave to the museum

Figure 32 Group 2 of 2 pre-exposure

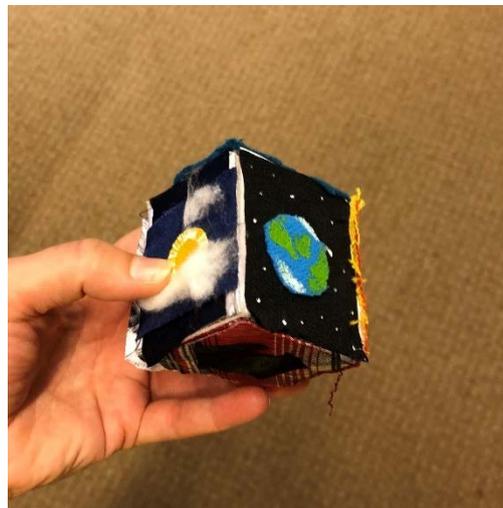


Figure 33 Group 2 of 2 pre-exposure made a die. Each side representing a theme of the exhibition Toekomstmakers

With some students, I noticed that they had trouble connecting and working together with their group mates. In those groups, I joined in. In the picture below, I noticed a student disengaging, looking puzzled about what to do. I joined her and showed her how she could work with cardboard. Modelling this behaviour really helps students to re-engage with the activity again. This is something I also noticed in the other pedagogical acts I discussed earlier.

Figure 34 Modelling working with cardboard.



This activity shows that emotional engagement through working with physical materials can be enhanced. I must note that it is not a given. Yet again, the interplay between the material, myself, and my students is very clear to me. Without my facilitation and the materials as co-teachers, the students would not participate as learners. Material pedagogy is not only about the material but also about the relationships and interactions that those materials evoke in learning environments. This aligns with the literature discussed earlier and the insight that in learning, social and emotional pressures are very complex (Denzin, 1984; Ahmed, 2004). From my observations, Ronald's, and the feedback form, I can conclude the activity sparked excitement and joy. In the feedback form, many students said they thought the activity was fun and something different. Also, in response to the question "Would you like to do this activity again?", everyone said yes.

As stated before, some groups incorporated their creations into the recommendations. Others made creations that were less applicable as recommendations for the museum. Still, there were things to be gained from the activity; for example, many groups stated in the feedback form that working in this way helped them communicate effectively with each other and share ideas (which is also one of the learning objectives in the module).

Figure 35 Group 2 of 2 pre-exposure





Figure 36 Group 1 of 2 post-exposure



Figure 37 They made a solar system with Het Nieuwe Instituut in the middle

All in all this activity shows that working with different materials can be a valuable tool to stimulate emotional engagement, as long as there is sufficient pedagogical guidance to ensure focus and collaboration.

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I started this research from a personal interest, trying to explore whether working with physical materials in the classroom can foster emotional engagement for both myself and my students. Seminars at MEIA, literature reviews, conversations with colleagues and students, and conducting three pedagogical acts have all been part of this exploratory journey. It began as a result of a personal emotional disconnection from the lesson activities I was conducting and a desire to offer more variety to my students.

HOW CAN WORKING WITH PHYSICAL MATERIALS IN THE CLASSROOM CONTRIBUTE TO THE EMOTIONAL ENGAGEMENT OF MYSELF AND MY STUDENTS?

The findings from the research have shown that working with materials can indeed foster emotional engagement, but it is not a guaranteed outcome. Conducting this research has shown me that providing structure and guidance is very important. Without modelling behaviour and providing support when needed, focus can be lost. This aligns with the insights of Fredricks et al. (2004), who emphasise the balance between freedom and structure in fostering emotional engagement. In addition, this research has shown that interaction with physical materials can encourage students to engage more deeply with their ideas, their peers, and the learning process itself.

It also made me aware of how important scaffolding is in order to ensure all students benefit from the activity, especially if it is a way of working that is new or less familiar. Also ensuring a safe(er) learning environment.

Furthermore, the emotional engagement observed was deeply intertwined with the social dynamics in the classroom. As Denzin (1984) and Ahmed (2004) suggest, emotions are relational and shaped by interactions within the learning environment. This aligns with Barad's (2023) concept of intra-action, meaning just putting material on a table is not enough for interaction to happen. The interplay of material, facilitator, and students is crucial to creating an emotionally engaging atmosphere.

In conclusion, there is no one-size-fits-all solution. Rather, working with physical materials serves as a tool to invite students into a more embodied learning experience, offering opportunities for positive emotional responses. As stated before, conducting this research has led to many valuable insights, but they are not absolute. The challenge remains to observe how these material-based approaches stand the test of time, especially as the novelty of such activities fades.

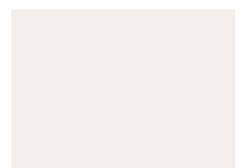
However, I hope that the people who read this thesis and the people I share it with see the value in this approach. I hope it inspires them to do the same even if it is new or feels uncomfortable.

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The question probably burning in your mind is; "So Amira... what's next?". Firstly I would love to share the outcome of this research with my colleagues. I also envision an expansion of material-based pedagogical practices within my institution. The first thing I would like to do is be the facilitator at the makerspace (RAC practice week) next year. I plan to share my findings with the organisers and create a plan to actively invite students into the space rather than just offering the materials passively. In addition, sharing the insights with the management team of the Rotterdam Academy is on my to-do list. I am currently setting up a meeting with my manager to explore further possibilities.

In the modules where I have conducted the pedagogical acts, I would like to share the outcomes and raise awareness among my colleagues about what this approach can offer both them and our students. Furthermore, I plan to continue experimenting with these types of activities. Once my students and I feel more comfortable I plan to further explore how embodied practices can be integrated in my teaching practice. For example theatre exercises or other kinaesthetic activities. I do this not only for the purposes of my own teaching but also as a way to foster a culture of embodied learning within my institution.

Ultimately, I see the potential for these activities to become a regular part of my teaching practice and potentially influence educational practices across the institution.

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APPENDIX

Appendix 1: Observation peer Ronald Bal second pedagogical act (Play-Doh 2.0)

Observation – 13 April 2025

What do I want to find out and what will you observe?

I'd like to ask you to pay attention to these two aspects:

- The level of emotional engagement among students
- Whether and in what way that engagement influences what happens next, such as the conversations that arise or the moments in between

Look out for:

Spontaneous expressions: Do students express their emotions verbally or non-verbally, such as laughing, sighing, or showing enthusiasm (e.g., "Wow, look at this!" or "This looks great!")? When does this happen?

Emotional shifts: Are there moments when a student shows a change in emotional state (e.g., from frustration to pride after completing part of the task)? When do these occur?

Conversations: Do conversations arise? Both during and after the clay activity. What are students saying to each other?

Observation

Amira explains her research

Students were focused and stopped talking as soon as Amira started speaking.

Check-in

In pairs: "What was your mood yesterday?"

Students actively engaged in conversation.

A student entered the room; the atmosphere shifted slightly. It feels less focussed. Students draws attention from other students in group by telling personal stories.

Second question – hesitation appears – emotional shift. Silence arises.

Students started chatting with each other and did not continue with Amira's question. They went on to talk about their own experiences and what they did over the weekend.

Students lost focus; side conversations emerged.

Spontaneous outbursts, laughter, talking about the weekend.

11:02 AM – Third question, distributing stickers.

Task is assigned.

Materials are handed out. Spontaneous outbursts occur. One student says: "*Wauw this is great for my ADHD!*" another student says: "*This feels so nostalgic first the stickers and now the clay*".

Students actively engage with the materials/play. Students also, start smelling the clay: "*Wow this smell is so familiar*".

Emotional shift: A different focus emerges. Students begin to play spontaneously while chatting about what they are making.

11:07 AM – Getting into it

Emotional shift: As instructions are given, students become focused and quiet.
Spontaneous outburst: After the explanation, students begin laughing and return to the materials.
Conversations: After Amira provides further instructions, collaboration begins. Students work together more on their creations. As the explanation continues, students carry on with the materials.
Emotional shift: Students now seem more capable of understanding what they're doing and communicating about what they are making together.
Conversations: They talk about what they are making and how they envision the event space.
Emotional shift: Students near Amira try to collaborate more. Increased focus is noted. Students stack their creations together. This group also discusses what still needs to be done before the event. What is on the to do list?
Spontaneous outburst: A student (back right) turns on his phone and shows a video of someone laughing. He repeats this several times. This group stops working with the materials and waits. Meanwhile, they continue conversing.
Other students keep playing with the materials and continue calmly.

11:29 AM – Second round of stickers

Silence falls. Students look around.
Spontaneous outburst: "OMG, you have shapes!"
Students gather and talk about their feelings.
"I'm in pain, bro!"
Emotional shift: Boys put materials in each other's necks or grab their phones and check out for a moment. (only 1 particular group Back right)

11:35 AM – Emotional shift:

Students re-engage with the materials. They start to play by making dice.

11:39 AM – Emotional shift:

Students (back right) grab materials and put them into containers. This causes conversations to stop. The opportunity to talk about the experience is ignored with this particular group.

11:40 AM – Conversation (3 other groups):

A student starts talking about what they've made and how it connects to their event space.

11:53 AM – Emotional shift:

Students begin answering Amira's feedback questions.
Everyone picks up their phone and starts working on the questions. Silence falls.

Spontaneous expression: Those who are finished leave for a break. Students spontaneously get up and leave the classroom. "*Time for a smoke!*"

Appendix 2: Feedback students second pedagogical act - (Play-Doh 2.0)

Which moments during the activity stood out to you most?	Why do you think those moments stood out?	What changed for you when working with clay instead of just talking about your event space?	What differences did you notice?	Anything else you'd like to add?
Working with clay	Because I hadn't done that in a long time	It made me think more deeply about it	You become more active	Nothing
It was nostalgic to work with clay again	Because we also did this as children	Not much	Maybe more visual thinking	-
Brainstorming together about what we were making	Because we were being creative together	I could work well with my hands	Not much	Fun assignment!
Being creative and finding solutions together	You're engaged and not distracted by others or phones	It reminded me of tasks I still had to do	Neutral at first, but ended up positive	No
Creating the location – I really enjoyed it	Yes, I got excited	I became very creative	Everyone had different ideas	You're doing great! Hope you get your Master's!
Shaping with clay	Because I was actively involved	You're being creative	Everyone makes something different	N/A
The moment we got the clay	It was surprising and nostalgic	-	-	Nice idea!
Thinking about the route and directions during the event	Because it's important and I hadn't thought of it yet	More visualization	Thinking about routes	Nice way to fill the lesson
The excitement once everyone started working with clay	My groupmates were skeptical but ended up liking it	You got a better visual idea	-	Fun assignment!
Being creative	Because it shows and helps you	Getting a picture of how it will look	None – we were mostly	Fun and creative

	see your own vision		on the same page	
Coming up with new ideas in addition to what we had	Maybe it made us more creative	Expressing it visually helped others understand	More creativity	Fun task, but I wouldn't want it daily
Making the camera	Final product was created	It sparked creativity	-	-
Being creative	Because it's completely different from what we normally do	You visualize things and see what's missing	Not really	It was varied
Working creatively with clay and recreating the entrance	Because we spent most time on that	With creativity	Doing instead of saying	No

Appendix 3: Observation peer Ronald Bal on third pedagogical act

Observation - 5 December 2024

Points to pay attention to:

- Are the students actively engaged in the activity, or not? How can you tell?
- Do they share ideas and collaborate within their groups?
- Are there students who are silent or not actively participating?

Observation

Some students started working with the materials before fully understanding the assignment.

The group began to organise themselves by moving around. After that, smaller groups formed.

The energy was high; almost all students were engaged with the materials, sometimes individually and other times in pairs.

Some students were criticising other students in their own group, joking, and challenging each other. Amira addressed this. The students then continued with their activities. The large groups broke into smaller groups, but no cooperation seemed to emerge from this.

One student did not participate actively. She didn't receive support in this regard. It was unclear whether she needed support. She didn't get attention from her peers, only when she specifically asked another student. She then withdrew again, looking at her phone. After 15 minutes, she started working with the materials, drawing on paper and cutting things out.

After half an hour, a sense of calm and concentration emerged. When Amira left the classroom, most students continued their activities.

The small group was actively communicating and experimenting with each other.

When Amira returned, ideas were shared more openly. With additional guidance, more communication seemed to happen between the different groups.

"We should do this more often, a bit of crafting, it's great," said Wouter.

Most students took the opportunity to try something new and sought out their peers to carry out new ideas together.

After about an hour, several students finished their materials and began talking to others and checking their phones. This seemed to be related to their focus.

After Amira's instructions, there was renewed focus, and the students began communicating again about how to build on their work.

After an hour, the students seemed to need more direction—what else could they do with their self-made objects? After a small intervention and some guidance from Amira, they seemed to move forward.

After an hour and a half, several students lost focus and started visiting each other's tables or joking

around. After that, the students seemed to focus again on their projects, especially when they heard they would need to present their work to others.

Amira asked the students to clean up, some took the initiative, while others quietly continued their activities. In the end, the classroom was cleaned up 10 minutes later.

After the desks were cleaned every group presented their creations. The students were interested in listening to each other's "new institute" objects.

After that they filled in the feedback form.

The students went for lunch at 12:15 and mentioned they were hungry.

Appendix 4: Feedback students third pedagogical act

What worked well in this activity? What did not work?	The idea was fun, but the result wasn't as practical.
	I found it refreshing to do something different in the lesson. I was able to express my creativity, which I like.
	The collaboration worked well, but sometimes some people weren't as involved.
	I liked that we had freedom in what we wanted to do but still had a goal to focus on.
	The connection to the new institution's assignment, the creative work.
	The group setup and table arrangements were good.
	The communication and activities themselves were enjoyable and rich in creativity, but it was somewhat chaotic.
	The teamwork was enjoyable. Working creatively together was fun, and it was great to see everyone's creativity. The materials, however, were difficult to work with and required creative thinking to use effectively.
	You were given the freedom to get truly creative, with very few guidelines, which allowed us to dive in. Everything was clearly explained.
	I thought it was a fun activity, with plenty of materials that could be used in various ways, encouraging creative thinking.
	Communication went well, and we collaborated effectively.
	There was a clear task, but what didn't work as well was that we had big ideas but struggled with execution.
	Teamwork worked well, but our professional communication could have been better.
	I enjoyed thinking about the new institution in a creative way rather than just offering dull advice.
	I liked starting with this activity, and we only realised what it would be when we were already working on it.
	What worked well was that we generated more ideas for our actual improvement proposal.
It was fun to work creatively together and make something physically, rather than just thinking about it as a group. It gave us a clearer idea of how an idea could look in real life.	
What did you learn by physically making something rather than just brainstorming?	It made your creative mind engage.
	What you envision in your mind doesn't always match the real outcome.
	It allowed more creativity to come out, and you realise you're capable of more than you thought.
	You generate more ideas and can easily expand on your first idea to create something new and interesting.
	Different ideas arise when you create something first and then add a purpose to it.
	It's fairly mind-opening and makes you more receptive to new ideas.
	You can sometimes come up with very original ideas just by doing and creating.
	There are countless possibilities, and sometimes you need to think beyond the obvious. Anything is possible if you're creative.

	<p>Your creative mind starts working once you start thinking and looking creatively, especially when there are materials in front of you and you're making something that can aid the process.</p> <p>By visualising things for myself, I learn to think more creatively and outside the box.</p> <p>I looked at the concept from various perspectives, considering what was feasible.</p> <p>By approaching the creative process differently. Brainstorming can sometimes be quite boring.</p> <p>Yes, everyone contributed their talents and took the initiative.</p> <p>Brainstorming is always so theoretical, but once you start working, you realise there are things you run into that you would never have thought of during brainstorming.</p> <p>I was able to use my creativity and get stuck in without overthinking it.</p> <p>More ideas arise by doing, rather than overthinking.</p> <p>Sometimes it was hard to translate our ideas into what we wanted them to be. But all in all, I think the final result turned out quite well!</p>
How did this activity help you come up with new solutions?	<p>By thinking outside the box.</p> <p>I'm not sure if this activity has helped me come up with new 'solutions' but it did help in brainstorming and figuring out how to create something.</p> <p>It made me think more broadly about a solution.</p> <p>Having a few materials available forces you to use them, or part of them, which helps you come up with new ideas rather than having to start from scratch.</p> <p>We already have an idea for a prototype.</p> <p>Not necessarily.</p> <p>It gave more insight into how to visualise something and how it might unfold.</p> <p>The creative solutions that emerged.</p> <p>Since it involves crafting, you begin to think and look like a child. How can we make this so it's understandable for children?</p> <p>It encouraged me to think more creatively, maybe thinking this way will lead to better ideas.</p> <p>The focus wasn't so much on realistic solutions.</p> <p>By considering ideas from the rest of the group and working with limited materials.</p> <p>For example, by listening to each other's ideas, we came up with a great ring for Saturn.</p> <p>It allowed us to view the institution from a new, more creative perspective.</p> <p>You need to consult with others, and as you progress, more new ideas emerge for adjustments.</p> <p>This activity revealed that there are more possibilities than we had first considered.</p> <p>I learned that by working on ideas, you quickly spot problems or areas for improvement. You see where things don't work.</p>

	By working with our hands, you have to approach things more creatively. Working with different materials sparked new ideas that didn't arise during brainstorming.
Would you want to do this activity again at a later stage? Why or why not?	Yes, it was fun. Something different for a change.
	Yes, but next time I would like to take what I've created or done into my assignments.
	Yes, then you can really bring your own idea to life.
	Yes, but with different materials or a different task.
	Yes, something creative, but not exactly the same.
	It's definitely more fun than a regular lesson, so yes.
	Yes, because I really enjoy the variety and just being hands-on in a fun way.
	Yes, something similar but not exactly this again. I think we've explored this as a group enough now.
	Definitely! It was a fun, creative, and playful way to approach new solutions.
	It's a good idea to do again once we've got a clear idea and are a bit further along. That way, we can visualise how it might look.
	Yes, it's good to see how another group thinks and how they approach things.
	I'd like to do it again but with different materials to challenge our thinking in new ways.
	I really enjoyed it, but I'm not sure how it helps with the work.
	Not necessarily, I think one creative thinking session is more valuable than two.
	Yes, I enjoyed crafting and expressing my creativity in a different way.
Yes, because we come up with more ideas when we actually do something.	
Yes, I think it helps to get a clearer picture of an idea, and it makes working on a project more enjoyable because you can see the results instantly. I also enjoyed the different way of collaborating.	
Things I still want to add...	Nothing.
	Fun, educational, and a nice change.
	I thought it was a fun lesson!
	No, thank you for the lesson.
	I'd like a different task in this format, something less abstract. I get that it fits with the new institution, but still.
	Nothing.
	-
	Amira explained the task well and helped us.
	Very fun creative lesson.
	-
	Are you going to throw this away?
	I thought it was fun and educational to work in a new way.
Although I thought beforehand, "What on earth are we doing and why are we crafting?", it turned out to be quite fun and more educational than I expected.	

