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## Appendix O: Project brief



Name student Lois Schrijver Student number 5,093,082

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT  
Complete all fields, keep information clear, specific and concise

Project title Overcoming polarisation

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

### Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

Research by the Dutch Social and Cultural Planning Office shows that three-quarters of people in the Netherlands believe polarization is increasing. Yet, research at Tilburg university found out, actual ideological differences haven't grown much, but the feeling of division has (Bennema, 2023). That creates a relevant opportunity for design: not to solve disagreements, but to make space for reflection, nuance, and understanding. This feeling alone can have serious consequences, it can create a feeling of "us vs. them," reduce social trust, and harm our democracy (Ministerie van Volksgezondheid, Welzijn en Sport, 2022). According to British writer Stephen Fry, in an interview with columnist Morris, people express concerns about the tone of political and societal debate, the lack of listening, and a declining willingness to engage (Morris, 2018).

Polarization also deeply affects youth. Their prefrontal cortex, the part of the brain responsible for impulse control and nuanced decision-making, develops until around age 25. At the same time, their reward system is highly active, making them more sensitive to strong emotions, social status, and black-and-white thinking. Polarization taps into these mechanisms by reinforcing "us versus them" thinking. Social media amplifies the effect: algorithms push emotionally charged or radical content, while likes and shares act as social rewards and enhance in- and outgroup dynamics (Uhis et al., 2017). Because adolescents are still learning to filter information critically and searching for identity and belonging, they react more strongly to negative or extreme content (Flanagin & Metzger, 2008).

A recent UNICEF survey among Dutch youth (ages 10–18) showed that 64% feel issues like migration, discrimination, and the war in Gaza are dividing people. Of these, 43% said they feel sad about the intensity of societal debates, while many feel excluded or silenced from these discussions (UNICEF, 2024). Youth workers see growing distrust toward the government, frustration, and hopelessness (Nederlands Jeugdinstuut, 2021). UNICEF calls on society to listen to youth and give them a voice (UNICEF, 2024). Healthy Start shares this mission and works closely with young people through co-design and participation. Together with Healthy Start, my graduation project explores how youth (16–25) experience polarization and how design can help make their voices visible.

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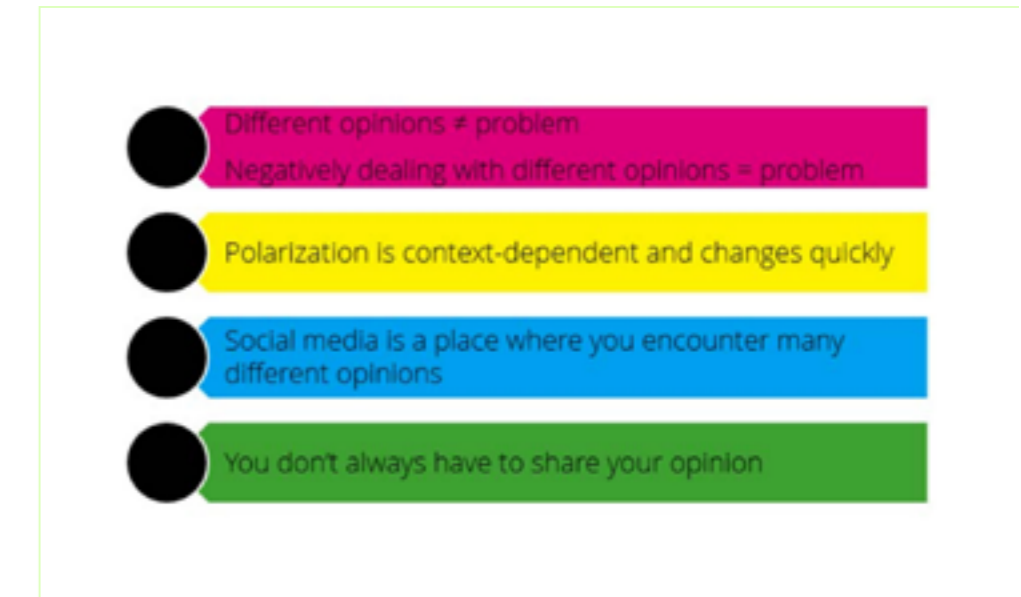


image / figure 1 van de Wetering, J. et al. (on going). Jongerenperspectief op polarisatie.

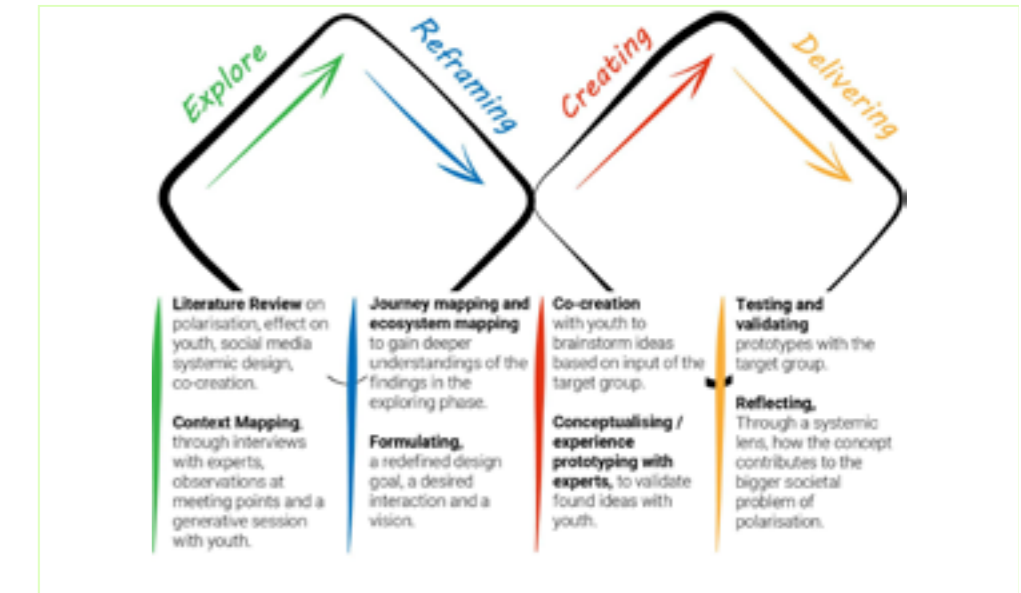


image / figure 2 Project approach based on systemic design framework and co-creation approaches.

**Problem Definition**

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice. (max 200 words)

Even though many people feel society is becoming more divided, research shows that our opinions haven't actually become more extreme. The real issue lies in how we respond to differences. In pre-research conducted by the graduation client, psychologist and EUR researcher Judith van de Wetering, young people shared that disagreement itself isn't the problem, it's the way people respond: with anger, pressure, or shutting others down (Figure 1). They also mentioned that you don't always have to share your opinion. Social media plays a role in this too, as it constantly exposes people to different, and sometimes extreme, viewpoints. This creates a relevant opportunity for design: not to solve disagreements, but to make space for reflection, nuance, and mutual understanding, while addressing feeling of disconnection that many young people describe. By working with young people, I aim to explore how design can make these emotional experiences visible and open up new ways of connection. This graduation project will focus on youth aged 16 to 25. I chose this group because it's a key phase in forming political opinions and learning how to relate to others with different views. Inspired by academic Loretta J. Ross and sociologist Arlie Hochschild, I want to explore how we can move from "calling out" to "calling in." Ross defines this as holding people accountable with empathy rather than shame (L. Ross, 2025). Hochschild shows that polarization is often rooted in emotion, loss, fear, moral hurt, and that empathy and shared experience can create real connection (Hochschild, 2016). I see an opportunity for design to create space for reflection, openness, and nuance, starting from the belief that we're often more alike than we think.

**Assignment**

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Design an intervention to create space for strengthening mutual understanding and reducing feelings of disconnection among youth aged 16–25, in the context of growing societal polarisation in everyday interactions.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

To explore how young people experience and respond to polarisation, I integrate systemic design with participatory and co-creative methods. Systemic design helps to understand connections, patterns and tensions in this layered issue, while co-creation gives youth an active role in building insights and solutions. Building on systemic design literature ((Van Der Bijl-Brouwer, 2023); (Van Der Bijl-Brouwer & Malcolm, 2020)), including principles such as mental models, social relationships and friction, I adopt a Double Diamond process: Explore, Reframe, Create, Deliver (Figure 2). The project will start by mapping existing Healthy Start research on youth perspectives on polarisation, combined with a literature review to identify knowledge gaps and promising angles. This will be followed by interviews with experts and youth, as well as observations at youth hubs, schools, sports clubs, and other meeting places. Inspired by the Convivial Toolbox (Sanders & Stappers, 2013), I will run a generative session with youth to elicit values, emotions, and lived experiences. During reframing, I will apply journey and ecosystem mapping to reveal connections, tensions, and opportunities, which I will translate into a desired interaction and a refined design goal. In the creation phase, ideas will be co-created and prototyped with youth, then iterated and reviewed with experts. Finally, the concept will be prototyped and tested with youth.

**Project planning and key moments**

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting**, **mid-term evaluation meeting**, **green light meeting** and **graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).

Make sure to attach the full plan to this project brief. The four key moment dates must be filled in below

Kick off meeting	9 sept 2025
Mid-term evaluation	10 nov 2025
Green light meeting	13 jan 2026
Graduation ceremony	10 feb 2026

*In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project*

Part of project scheduled part-time	
For how many project weeks	
Number of project days per week	

Comments:

**Motivation and personal ambitions**

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five. (200 words max)

Since starting the Dfl master, my interest in societal and political issues has grown. I've noticed the increasing polarization: more radical parties in government, more demonstrations, and especially a lack of dialogue. People seem to cancel each other out instead of talking. This shift fascinates me, because deep down, I believe people are more alike than we think. So when I saw this graduation opportunity, I knew I couldn't let it pass.

During my bachelor's, I did a minor in psychology, but now I want to dive deeper into sociology. Collaborating with psychologist Judith van de Wetering feels like the perfect chance to learn more about this field.

I also want to gain more hands-on experience in co-design and systemic design. I've learned about co-design during my studies, but haven't applied it much outside the IDE faculty. Co-designing with youth offers a great opportunity to see what works for them, and for me.

Finally, this project is a chance to explore systemic design. Because I was in between the old and new curricula during both my bachelor and master, I missed out on the systemic design courses. This feels like the right moment to explore methods and principles such as ecosystem mapping and social relationships principle.

# Appendix A: Expert interviews

Interviews conducted and transcribed, analysed and translated by me. These quotes are small parts of the interviews. Green highlighted quotes are used within the report.

## A1: Expert on Politics & Youth (Ei01)

Start by asking for consent over the phone and explain that I will send a consent form afterwards, which he can sign.

**Questions**

**Who are you and what is "Organisation"?**

What we mainly focus on is: what can you do yourself to participate in democracy? We need to activate young people to make their voices heard.

Organisation is an organisation that aims to be as impartial as possible. We explain the rules of the game: how politics, democracy and the constitutional state work,

**What does a typical working day with young people look like? What topics do you cover?**

Young people follow the path of how a legislative proposal moves through parliament. They are allowed to choose the topics themselves.

What youth comes up with is very region-specific and age-specific. Young people in cities have have a different persepective then in the country side.

Meeting is a major issue, creating negotiation so that people can feel hearing. When someone follows an argument, there are not discussed. Young people are also familiar with arguments made by others. That's important.

Often, by the end of the day, the 'group' comes together. When young people think differently, that's where democracy starts. And that's okay.

**To what extent do young people/adolescents engage with politics, and specifically with polarisation?**

Politics is often seen as a neutral matter, but it's not. Young people feel strongly about it. They often do not know exactly what their politicians stand for, but they're engaged.

**I have read that many young people feel unheard in politics and have little trust in the government. Do you notice this during the workshops? If so, in what way?**

What we mainly focus on is: what can you do yourself to participate in democracy? We need to activate young people to make their voices heard.

The mission is to break through opinion bubbles, for example through the sharing game.

In the workshop, the changes in democracy are not necessarily included in the program. We start with the idea of our current democracy and we can explore further if the topic comes up, but it's not embedded in the program. It may be addressed when certain events demand it or when young people bring up questions.

Young people need to learn that different opinions can exist.

**How do young people deal with (political) differences of opinion?**

Interviewed you explain the ground rules:

- a. You listen to each other.
- b. It is okay to think differently, as long as you remain respectful.

c. The other applies outside the workshop.

This is how you hopefully help form citizens who can talk to each other respectfully.

You have an "how to get through the door" to guest houses at schools. They use a card game. The coalition formation game. You have groups of students with cards containing statements. From these you have to create a party programme, and have to negotiate with another group.

You discuss that have to debate each other, examples of things that trigger young people to think and to compromise.

We let them experience what it means to be involved in politics themselves.

### How do you act when groups of young people are directly opposed to each other or when a negative atmosphere arises around polarising topics? What works, and what doesn't?

When young people are directly opposed, the key remains respect. We keep repeating this and introduce the Dutch "polder model."

In general, with the framework here, you can remain respectful and allow perspectives.

Finding common ground often happens around the youth council topic.

Local Politics is an issue that does resonate among young people.

Migration often comes up, but often people at the same school think similarly about it. So it depends on where they come from and the local context.

Recommendation to speak with those social studies teachers.

### Where do you see opportunities for improvement regarding polarisation among youth, and in what context?

Research comes from the representative official system. There is an old saying: "You don't like what you don't know." You cannot love democracy if you do not know it. In my view, one way to strengthen belief in democracy is by increasing knowledge about how it works and the influence you can have on it as a citizen. A possible solution to the problems that come with polarisation is to let young people come into contact more often with people outside of their "bubble". This broadens their perspective and helps them learn that it is okay to have a different opinion and to express it.

The solution is, allowing and encouraging it, meeting with other and meeting with other with respect. We need to challenge young people in this. The European has a lot of what you know. (Example: the House of Commons style debates.)

## A2: Expert on Politics & Youth (EiO2)

Start by going over the consent form for the audio recording.

Test the audio recording – do a quick sound check.

Explain the consent form.

Give a brief explanation of the project.

**Lois: First question: could you explain a bit what kind of work you did and what a typical working day at *Profillemans* looked like for you?**

**Interviewee** *Profillemans* is quite a large organisation. Essentially, it is an organisation for democracy and the rule of law. They do a lot of work in educating young people about our democracy and constitutional state. I worked at *Profillemans* as an educational facilitator. I guided and delivered programmes for secondary school students, and sometimes also for primary schools, to teach them about the rule of law, democracy and our constitutional system. We did this mostly through the national government, as in the Hague. There I was mostly about what the House of Representatives and the Senate do. But I also went to primary schools, where you explain things more through the municipal council. We gave guest lectures. In that way, you get conversations about how things are organised and what is the Netherlands.

**Lois: Did you also discuss topics that are currently prominent in politics?**

**Interviewee (2:00)** Yes, when I explained things through the Hague, we often went to the House of Representatives and there was usually a debate. Then I would ask them what topics were relevant to them, and based on that we would give a talk. It was often based on topics they

brought up themselves. Things they found important. We really try to connect to their world. Structurally, there had to prepare a 15-minute talk in advance, and based on that prepared we would go through the political process from problem to solution.

**Lois: Did you notice that certain topics came up frequently that young people brought in?**

**Interviewee (3:27):** Yes, something that came up very often, and probably still does, in terms of proposed laws, was along the lines of: we want to solve the housing crisis by having stricter asylum policies. That was a really big theme. The housing shortage linked to asylum policy.

**Lois: Were opinions on that topic very far apart?**

**Interviewee (4:10):** It really depends on where they come from. You have to try to understand their world and what they are exposed to.

You do notice that there are often negative talk about asylum seekers in newspapers. There have also been articles through news on other channels where we learned proposals for how to solve a world, even Netherlands. So sometimes you are presented with things that go against the rule of law, and then you look at where that is coming from together with the class. Sometimes I also explicitly said that I do not accept that in general. There was quite a negative attitude towards asylum seekers, foreigners, and also quite a lot of xenophobia.

**Lois: When extreme statements were made or a negative atmosphere arose, what did you notice in the children's reactions?**

**Interviewee (5:30)** Usually you can do this by asking one question after the previous, a "why" question. The approach I learned is that when you talk to young people about topics that are quite sensitive for them, you really have to remain neutral. You are basically their conversation partner, and you can always set your boundaries. But usually there is something else underneath the extreme opinion. For example, they see a lot of injustice and feel a need for more fairness. Many groups feel disadvantaged. This differs per class. Often they all start shouting at once, and I try to set boundaries that it is okay to have a conversation, but you

have to be respectful. There are always a few outspoken kids who speak up more than the rest. Then you have to realize that maybe only a few kids in the class hold that strong opinion, and the quieter ones do not. So the loud kids come up to me afterwards saying "I hope you don't think everyone in the class feels like that."

**Lois: Do you notice that the other kids maybe shut down when one person expresses their opinion very loudly?**

**Interviewee (7:40)** Yes, sometimes that is the case. You always have some students who are less motivated to participate. But I try to actively ask for different opinions in the class. I often play devil's advocate to offer other perspectives and ask what they think about that. I try to engage the quieter students more actively. The idea is that everyone participates, even if it's just by saying they heard instead of speaking. That way you try to include the "less visible."

**Lois: There was a UNICEF report that spoke to many young people about polarisation. It showed that quite few young people feel truly heard in politics and have little trust in the government. Do you recognise this?**

**Interviewee (9:20)** Yes, the report says that they feel politics is too intimidating. Politicians use a lot of difficult words that they don't understand, which makes them disengage. If they don't understand it, it feels very distant from their lives.

**Lois: Do you think that one-liners, for example in political propaganda, appeal to them more quickly?**

**Interviewee (10:14):** What you also notice is that experience really appeals to them.

At Parliament we have learned an interesting trick in a very interactive programme. In our meeting a hour of the class all day. They often come in expecting me to talk the whole time, so they are not prepared for having conversations or having to think and do things themselves. In the end, you have to ask them what they really enjoy. That especially the games. And that also helps them remember. I better avoid difficult words in this regard. It is UNICEF that people

already drop out when you use words like "democracy" because it doesn't connect to their world.

**Lois: Do you notice that young people have already picked up something about politics before they come into your sessions?**

**Interviewee** That really varies. Sometimes I have students who have already studied politics, who have even been to a big city. They come in with some prior knowledge. The politicians they do know are the ones they know from TikTok, or activists on social media.

**Lois: So social media does influence their views?**

**Interviewee (13:01):** Yes, it's mainly the visibility. Those are the people they know. They are more impressed by them than by some random member of parliament.

**Lois: What if a group is strongly opposed to each other, or a heated discussion arises? What works for you, and what doesn't?**

**Interviewee (13:45)** In general, I haven't experienced it getting completely out of hand very often. Students also tend to correct each other, and I think that's partly because they already know each other from being in the same class. But the main risk is that students say something that is hurtful, racist or discriminatory, which can make others feel unsafe to share their opinion. I try to set clear boundaries from the beginning so this does not happen. I make everyone participate, with an offering to correct or moderate them to engage respectfully. I make a deal with them at the start of the day, and these kinds of rules are part of that. What works with young people is being clear about what they get to return. I also help to give them a sense of control.

**Lois: When you think about polarisation, what do you see as the dangers for young people? Or maybe also positive aspects?**

**Interviewee (16:50)** What I sometimes find difficult is that I only see these students for a few hours, and it is not my goal to change their opinion. I sometimes wonder if maybe others should have... it's not my job

to influence their political view. What I do want is for them to reflect: where does my opinion come from? I also realise that some students don't learn this at school. I've read articles about this: for some, it's the first time they are talking about certain topics. So it's not strange that they sometimes make polarising statements. Sometimes it is also just conversation, trying to be tough, knowing that they're just children. So that's often a side effect.

My main goal is that they learn how to formulate their opinion and understand that their opinion matters. If you have a problem with something, you should go and vote or use your voice in democracy in another way.

Polarisation is a big word, and I think many people don't really know what is meant by it. It's important to keep talking to each other, as long as it's safe and within the rules we agree on. Respect each other, and other opinions are allowed to exist. But also be critical about adopting someone else's opinion, or something you saw in a video. Think about whether it's the full story, and whether you understand the other perspective. I try to give them a kind of "thinking toolkit".

**Interviewee (20:00)** They are young people, even if they are doing this course for the first time. They are not necessarily engaged. They are mostly focused on each other. When they say something, they're not really saying it to me. It's also for young people to make mistakes in how to give feedback. I can help them. But also see that they often would understand what they're not saying. I encourage them to speak up and what others say or what they present say.

When dealing with polarising and sensitive topics, I try to go to the deeper layer. To ask what is underneath. If you keep asking, it often comes down to safety. Young people can't always express that well, so sometimes you have to help them. I help to ask more about questions and to frame things clearly. Otherwise they shut down. Young people are open to having difficult conversations, but you have to keep it close to their world, also going from the feeling that what they share is valid and acknowledging their viewpoint.

**Lois:** Yes, they need to feel heard.

## A3: Teacher of social studies (Ei03)

Start by going over the consent form for the audio recording.

Test the audio recording – do a quick sound check.

Explain the consent form.

Give a brief explanation of the project.

**Lois: I was wondering what your social studie classes look like and which topics you cover.**

**Interviewee:** Well, I can explain that I teach at a (HBO/VWO) school. Social studies is a subject that currently does not have a national final exam, so there is quite a lot of freedom. However, there are two learning objectives. As a teacher in the Netherlands, you are expected to cover certain topics. If I would normally, in our textbook the subject is divided into two main themes. First, we look at what social studies actually is and what we mean by social issues. Then we look into the role of law, the political system, democracy, elections, and political parties. We look at the welfare state, especially how the Netherlands has shaped the social contract between the government and citizens. And finally, the globalisation society brings a multicultural society, how that comes to be, and what the advantages and disadvantages are. Based on these themes, you have learning goals and skills to work on, and a selection of freedom where you design your lessons.

**Lois: I think you also told me previously that you sometimes deal with topics related to polarization. Is that right?**

**Interviewee:** Yes, but when I usually notice with a subject like social studies is that it often is a huge dilemma to discuss important themes, exchange ideas, or work on assignments. Personally, I think it's very important that school is a place where students are broadly exposed to

ideas and perspectives. That they learn, first, to reflect on themselves 'Where do I stand?' and second, to put that into words. That's challenging because political and social concepts are complex. But I actually find it more important that they connect with their emotions: what do I feel about this?

In the moment, when political things around and started with preliminary democracy because elections are coming up, usually we have to understand what's happening in society and what's meant to be allowed to vote. What do parties stand for? It's a great opportunity to unpack the one-liners used in campaigns. At first, you often see students strongly identify with one side or another. My goal as a teacher is to go deeper: if you choose this, what are you not choosing? That's often unclear.

work a lot with arguments and debates. If the statement is 'the rich should pay less tax,' many students agree, but they don't get understood the complexity—what taxes are used for, and what the consequences would be if you lowered them. Often you're the opposite side, which is fun too, but that also has consequences. So you bring in nuance. Not explicitly about polarization, but about showing that while you may think you have strong opinions, reality is often more complex.

**Lois: Do you notice that young people often start with very fixed opinions, or does that vary?**

**Interviewee:** In my experience, most adolescents, my students are usually around 15–16, do have quite strong opinions, or at least they show them in class. But you can get them to move. It's important to let them experience perspectives different from their own. That's the biggest challenge. I do have my own views, but in class I try to stay as neutral as possible so they feel safe. I want to guide their thinking, not become someone they need to oppose.

sometimes they will see other things, and the media, but my role is to help them become more nuanced than what they often see in the media.

**Lois: Are there topics where opinions are especially divided?**

**Interviewee:** It's very time-dependent. For example, the Green party is a major issue right now. But interestingly, opinions are not extremely divided. We are a very diverse school in Rotterdam, with students of

Asian background, small background, Libanese, so you have to be sensitive. For example, the Green teacher does a Russian story, and the Libanese students struggled with that. How do you handle that? I think you need to talk about it together and make space for all perspectives. Political conflicts are very present.

last year, there was a heated conflict about gender inequalities. Some students said that I've got chosen 'boy' this is unfair to be excluded. I had to manage that and turned it into a debate. At the end of the lesson, a boy came up to me and said 'It's interesting, I've never looked at it from that side. For the first time I see there are good arguments on the other side.' Sometimes the topics are less, sometimes very political.

**Lois: I read that young people feel unheard in politics and have little trust in government. Do you see that?**

**Interviewee:** It's difficult because they don't really know yet what "the government" actually is. They know that you vote, if they vote they don't have the power to affect anything with families. What I do notice is that when I ask: if you were 18, would you vote? Many say: "No, I'm afraid I'd make the wrong choice." They think you have to agree with everything, otherwise you don't vote. But not voting is also a choice. I do think social media and political instability affect their trust in the government. One-liners work well. Simplicity is attractive. But it's our job to show that those one-liners are strategies to influence you. There's psychology and marketing behind them. Nuance is harder.

**Lois: How much do children know about politics before social studies classes start?**

**Interviewee:** It varies a lot. It depends on their home situation and experiences. For example, for example, how many news items, which is very valuable. There's a different kind of power in lived knowledge, it makes students lean in, especially when the topic is emotional. But in general, their knowledge is limited. Concepts like democracy, transparency, and the role of the media are not very clear to them.

**Lois: When discussions become more polarised, how do students react?**

**Interviewee:** It depends on personalities and on the group. Each class is different.

For both I see, you don't start with heavy topics immediately. You need to know what you're doing, you know students are very sensitive and you're not. That can be difficult but also why, as a teacher, you have to manage it. It's important to set clear rules for discussion, what students can do, something that happens. Students have more than 15 years old to be both sides to be heard and to ask questions that bring nuance.

**Lois: Is polarization more noticeable in school, in regions, or in the media?**

**Interviewee:** It's everywhere. You can't escape it. It is in the whole society, an at this point extremely in media. Algorithms don't help. Maybe people do not realise it, but they feed you more of what you already believe, making it an amplifier. That's why schools should make students aware of this and teach them to actively look for opposing views. Everything that happens in society enters the school, such as discrimination, which is a big topic.

sometimes you're not allowed to discuss it, and I understand. We live in a country where different opinions are allowed, but you are not allowed to turn those differences into hatred.

sometimes you get more for a conversation, the left side, to see what the teachers were growing up in the culture of your dialogue. That really stuck with me. You can't take parents out of the equation; the influence from home is very strong. We need also include more personal questions to help us students reflect on what conflicts between home and school. That is part of the journey; instead of thinking in black and white, development starts to happen.

**Lois: A lot of polarization is about "us vs them." Do you see that in school?**

**Interviewee:** Yes, definitely. Sometimes along with an religious lines, but also just as part of growing up. Adolescents are searching for belonging. They experiment with identities. That's normal. The extremes usually soften over time. But it's important that it doesn't become rigid "us vs them" thinking. Dialogue must remain possible.

**Lois: Research shows that young people don't mind different opinions, but they do mind how people deal with differences. What's your view?**

**Interviewee:** Respect is key. Even if someone's opinion strongly opposes yours. There are boundaries, of course. **I think it really helps young people who are still figuring out where they stand if you don't dismiss them, because that's how radicalization starts.** Otherwise, they lose respect for you and just start shouting their opinions even louder.

**Lois: Where do you see opportunities to reduce polarization among youth?**

**Interviewee:** I strongly believe that schools play a crucial role, because this is where young people spend most of their time and where you can truly get to know them. It is difficult for young people to accept ideas from someone they do not have a relationship with. That is why they need role models and **I think we need spaces where young people feel seen, and where there's room for the difficult conversations.** It is also important to actively bring together people with different backgrounds and opinions.

When it comes to social media, I do not think we can fully control it. What is essential is awareness. If you are not careful, you get pulled into one direction.

Young people often think they see many different opinions on social media. To some extent that is true

Simply hearing someone express an opinion can already feel like diversity to them. At the same time, algorithms quickly guide them into echo chambers.

**Lois: Is there anything else that you think is important to add?**

**Interviewee:** **When we talk about young people, we have to see polarization in the context of their development.**

**Lois: Polarization can also help create change in society.**

**Interviewee:** Yes, emotion is often necessary to create action. You have to care deeply about something to move.

**Lois: Young people say they are curious about different opinions.**

**Interviewee:** Exactly. Curiosity is key. When opinions clash, curiosity can grow. That helps people to nuance their views.

The space between different "bubbles" is crucial. Polarization may be inevitable, but how we deal with that space in between is what really matters.

## A4: Expert on social media & youth (Ei04)

**Start by going over the consent form for the audio recording.**

**Test the audio recording – do a quick sound check.**

**Explain the consent form.**

**Give a brief explanation of the project.**

**Lois: My first question was actually a bit broader: how do young people really use social media? Do they actively respond to posts, or do they mainly forward things to friends? In other words, general social media use.**

**Interviewee:** In a previous researcher at Erasmus University Rotterdam, working at the Erasmus MOVE Lab. At MOVE we study young people and children digital media use and their interactions with digital media. We use participatory methods as part of our projects to involve children and adolescents as co-researchers. That matters because it helps us connect much better to their lived experiences. I think that also aligns with your design approach, designing based on how they experience things. Other than with leading what's 'okay' or 'harder'. Our research was with primary school children (roughly grades 4-6), they follow all rules to allow adolescents and even adults, but it experiences being the age difference to work with older students has mostly focused on smartphones usage, and I did one study on online hate and bullying behavior, maybe relevant here. In our study with grades 4-6, we spoke with about 100 students. We asked what they do online, on which devices, what activities they engage in, and why. We identified several categories of activities. One is consuming, watching, reading, and listening to online content. Another is playing with digital media, like gaming and using them, third, the collaborative, creating, designing, editing and sharing. What we saw most clearly is that consumption was by far the most common: scrolling, watching, taking

in content, more passive use. Sharing does happen, but less. Students talked more about what they send than what they receive, even though they are of course also receivers.

**Lois: So they mostly have a more passive role, scrolling, and sometimes a more active role when sending things.**

**Interviewee:** Exactly. Something else we found, an activity not always highlighted in older literature, was managing. Because there is so much content and so many apps, young people spend effort sorting, organising, deleting, and grouping information.

**We also realized that it's connected to social norms and group status, certain activities on social media come with specific social advantages**

**Lois: I've seen a contradiction in the literature. A lot of research says social media can be polarising and push people into an "algorithmic funnel." But when Judith asked young people about it, they said they encountered many different opinions and that it actually broadened their perspective. Do you recognise that?**

**Interviewee:** Yes, very much. In our work we often describe digital media as "two sides of the same coin"

experts and also young people say that algorithmic funnels can form quickly, and it can be hard to get out once you're in them. The younger participants weren't always aware that such funnels exist, while experts, parents, and teachers worried about them. At the same time, young people can also use the algorithm strategically to broaden their horizon: **if you intentionally search for different viewpoints, you can expose yourself to content outside your immediate social circle.** We shouldn't forget that offline social circles can also be "filter bubbles." **For the children in our study (Erasmus MOVE Lab), it was about personal growth, social media is a way to explore who they are and who they want to become,** especially in pre-adolescence and adolescence, when they're figuring out who they are and what they believe beyond their parents'

views. Social media can help them encounter different opinions, though the question remains: how different are those opinions really? Still, it can broaden perspectives, if you understand how algorithms work.

**Lois: Do you think young people understand algorithms already, or could there be more awareness to help them actively look for different views?**

**Interviewee:** I think there's definitely room to improve that. I can't say too much about your exact age group, but for our under-13 participants, awareness of algorithmic functioning was limited.

Another key point: in media literacy research, there's often an assumption that knowledge leads to safe or wise behaviour, but in practice that's not always true.

**There appears to be a gap between what adolescents know about algorithms and how they act upon that knowledge.**

**Lois: There's also a lot of misinformation and misleading content online. Are young people able to filter that out, or is that difficult?**

**Interviewee:** That's a strong question. Again, having the knowledge is often not enough. For adolescents, executive functions are still developing, so impulse and emotion can dominate. Critical evaluation requires slowing down. There's a model, the Message Interpretation Process/Model, that suggests people process messages through different routes. **We often make choices with our lazy brain, we don't choose consciously, but rather take the quick route when judging content, without being particularly critical.**

offer very few natural "pauses." People get pulled into endless scrolling and constantly search for better content. We sometimes say: **there are no traffic lights online, and young people actually need those moments to pause and reflect, to assess what they're seeing:**

**Lois: That makes sense.**

**Interviewee:** We also did some design-thinking work on solutions with young people. They often find it frustrating that platforms offer limited control over the feed.

**Lois: It is strange that you're constantly fed content in a way that feels addictive.**

**Interviewee:** Exactly. We also work with a framework we call the Digital Media Empowerment Model (we haven't published much on it yet). It proposes four factors that contribute to digitally resilient behaviour, this can translate to your interest in critically evaluating content.

The four factors are:

1. Knowledge (media literacy: knowing what to do and how)
2. Skills (especially stopping and thinking: the ability to pause and evaluate before reacting)
3. Motivation (does the young person want to do it, and why?)
4. Opportunity/Context (are they in an environment, media and social, that enables it?)

Motivation depends on things like how serious the situation feels, whether it feels personally relevant,

**Lois: Do you see social media as polarising for young people?**

**Interviewee:** I think so. We've seen a lot of research that shows that young people do not actively resist polarisation in political debates. They do resist general digital toxicity, but are not so much concerned with it. We don't ask directly about polarisation, we focus on more general content and content. One related issue is we work on online behaviour. We want secondary schools and universities to have policies in which algorithms control how content is shown. We believe that schools should have a role in this. We saw that a small number of students intervened early (strong moral compass), while most waited to see what others did, consistent with the bystander effect. The more bystanders there are, the less responsible individuals feel to intervene. This may relate to polarisation: extreme content can circulate more easily online because resistance is less immediate, people feel less personally responsible, and the scale is larger.

Online, with many anonymous people, it's easier for polarising content to spread, and such content may also be amplified by algorithms.

**Lois: Yes, it's difficult to find one source of polarisation. Many things influence it. For me the issue isn't polarisation itself, but when people stop engaging in conversation with those who think differently, or become openly hostile. Some friction can also be useful because it can create change.**

**Interviewee:** A teacher once told me that in the classroom students should be able to express many opinions, as long as it doesn't directly harm others. That "safe place to let it rub" can matter. It can be difficult to define harm, but the underlying idea is that discussion should remain possible.

We also use a participatory method based on Youth Participatory Action Research. Young people often enjoy sharing experiences and listening to others. **That's what young people want. They want to be heard. They want to talk about their online world. Those conversations can also spark critical reflection.**

**Lois: I've been reading about digital resilience. What does it mean, and how can young people become more digitally resilient?**

**Interviewee:** We define it behaviourally: what strategies can you use to reduce risks while still benefiting from online opportunities.

For your topic (polarisation and dialogue), digital resilience could include behaviours like evaluating sources, reflecting critically on content, and responding constructively when you see an opinion you disagree with. Again, those four factors matter: knowledge, stop-and-think skills, motivation, and opportunity/context. A key implication for your project: don't focus only on knowledge ("what is polarisation?"). Also design to support reflection and action.

Finally, social connections matter for online resilience. According to all the research, being online, competent, and able to connect with young people that are connected, they may be more likely to behave positively online, whereas if they respond to each other in a negative way, that can be a problem.





## B3: Mapping activity: from factors to clusters (MA1).

To move from context factors to thematic clusters, a mapping activity was conducted in collaboration with an IDE alumnus. The aim was to identify relationships between factors and organise them into clusters. The resulting clusters are presented on the next page. The colours represent from which system level each context factor is.



## B4: The final clusters

In this appendix the final clusters described in chapter 6.2 are presented, together with the belonging context factors.

### 1. The Illusion of Division

People think that the society is more and more polarised, while research shows it is not the case.

Due to the freedom of speech, it is easy to get confronted with other opinions.

The degree of polarisation depends on the context, with certain issues, like migration, Israel - Palestina, and gender, generating stronger divisions.

Nederlands Jeugd Instituut, n.d. |aal en Cultureel Planbureau, 2024

There is no proof for growing difference in opinions (Ideological polarisation) only more extremes.

Bennema, 2023

Many Dutch people youth, including adolescents, feel growing concern about societal polarisation, as they sense that public opinions are moving further apart

Van Weteringen, ongoing

"It is unrealistic that everyone agrees with each other"

Co-creation Hoge School Rotterdam

International pressure highlights differences between social groups in the Netherlands.

Prins, 2024

Online conflicts are often portrayed in stark, black-and-white terms and remain visible without automatic moderation.

Bjornsgaard & Dukic, 2023

Both social and traditional media contribute to polarisation by amplifying conflict and promoting simplified, emotionally charged one-liners that highlights extreme opinions

Flanagin & Metzger, 2020

"At the moment, there is no real feeling of togetherness anymore. Everyone is mainly focused on themselves. Society feels very individualistic."

Co-creation Hoge School Rotterdam

### 2 When emotions overrule listening: a growing lack of dialogue

When people are free to speak, there is a chance discussions get heated. Due to more emotional conversations and people that do not listen with respect creating unsafety.

Many Dutch people observe that both public and political debates are becoming increasingly tough and emotionally driven

Nederlands Jeugd Instituut, 2024

aal en Cultureel Planbureau, 2024

As a result of perceived polarization, some inhabitants feel frustrated and hostile towards others, as the sense of division in society continues to grow.

Muis, 2024 |aal en Cultureel Planbureau, 2024

It's important not to enter a conversation just to prove that you're right." "Freedom of speech is important, but it shouldn't come at the expense of others." "It's important to take others into account."

Co-creatie Hilversum

Co-creation Lieve Mark Leiden

The society should move from a cancel-out culture to a call-in culture

Ross, 2025

For adolescents, constantly expressing opinions is not always seen as meaningful or respectful.

Van Weteringen, ongoing

Adolescents repons more emotional due to heightend (social) reward system

Crone & Dahl, 2012

On social media, anonymity often leads users to behave aggressively and express negative biases.

Flanagin & Metzger, 2020

Even when adolescents encounter diverse opinions, both on and offline, it does not always foster understanding, since differing views are not always taken seriously or people have fixed opinions.

Conference Healthy Start, 2023

aal en Cultureel Planbureau, 2024

Van Weteringen, ongoing | follo agency, 2023

While in the sixties the pillarisation made it difficult to interact with people from out-side of the group, in the climate of nowadays it is easy to be confronted with different opinions.

Koops, 2021 | Lijphart, 1990 | Van Loon, 2025

### 3 Unheard voices of youth

Youth does not feels listened to and heard within the society. By parents, teachers, but mostly policy makers.

A vertical divide is emerging between young people and political institutions.

Van Weteringen, ongoing

As many young people feel unheard and not taken seriously by the government, they experience discrimination and major issues left unresolved, their trust in politics and public institutions continues to decline.

Bennema, 2023

Adolescents are the least happy age group, as they lack a sense of future perspective

EenVandaag, 2025

"Politicians talk about us, but they don't really know us.

Co-creation Delft

Many adolescents experience pressure because they feel personally responsible for the ongoing polycrisis.

Conference Healthy Start, 2023

The rising proportion of older citizens in society means that youth concerns often receive less attention in political decision-making.

EenVandaag, 2025

"The current generation of young people faces bigger societal challenges than previous generations, such as climate change. This is reinforced by individualism. I'm just not sure whether this was also the case in the past. "

Co-creation Hoge School Rotterdam

"Powerful people make decisions about ordinary people without being among them."

Co-creation Delft

#### 4 Finding identity in division

When people are free to speak out, they can find what they really stand for.

Society benefits from a balance between healthy polarisation, in which some degree of polarisation is beneficial for democracy, helping society to reflect, adapt, and move forward. And unhealthy polarisation, which fosters division.

Interview Expert politics & youth

Polarisation can help adolescents explore their own beliefs and identity.

Interview teacher social studies

It's healthy to have proper discussions, and some heated moments are part of that if you want to move forward.

Co-creation Lieve Mark Leiden

You should be able to express yourself on social media, while still taking others into account

Co-creatie Hilversum

Adolescents are still developing their identity and in search of what they stand for.

Telzer et al, 2017

Adolescents can explore and interact with different viewpoints, find inspiration and engage with supportive communities through social media, broadening their understanding and self exploration.

Flanagin & Metzger, 2020

Interview Expert Social media

Heated moments in discussions are sometimes just part of it, you want to respond quickly. Maybe we need to learn to accept that.

Co-creation Lieve Mark Leiden

#### 5. Fuelled by algorithms, ruled by extremes

Social media are not free platforms. People are controlled by big tech companies, influencing how algorithms and bots work. Leading to the ruling of extreme voices.

Unverified accounts tend to use ruder language and show greater intolerance and stark black-and-white terms without moderation toward other groups in both content and chats. Next to this, the bystander effect leads many users to refrain from addressing hostility as they do not feel responsible

Bjornsgaard & Dukic, 2023

Conference Healthy Start - Ma, 2025

Flanagin & Metzger, 2020

Interview Expert Social media

Social media algorithms tend to prioritize extreme or emotionally charged content, as such posts drive engagement and, consequently, profit for the Big Tech companies behind them.

Adam & Magaji, 2025

Flanagin & Metzger, 2020

Not every young person understands how algorithms are influenced by large tech companies and bots on social media. Yet, There is growing pressure on social media platforms to provide more transparency about their algorithms,

Co-creatie Hilversum

Adolescents don't like to be influenced by large systems such as the government, media, or social media. If

Conference Healthy Start - Ma, 2025

As attention shifts toward extremes, the political middle is receiving little attention, leaving sudden societal problems without viable alternatives, while reality is far more layered. Yet political parties in the middles show a new boost in the election of 2025.

Conference Healthy Start, 2025

Van Den Daal, 2025

van Wijnen & Schumacher, 2025

When discussing social media, many debates emerged, including concerns about AI online and differing opinions about algorithms and the content shared on socials.

Co-creatie Hilversum

On social media, adolescents frequently experience a sense of powerlessness, unable to control the content they are exposed to. As there is a constant flow of content and rapid shifts in attention making it difficult to pause, focus or reflect.

Conference Healthy Start - Ma, 2025

Interview Expert Social media

Silva, 2024

Many parents and youth workers feel overwhelmed by the online world and are unsure how to guide adolescents through it.

Interview Expert Social media

Nederlands Jeugd Instituut, 2025

#### 6 Online and offline social mirroring

Social media shapes society and society shapes socials.

Adolescents' perspectives on social and political topics are often influenced by the content shared by influencers online, influencing the adolescents attitudes and behaviours.

Telzer et al, 2017

Peers play a major role in shaping adolescents' behaviour and opinions. High-status peers have an even greater influence, affecting adolescents in both constructive and harmful ways.

Crone & Dahl, 2012

Telzer et al, 2017

Adolescents' behavior on social media is shaped by their real-life social structures, such as family, friends, and school.

Interview Expert Social media

Adolescents are strongly influenced by their parents, affecting their attitudes, behaviors, and choices, for better or worse

Lub et al., 2010

Adolescents often correct and guide other peers within familiar social groups.

Interview Expert politics & youth

Adolescents have a heightened (pro) social brain and are sensitive to group pressure

Interview teacher social studies

Blakemore & Mills, 2013

Social influence occurs as adolescents learn and internalise group norms through imitation, interaction, and reinforcement, shaping their behaviour

Telzer et al, 2017

Approval becomes visible through likes and comments, and can encourage more performative or extreme expressions

Flanagin & Metzger, 2020

#### 7. Holding space for complexity

It is important to try to find nuance and reflection behind each argument and discussion, to increasing the feeling of safety while remaining freedom of speech.

It is important that schools encourage diverse perspectives and nuanced thinking, although this does not always happen.

Interview teacher social studies

By being guided in conversations and encouraged to step outside their social bubbles, adolescents can learn to engage with different perspectives and find nuance.

Interview teacher social studies

"I feel the pressure to 'pick a side' when it comes to serious issues, like people's lives, you do feel like you have to say something."

Co-creation Lieve Mark Leiden

Unverified accounts tend to use ruder language and show greater intolerance without moderation toward other groups in both content and chats.

Conference Healthy Start - Ma, 2025

Adolescents care about reliable information and want effective solutions to combat misinformation.

Conference Healthy Start - Ma, 2025

Being open about taboos helps create awareness and builds self-confidence.

Co-creation Hoge School Rotterdam

## 8. When hopelessness ends the conversation

When people feel hopeless, frustrated or unsafe, they tend to drop out of the conversation.

Some Dutch inhabitants tend to withdraw from the conversation, as a reaction to feeling hopeless.

Conference Healthy Start, 2023

The danger of polarisation lays in, when people stop to conversate with each other.

Nederlands Jeugd Instituut, 2023

There is a rising fear of confrontation among adolescents, partly due to online pressures and reduced in-person practice.

Wang, 2025

On social media, the bystander effect leads many users to refrain from addressing hostility because they do not feel personally responsible.

Conference Healthy Start, 2023

Interview Expert Social media

Many adolescents feel excluded from political discussions when politicians use complex terms like 'polarisation,' leading them to disengage.

UNICEF, 2025

I know how to mentally cope with all the changes and problems in the world." Agree: "Because I can shut myself off and let it go to some extent. I still have my own life to live, and I've learned over the years how to deal with it." Disagree: "Because it still affects me. Some topics just hit harder than others

Creation Hoge School Rotterdam

## 9. The mismatch between youth development and socials

Social media takes abuse of the curiosity of youth, dragging them into an infinite scroll without reflection.

Even when adolescents understand how algorithms work, they tend to follow familiar routines on social media, while underestimating the influence these algorithms have on their experience.

Interview Expert Social media

Because the medial prefrontal cortex (mPFC) is still developing, adolescents have limited capacity for self-reflection and often struggle to critically examine where their opinions come from.

Uhlis et al., 2017

Adolescents mentioned that they do see negative content on social media, but tend to forget about it once they close the app

Co-creatie Hilversum

Adolescents can explore and interact with different viewpoints through social media, broadening their understanding and enjoying sharing their experiences online.

Flanagin & Metzger, 2020

Interview Expert Social media

Van Weteringen, ongoing

Users often find it hard to fact-check content on social media, because some information is partially true and verification requires extra work.

Conference Healthy Start - Ma, 2023

Because of infinite scrolling, users rarely take the time to stop and reflect on the content they see.

Interview Expert Social media

Many adolescents believe that the effects of social media depend on individual responsibility and feel they personally manage social media well.

Co-creatie Hilversum

Because of their heightened social reward system, adolescents respond more strongly to emotions, making them both more reactive and more motivated to learn through emotional experiences. They are eager to learn, and curious about other opinions.

Crone & Dahl, 2012 Interview teacher social studie

## 10. Safe within the bubble

Staying within these safe bubbles both, on- and offline, may offer a sense of belonging but also limits openness towards difference, slowly turning comfort into quiet intolerance.

Many Dutch people tend to stick to familiar and comfortable social bubbles.

Lieberman, 2014

Young people need to be encouraged to step outside their social bubbles

Interview teacher social studie

Adolescents seek belonging and are highly sensitive to group norms, often leading to in-out group thinking.

Telzer et al, 2017

Young people can clearly relate to polarisation in society, but it differs per class how 'safe' people feel expressing their opinions.

Creation Hoge School Rotterdam

Many adolescents find themselves trapped in echo chambers on social media, where algorithms and likes reinforce their existing view.

Uhlis et al., 2017

Adolescents pay close attention to comments and chats, using them to confirm ideas or find amusing and striking content.

Conference Healthy Start, 2023

Interview Expert Social media

At the moment, there's no real sense of togetherness or connection. Society has become too individualistic.

Creation Hoge School Rotterdam

## 11. Drowning in (mis)information

Socials are full of mis- and disinformation making it an unsafe place.

Chats and content from unverified accounts are unsupervised, exposing adolescents to unmoderated information, leading to mis- and disinformation or information that is taken out of context.

Conference Healthy Start - Ma, 2023

For many adolescents, social media is the main channel for news and political information, frequently via unverified accounts. Mostly on Instagram, Youtube or Tiktok

Conference Healthy Start - Ma, 2023 Zonneveld, 2024

While adolescents attempt to cope with the vast amount of information online, it often feels overwhelming to them.

Interview Expert Social media

It's important to also have space for lighter things.

Creation Hoge School Rotterdam

Adolescents often perceive politicians through social media, knowing them by visibility rather than by their policies or beliefs.

Interview Expert politics & youth

Adolescents struggle to maintain focus on longer videos or tasks due to the rapid context shifts and short attention spans typical of platforms like TikTok.

Flanagin & Metzger, 2020

Interview Expert politics & youth

Constant je mening kunnen uiten zonder supervision online, zorgt voor chaos en haat

Co-creatie Hilversum

Young people do recognise polarisation on social media. One example mentioned was a post about protests during the arrival of Sinterklaas, showing a lot of emotion and crying children, described as 'not the time and place.'

Co-creatie Hilversum

## 12. Becoming heard online

Social media is a place where youth can freely explore and use their voice.

Freedom of opinion is a fundamental right in the Netherlands, allowing everyone to express their views openly.

Grondwet 7

Adolescents should be given the chance to express their opinions and influence societal discussions, including via social media.

ance Healthy Start - Van den Bo

Through social media, adolescents have the means to participate politically, exploring different viewpoint and broadening their understanding, though individual engagement varies.

Uhls et al., 2017 Van Weteringen, ongoing

Through social media, individuals can reinforce bonds within their existing social circles or communities

Uhls et al., 2017

As the main drivers of social media, adolescents can actively influence what content spreads, and can be encouraged to use this influence positively.

ance Healthy Start - Van den Bo

Interaction helps young people feel heard and teaches them how to engage in discussions in a respectful way.

creation Hoge School Rotterdam

I feel that I, as an individual, can influence societal issues."

Agree: "Our strength lies in acting together."

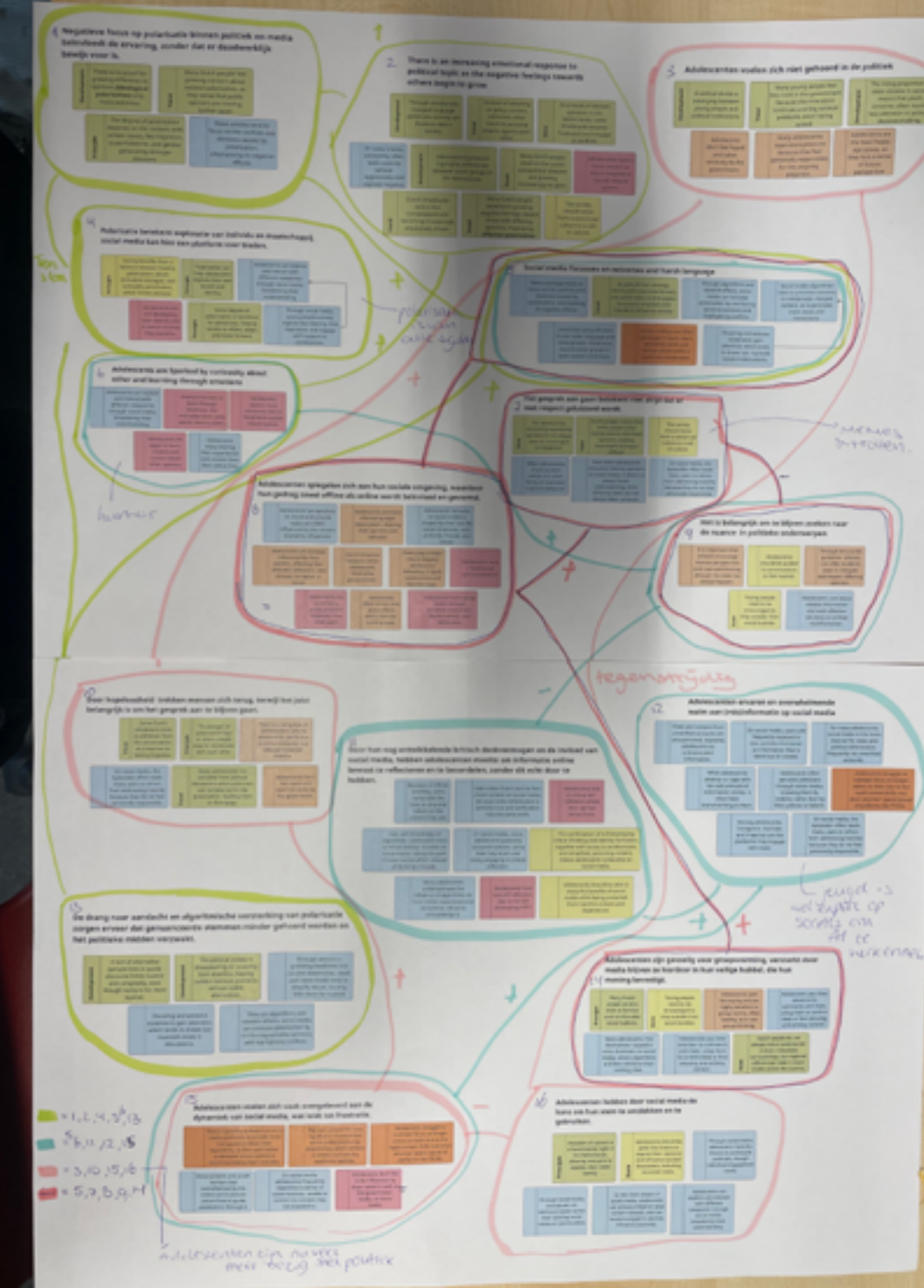
Disagree: "You really need that collective effort to actually achieve something."

Agree: "Because change starts at the micro level"

creation Hoge School Rotterdam

## B5: Mapping tension (MA2)

A mapping activity was conducted with three IDE students. The goal was to uncover tensions between the clusters described in Chapter 6.2. The four tensions are explained on the following pages.



## Tension 1: The duality of division

### Related clusters:

- The illusion of division
- Emotions over arguments
- Finding identity in division
- Fuelled by algorithms, ruled by extremes
- Driven by feeling, drawn by emotions

Polarisation is increasingly portrayed as a growing social threat, amplified by politics, media, and online platforms. Yet research suggests that the actual ideological gaps between people have not widened. Rather, the extremes have become more visible. In both politics and the media, complex issues are often reduced to emotional, black-and-white narratives, while online algorithms further amplify this tone by rewarding provocative and extreme content. As a result, debates are increasingly driven by emotion instead of argument, leaving little room for nuance, curiosity, or understanding.

For adolescents, still exploring who they are and what they stand for, this environment shapes both how they see the world and how they see themselves. Polarisation can become part of their identity exploration, taking a stance, even an extreme one, helps them find belonging and meaning. Their natural curiosity and emotional sensitivity make them highly responsive to this dynamic: drawn in by emotion, but also motivated to understand and connect.

The tension lies between the perception of growing division and the reality that disagreement can also be meaningful, constructive, and even necessary for change. The same forces that amplify division, such as emotion, media and algorithms, can also spark reflection, dialogue, and identity formation.

### Opportunity:

How can we ensure that the term polarisation is seen in a more positive way, and that a healthy form of it exists within society?

## Tension 2: Between exploration and exploitation

### Related clusters:

- Finding identity in division
- The mismatch between youth and socials
- Driven by feeling, drawn by emotions
- Drowning in (mis)information
- Scrolling without control

There is a growing mismatch between adolescents and the social media systems that surround them. Adolescents are curious, emotionally responsive, and eager to explore different perspectives. Social media offers a platform for this, a space to connect, express, and learn. Yet the same platforms are designed to capture attention, not to foster reflection. Algorithms promote extremes, reward emotional expression, and push moderate voices out of view.

While adolescents are still developing the cognitive control and self-reflection needed to navigate such environments critically, social media exploits their curiosity and sensitivity. The rapid flow of emotionally charged content stimulates their reward systems, making it harder to pause, question, or evaluate what they see. With the constant overload of information, it becomes increasingly difficult to distinguish truth from mis- and dis-information, creating an environment where emotion often outweighs truth.

This tension lies in the gap between what adolescents need and what social media offers. They need time to explore, reflect, and make sense of their beliefs. Yet the platforms they use most reward speed, intensity, and reaction. As a result, many adolescents feel overwhelmed and disconnected, aware of the system's impact, but uncertain how to resist it.

### Opportunity:

How might we channel adolescents' curiosity on social media into deeper reflection and more nuanced self-exploration?

## Tension 3: Between being silenced and finding a voice

### Related clusters:

- Unheard voices of youth
- When hopelessness ends the conversation
- Scrolling without control
- Becoming heard online

Young people increasingly feel unheard in society. Many adolescents express frustration about being excluded from political decision-making and not being taken seriously in discussions dominated by adults. Their sense of powerlessness grows as they see little progress on issues they deeply care about. This lack of recognition fuels feelings of hopelessness and disconnection, leading some to retreat into silence rather than continue a conversation that feels one-sided. Online, this frustration is both amplified and challenged.

Yet the same systems that offer visibility also steer attention. Algorithms reward engagement and emotion, subtly influencing what young people post and how they express themselves. At the same time, their collective presence and behaviour feed back into these algorithms, meaning that their voices, when used consciously, can also reshape what becomes visible. Social media gives adolescents the tools to raise their voices, connect with others, and shape what circulates online.

This creates a tension between the urge to withdraw and the desire to be heard. Adolescents navigate systems that both limit and amplify their voices, finding themselves in a space where influence and powerlessness coexist. Even as they shape what circulates online, it remains uncertain whether their words carry weight beyond the screen.

### Opportunity:

How can we use this collective power online to give young people a voice again, both on and offline?

## Tension 4: Between belonging and othering

### Related clusters:

- Fuelled by algorithms, ruled by extremes
- Speaking without being heard
- Online and offline social mirroring
- Holding space for complexity
- Safe in the bubble

Adolescence is deeply shaped by the need to belong. Young people develop their identity through connection, imitation, and feedback, making them highly responsive to group norms and social approval. Yet this same sensitivity can also make them vulnerable. Approval within peer groups, both online and offline, often shapes how young people express themselves, in both positive and negative ways.

Social media intensifies these dynamics. Algorithms promote emotionally charged and polarising content, while likes and comments turn agreement into visible validation. In echo chambers where sameness feels safe, perspectives are continuously reinforced. This strengthens in-group and out-group thinking: young people align with those who think alike and distance themselves from those who don't. In this environment, discussions often become defensive or confrontational, and the ability to truly listen or seek understanding slowly fades.

The tension lies in this duality: the same social forces that provide belonging also limit openness to difference. When being part of a group becomes more important than engaging with other perspectives, adolescents risk losing their ability to truly listen to differing opinions.

### Opportunity:

How can adolescents relearn to engage in dialogue, both online and offline, with nuance and openness?





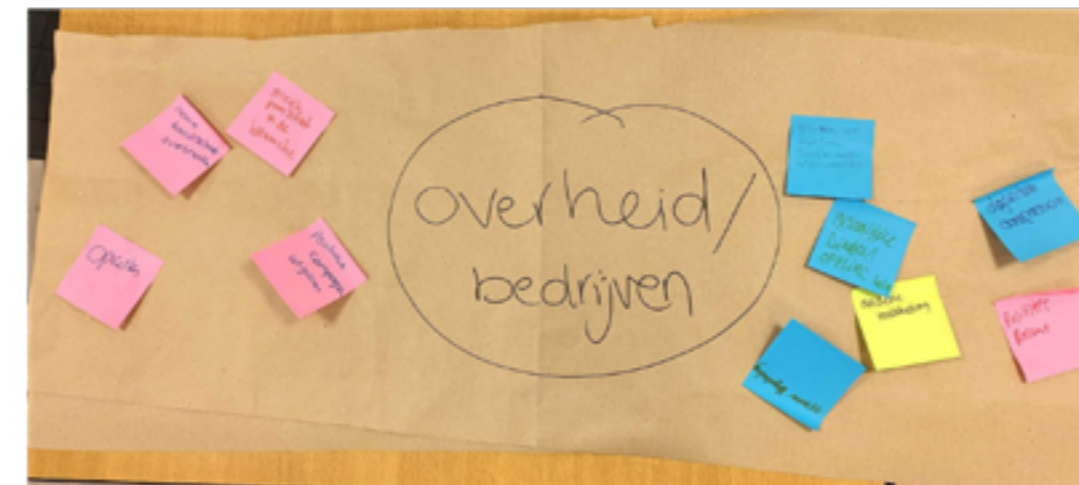
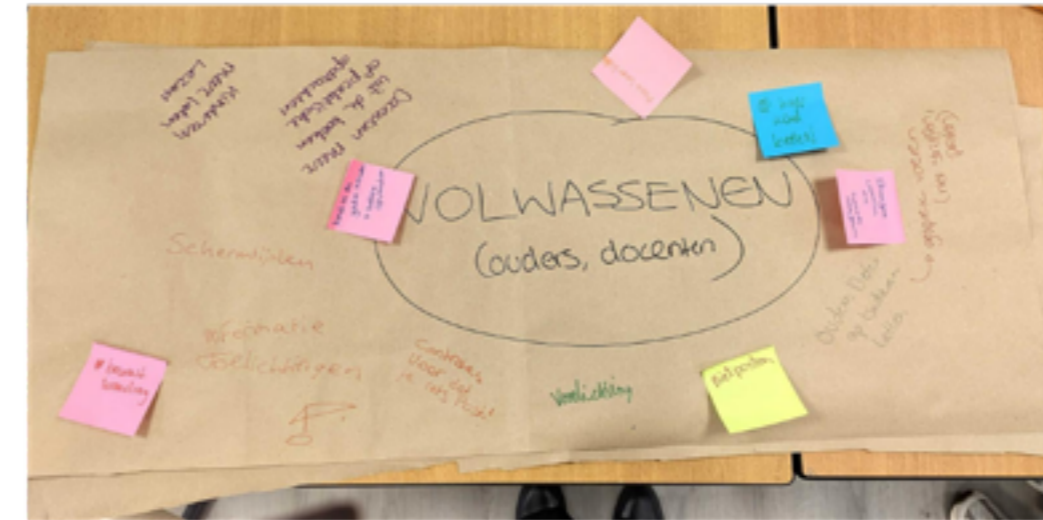
## C2: Material used during creative session 2 (CS2.1 -2.3)

During the second creative session, participants were asked to reflect on the future and to generate ideas in response to three research questions:

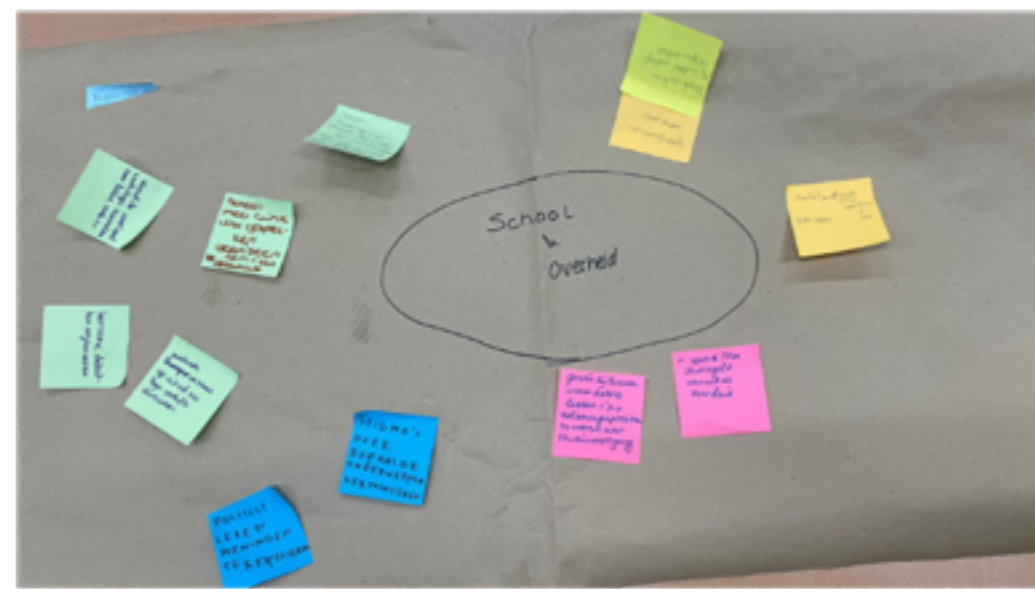
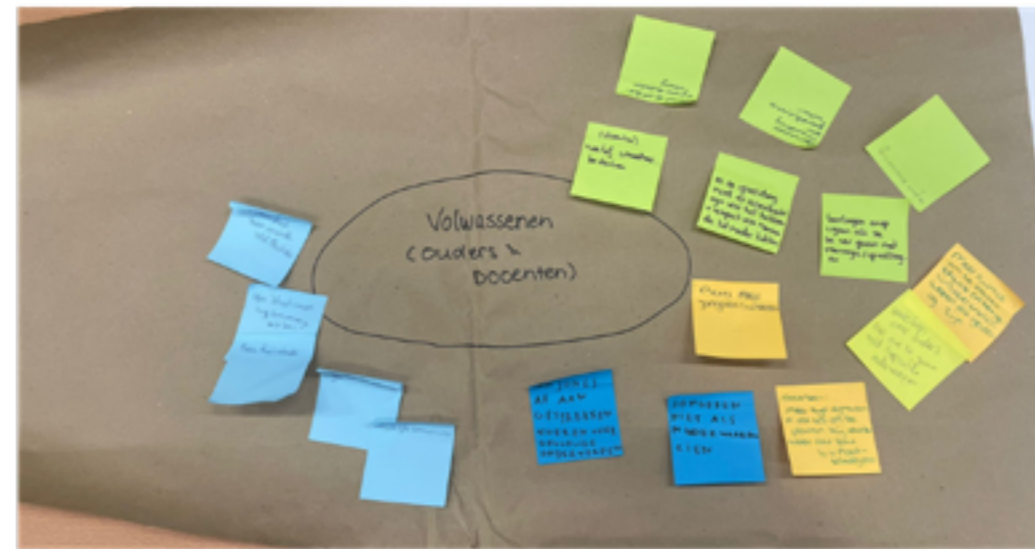
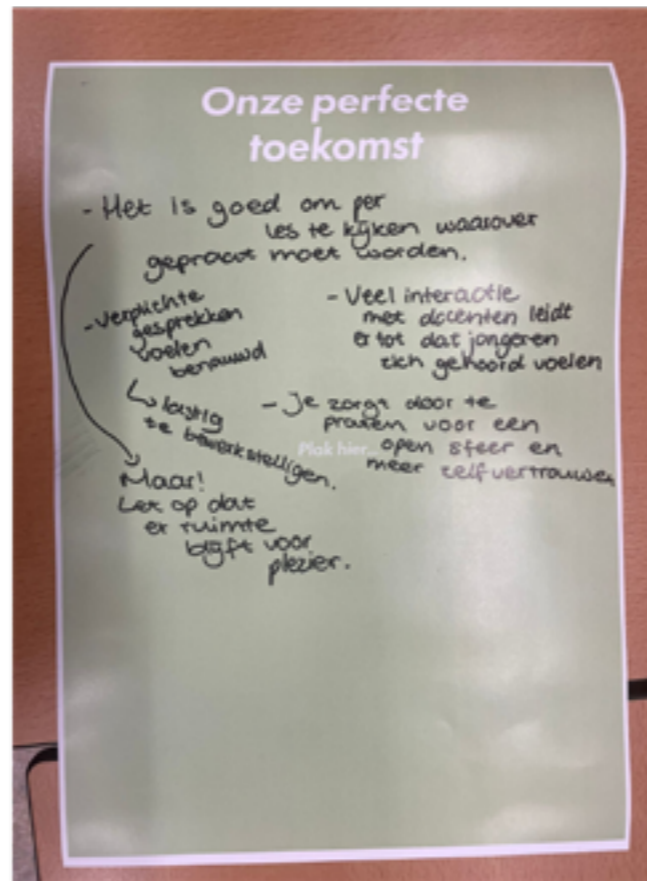
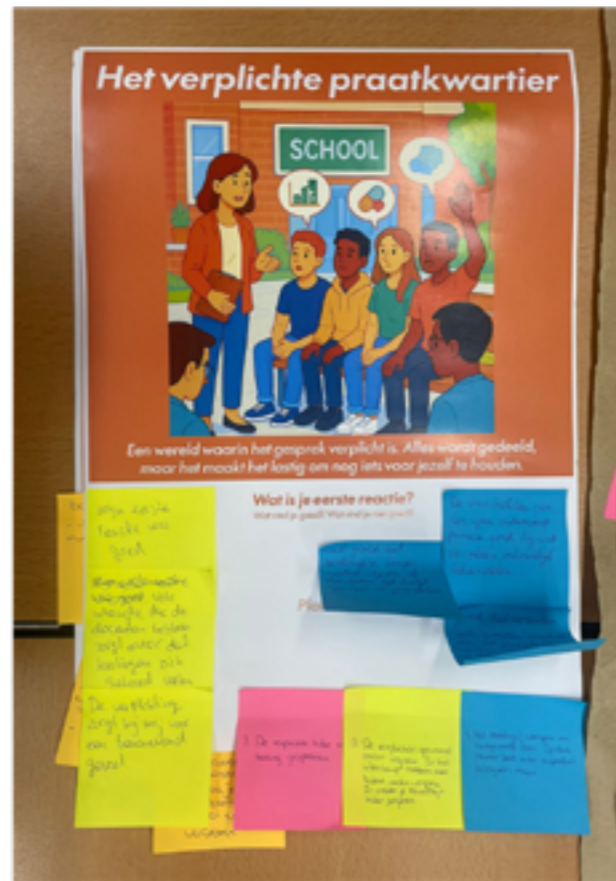
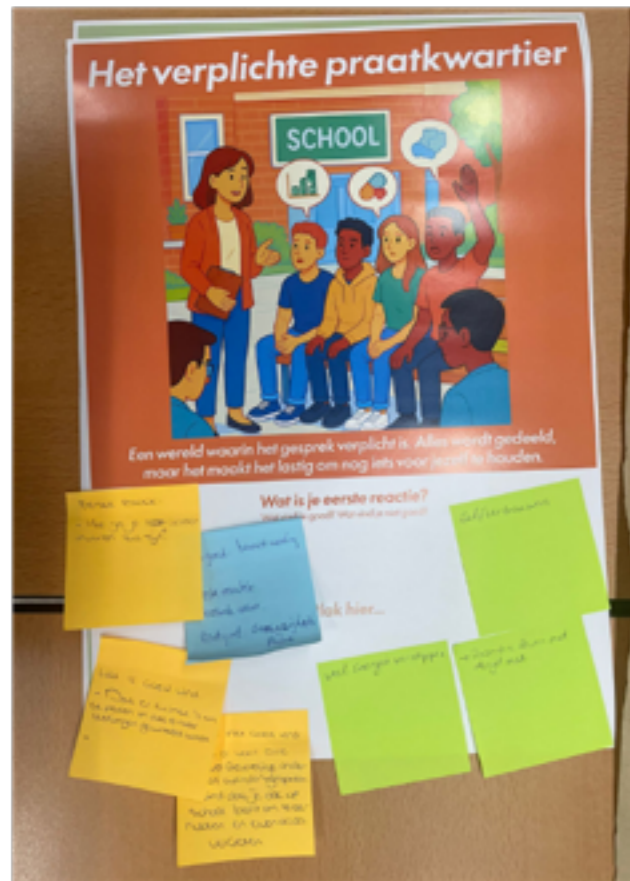
- How can we better deal with differences of opinion online? (Session 2.1)
- How can we better deal with differences of opinion in schools? (Session 2.2)
- How can we better deal with differences of opinion in public spaces? (Session 2.3)

The outcomes of this session are presented on the following pages.

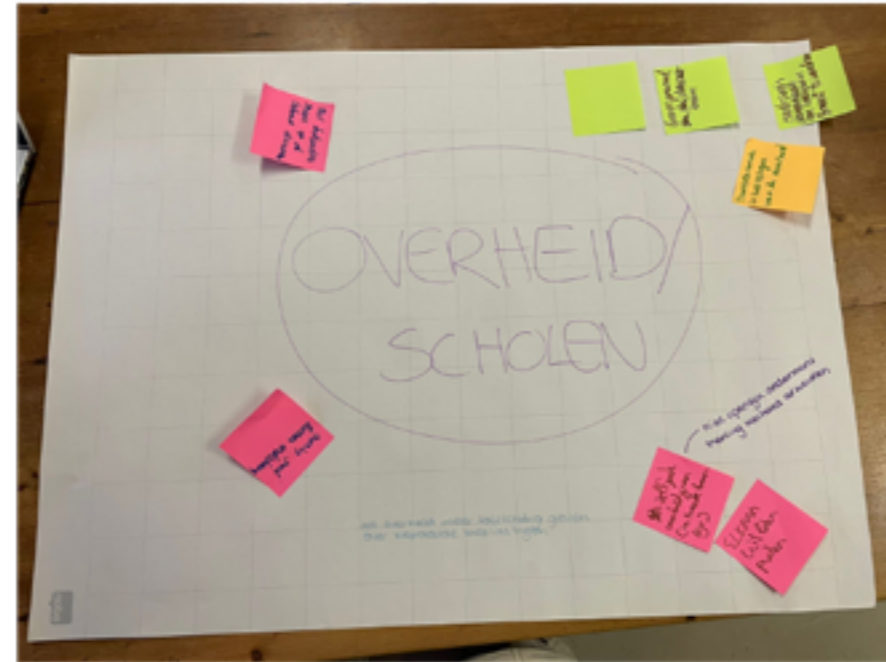
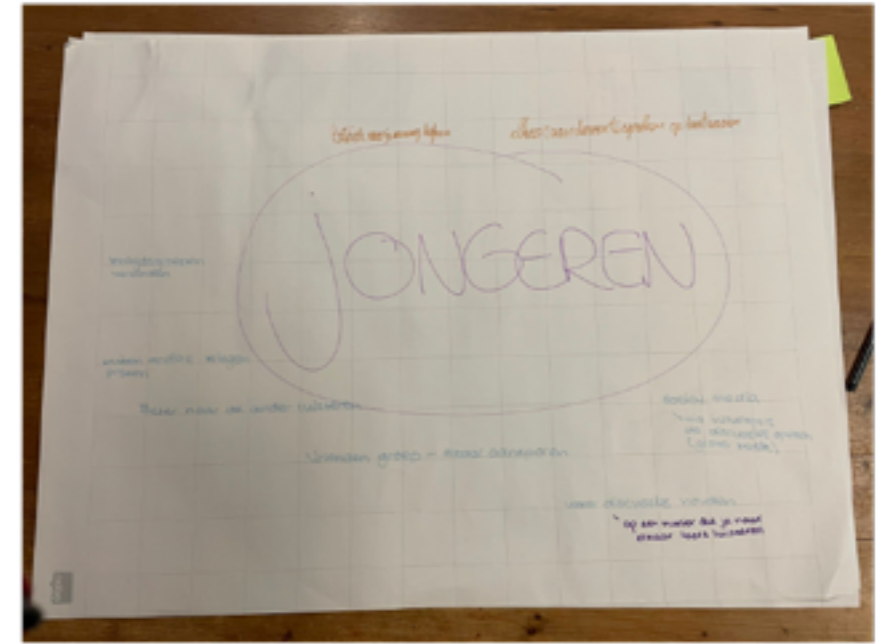
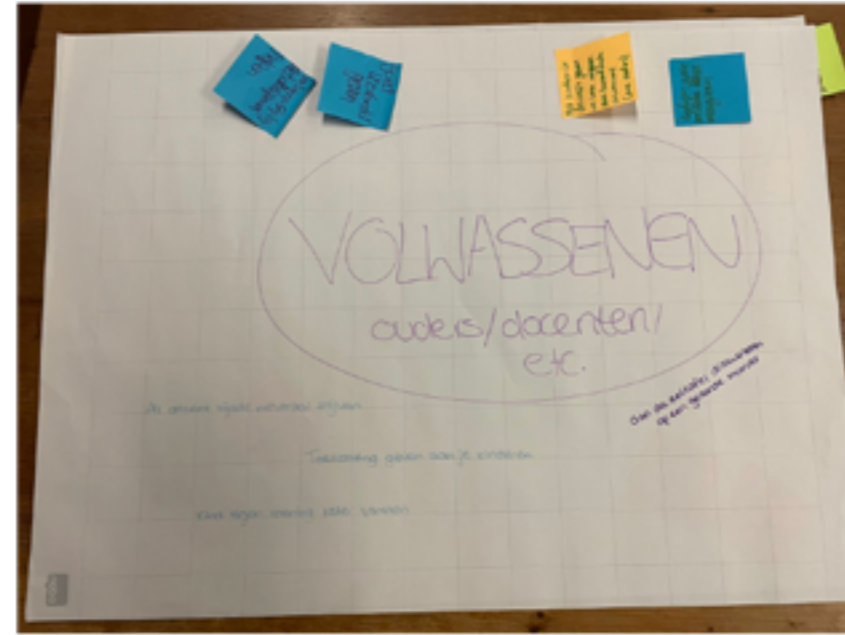
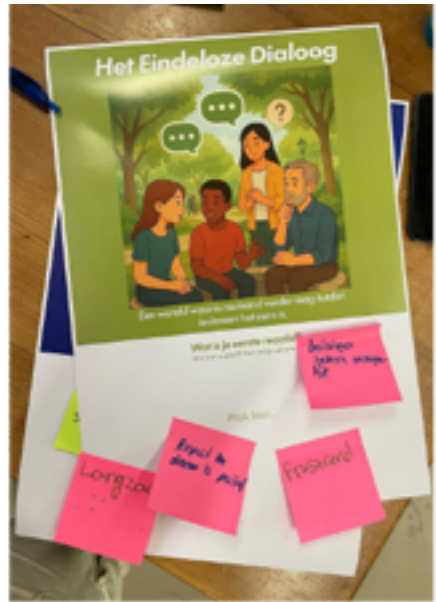
### Session 2.1



## Session 2.2



Session 2.3



# Appendix D: Preparing & analysing the ideation activities

## D1: Preperation & Material used during ideation session 1 (IS1)

### Goal of the session

The goal of this ideation session was to further explore the opportunity space identified during the earlier research and creative sessions. The session aimed to generate a wide range of ideas related to social media, polarisation, and the online experiences of adolescents. At this stage of the design process, the focus was on divergent thinking, meaning that participants were encouraged to generate as many ideas as possible without judging their feasibility. The intention was to explore new directions and discover unexpected perspectives. Therefore, participants were explicitly encouraged to think freely and propose ideas that might initially appear unusual, unrealistic, or provocative.

### Preparation and approach

To organise the session, several preparatory steps were taken:

- Defining the core problem and research questions guiding the ideation.
- Inviting participants with a design background who are familiar with creative ideation techniques.
- Preparing the materials needed for brainstorming and clustering.
- Creating a structured agenda to guide the session.
- Providing context about the project and the topic of social media polarisation

The ideation session was inspired by techniques from the Roadmap for Creative Problem Solving Techniques (Heijne & Van der Meer, 2019).

### Session agenda

The session lasted approximately one hour and followed the structure below:

- 13:45 – Kick-off. The session started with a short introduction explaining the goal of the ideation session, the context of the project, and the rules of brainstorming. Participants were reminded to postpone judgement and to focus on generating a large quantity of ideas. The research questions guiding the ideation were redefined with the participants

- 13:55 – First ideation round. Participants generated ideas individually using brainwriting. Other creative prompts such as absurd questioning and the “criminal thinking” method were used to keep the flow of ideating. These techniques encouraged participants to think beyond conventional solutions and explore more radical or humorous ideas.
- 14:15 – Wrap-up first round. Ideas generated during the first round were briefly reviewed and shared with the group.
- 14:20 – Spontaneous clustering. Participants built on the existing ideas by combining, expanding, and connecting them. This phase focused on developing ideas further and identifying possible relationships between them.
- 14:35 – Reflection, Hits & Dots. The session ended with a short reflection and ranking ideas that stood out.

### Brainwriting activity

The image displays four brainwriting activity sheets, each with a specific challenge and principles. Below each sheet is a cluster of handwritten sticky notes representing the ideas generated by participants.

- 1.1** Challenge: Hoe kunnen we jongeren die op social media zitten ondersteunen om niet alles van zichzelf te vinden/ bewust maken van onwaarheden? Principles: ...
- 1.2** Challenge: Hoe kunnen we jongeren die op social media zitten ondersteunen om niet alles van zichzelf te vinden/ bewust maken van onwaarheden? Principles: ...
- 2.1** Challenge: Hoe kun je volwassenen betrekken bij het social media gebruik van jongeren? Principles: ...
- 2.2** Challenge: Hoe kun je volwassenen betrekken bij het social media gebruik van jongeren? Principles: ...

## Iterative clustering activity



## D2: SCAMPER on the first ideas

After the first ideation session, the generated ideas were clustered to identify broader patterns. From these clusters, one promising direction, "Swap the Algorithm," was selected for further exploration. By combining ideas from this cluster with elements from other clusters, three larger concept directions were identified. Each of these directions was further developed using the SCAMPER method, which is explained on the next pages.

### Idea 1: Fix your algorithm

Fix Your Algorithm is an interactive installation that confronts young people with the invisible workings of algorithms and how these can narrow their worldview, reinforce polarisation, and stimulate individualism. The installation invites visitors to literally walk through different algorithmic "worlds," experience them, and eventually reset or "repair" their own algorithm. Instead of presenting algorithms as abstract lines of code, the installation makes them spatial, sensory, and experiential. Visitors discover how quickly their perspective can be steered, limited, and shaped. Afterwards, they are given the opportunity to actively experiment with alternative feeds, perspectives, and information bubbles. The installation functions as a kind of algorithm repair café: not a place of judgement, but a space for awareness, reflection, and choice.

#### Goal

- Create awareness of how algorithms shape worldviews
- Allow young people to experience that polarisation is not simply "coincidental"
- Restore a sense of agency: users are not only consumers, but also have influence over their online environment

#### Strengths

- Makes abstract technology more understandable
- Playful rather than instructive or moralising
- Encourages conversation and discussion
- The physical experience makes the topic more memorable

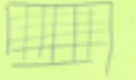
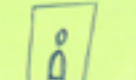
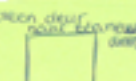
## Idea 1: Installation 'fix your algorithm'



#### Limitations

- It is impossible to show a real algorithm, so the installation remains a representation
- Risk of simplification, which requires strong conceptual framing
- Young people might feel confronted or criticised, making tone and framing crucial

Idea: Innovation "Fix your algorithm"

Substitute	Combine	Adapt	Modify
<p>What can I substitute to improve an implement?</p> <p>Vr ten tunnel Luchter en mist</p>  <p>Individual screen</p>  <p>Screen door naar buiten aan</p> 	<p>Can I combine this with other ideas?</p> <p>Vr installatie "Fix your algorithm"</p> <p>Pick match by installation om te kunnen luchten juice channel</p>	<p>What's best? Can I adapt the characteristics of the idea?</p> <p>Installeer mee in café / video vst</p> <p>Meer interactie samen Met andere leerlingen. Hoe?</p>	<p>Could I exaggerate/simplify the idea?</p> <p>Scan on your phone</p> <p>interaction on phone update Algorithm</p> <p>More extreme polarising views</p> <p>More to see other ones world views</p>

## Idea 2: Workshop VR

Young people grow up in highly personalised online environments shaped by algorithms. These algorithms often reinforce an individualistic worldview and can contribute to polarisation. In this workshop, young people use VR to: literally see and experience their own online bubble, switch to other algorithms or perspectives, reflect together with parents or peers on the differences they encounter. The goal is to stimulate awareness, empathy, and conversation, not through moralising, but through experience.

Target group

Primary: young people (approximately 16-20 years old)

Secondary: parents/caregivers, teachers, and facilitators

Problem statement

Online algorithms mainly show us content that aligns with our existing worldview. For young people, who are still in a formative phase, this can lead to: reinforcement of "us versus them" thinking, less understanding of other perspectives, rapid polarisation around topics such as politics, gender, climate, and identity. At the same time, parents often have little insight into the online environments their children are navigating.

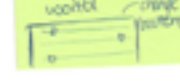
Goal

- Provide insight into how personalised algorithms shape the worldviews of young people
- Allow participants to experience that online polarisation emerges from systems, not only from individual opinions
- Position young people as active participants rather than passive consumers but also have influence over their online environment

Strengths

- Makes an invisible system tangible
- Uses experience rather than explanation
- Invites reflection and conversation
- Connects with the lived experiences of young people

Idea: Innovation "Fix your algorithm"

Put to another use	Eliminate	Rearrange	Scamper
<p>What other kind of users would want my product?</p> <p>Elderly ↳ to learn more about tech nowadays ↳ Simple installation without use of extra tech</p>	<p>When can I remove without altering the idea's objectives?</p> <p>Fix your algorithm</p> <p>Zie alleen je eigen world view</p> <p>Zie alleen anderen's world view</p>	<p>When can I rearrange in the idea?</p> <p>Tunnel is nog je eigen algoritme die aan het updaten is</p> <p>Fix your algorithm and see how that changes the world</p> 	<p>...</p>

## Workshop with VR

Workshop gemaakt door jongeren

Lachrijver

Workshop gemaakt door jongeren voor hun ouders

Lachrijver

Voorlichting aan jongeren hoe jongeren goed met social media om kunnen gaan

jongeren simulator van hoe social media gebruikt wordt (VR - oid)

Lachrijver

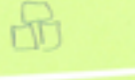
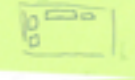
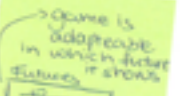
Kind kranten artikel van de maand laten schrijven - zodat je insight in gedachte krijgt

Lachrijver

Limitations

- It remains an interpretation of complex technology
- Risk of oversimplifying a layered and complex problem
- Can be confronting for participants
- Requires careful framing and facilitation

Idea: Workshop with VR

Substitute	Combine	Adapt	Modify
<p>What can I substitute so as to make an implement?</p> <p>Instead of VR build your environment</p>  <p>Instead of VR, make something for your parents</p>	<p>Can I combine this with other ideas?</p> <p>Combine with VR within the world you need to stabilize the algorithm</p> <p>VR installation based on different algorithms people need to give alternatives which ones</p>	<p>Could I adapt the characteristics of this idea?</p> <p>No workshop just a game</p>  <p>Workshop together with parents to create your physical algorithm</p>	<p>Could I exaggerate/simplify the idea?</p> <p>Multiple people in one VR-world you need to escape the algorithm together</p> <p>Game is adaptable in which direction it shows</p> 

Idea: Workshop with VR

Put to another use	Eliminate	Rearrange	Scamper
<p>What other kind of users would want my product?</p> <p>Parents create the word they know online</p> <p>↳ filling the gaps together with youth</p>	<p>What can I remove without altering the idea's outcome?</p> <p>No reflecting just sharing</p> <p>No VR - just a plain game</p> <p>Different words are already created</p>	<p>What can I rearrange in the idea?</p> <p>Not about socials also algorithms on google</p> <p>Multiple words are created through gaming/choices</p>	<p>...</p>

## Idea 2: Fix your algorithm

“What’s in My Media?” is an interactive game in which young people build their own algorithm and experience each other’s algorithms. Through gameplay, participants discover how online platforms shape their worldview, how individualisation emerges, and how this can contribute to polarisation. The game makes invisible algorithmic processes tangible and discussable, and invites players to critically reflect on their own media bubble as well as those of others.

Rather than explaining what algorithms do, the game allows participants to experience what algorithms do.

### Goal

- Provide insight into how algorithms shape the worldviews of young people
- Create awareness of one’s own media bubble
- Allow participants to experience that others may live in a very different online reality
- Make polarisation tangible and experiential rather than purely theoretical
- Stimulate critical thinking without being moralising
- Initiate conversation about opinion formation, identity, and the influence of media

### Strengths

- Playful and accessible → not a heavy “lesson,” but learning through exploration
- Experience-based → participants feel the effects of algorithms rather than only hearing about them
- Confrontational in a safe way → without direct debate or personal confrontation
- Encourages empathy → participants step into someone else’s media bubble
- Relevant and timely → directly connected to youth, social media, and polarisation
- Makes the invisible visible → algorithmic processes become tangible
- Encourages group interaction rather than individual reflection alone
- Fits well within a design and graduation context → both conceptually and practically relevant

## Idea 3: Game, ‘What is in my media?’



### Limitations

- Complexity → algorithms are complex systems, which creates a risk of oversimplification
- Time investment → the game may become too long without careful design
- Facilitation needed → without proper framing, the intended message may be lost
- Different interpretations → players may react defensively (“that’s not me”)
- Emotional sensitivity → some content may be confronting for participants
- Risk of stereotyping → participants might categorise others too quickly
- Design challenge → the concept requires careful development to avoid remaining too abstract

Idea: Game: 'What is in my media?'

Substitute What can I substitute so as to improve the idea?	Combine Can I combine with other ideas?	Adapt Could I adapt the characteristics of this idea?	Modify Could I exaggerate/simplify the idea?
Have an Board to play on 	Use VR to sketch the words 	Algorithm not based on your own experiences 	Electronic boards to upload the cards 
Cards are scanned on the phone 	People can anonymously ask questions (chat board) 	game online, people are not physically together.	Use AI to sketch the algorithms 
Make use of a beamer on the table 			half physical / half digital

Idea: Game: 'What is in my media?'

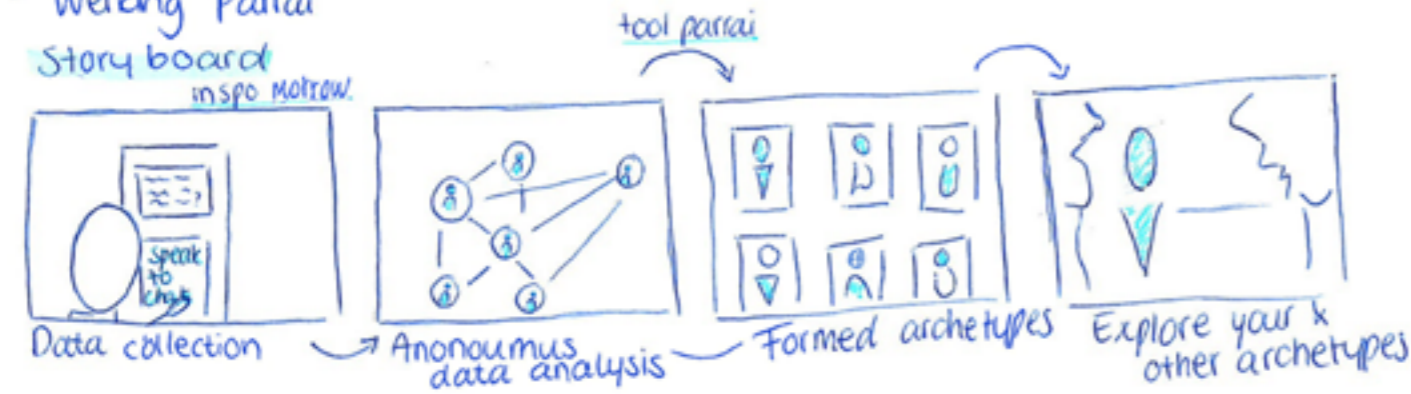
Put to another use What other kind of uses would want my product?	Eliminate What can I remove without altering the idea's outcome?	Rearrange What can I rearrange in the idea?	Scamper ...
Change the context to a museum / @home / school 	Instantly start creating an algorithm together with cards 	Start with creating the algorithm together, then reflect on what you recognize.	
To play for adults to understand youth. 	Only a card game.		

# D3: Concepts derived from SCAMPER method

As mentioned in chapter 8.3 in the report 5 starting concepts arrived after analysing and clustering the ideas derived from the SCAMPER method (D2). Two of the ideas are explained in the report and further analysed. The remaining three ideas are shown on the next pages.

## Archetypes

- Inspiration Database Matthijs Morrow
- Working Parrai Story board inspo Morrow



Do we really need archetypes?

Ischrijver

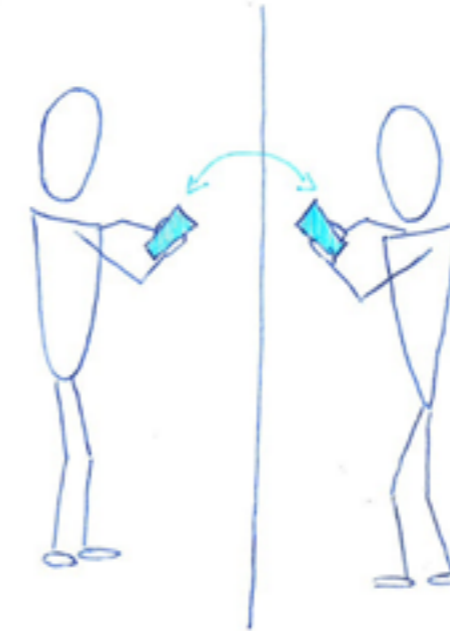
Why are the archetypes created by algorithms in the tool?

Ischrijver

How?  
 Combined with other idea?  
 - installation  
 - Game  
 - VR

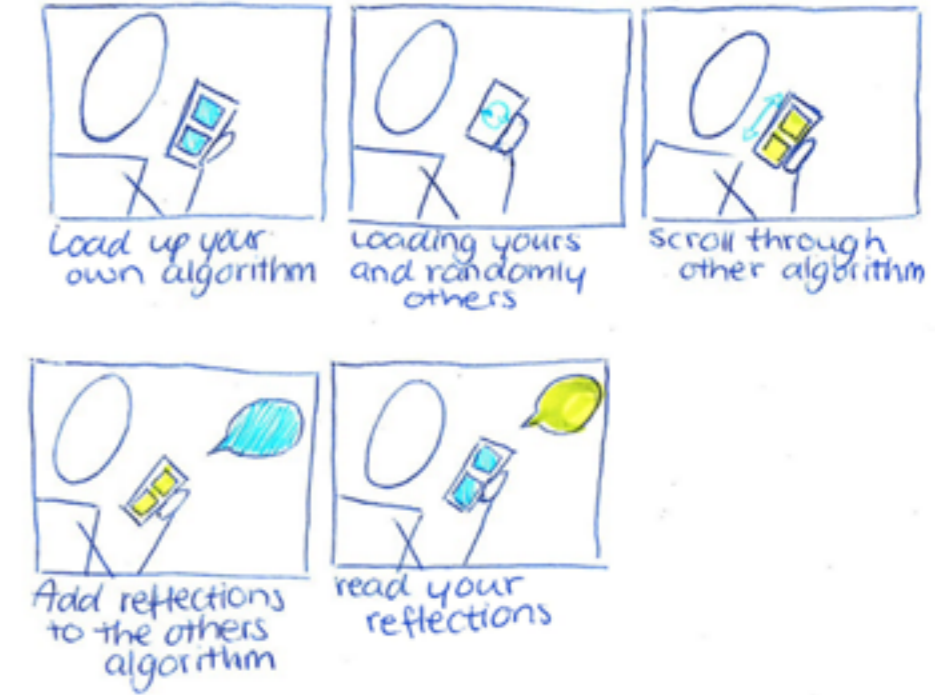
## App-Swap Algorithms

Swap anonymously and randomly your algorithm



Feels weird to keep 'the online world' still online

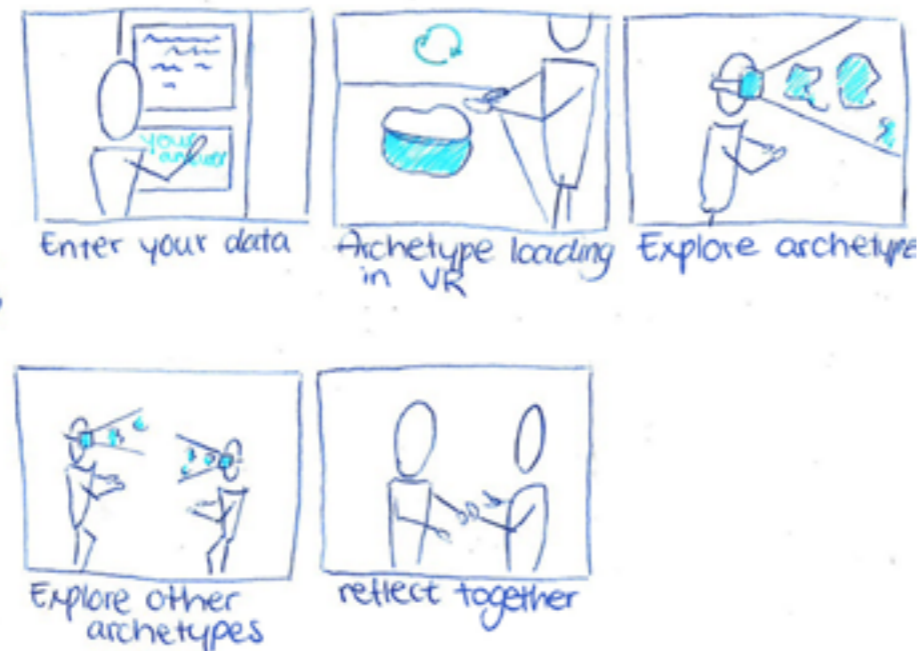
## Storyboard



VR — make the online visual:  
Explore archetypes through  
VR



Storyboard:



## D4: Preparation & Material used during ideation session 2 (IS2)

### Goal of the session

The goal of this ideation session was to further explore how algorithmically shaped online environments could be visualised and experienced in a collective setting. Building on insights from the previous ideation session and concept exploration, the session focused on generating ideas for how algorithmic worlds could be made tangible while maintaining anonymity for participants.

The following research question guided the session:

How can we visualise and make online worlds shaped by algorithms and chatbots experienceable, while allowing participants to explore them anonymously with or alongside others?

The session aimed to explore different ways of representing algorithmic environments, experimenting with interactive formats, and identifying possible directions for translating these ideas into a design concept.

### Preparation and approach

The ideation session was prepared by outlining the research question and selecting creative methods that would support collaborative idea generation. The session was designed to encourage participants to build on each other's ideas and explore unconventional perspectives.

At the start of the session, participants were briefly introduced to the topic and the goal of the ideation process. Example algorithmic environments and social media feeds were shown to provide context and stimulate discussion about how algorithms influence online experiences.

Participants were encouraged to think freely and generate a wide range of ideas, focusing on exploration rather than evaluation.

The ideation session was inspired by techniques from the Roadmap for Creative Problem Solving Techniques (Heijne & Van der Meer, 2019).

### Session agenda

The session lasted approximately one hour and followed the structure below:

- Kick-off. The session started with a short introduction explaining the goal of the ideation session, the context of the project, and the rules of brainstorming. Participants were reminded to postpone judgement and to focus on generating a large quantity of ideas. The research questions guiding the ideation were redefined with the participants
- Icebreaker: reflecting on personal algorithms. The session started with a reflection exercise in which participants discussed their own social media feeds by looking on which buzz words their algorithms function, this can be found on insagram. Questions included if the participant was surprised by the outcomes. This activity helped participants reflect on how algorithms shape their personal online environment.
- Framing the challenge. The facilitator introduced the ideation challenge: How can algorithmic online worlds be made visible and experienceable for others while maintaining anonymity? The participant choose two ideas which were most promising
- Brainsketching. Participants generated ideas through a brainsketching exercise, in which ideas were visualised through quick sketches. Participants created rough visual concepts and passed them on to others, who could add to or modify the sketches.
- Reflection and idea selection (Hits & Dots). At the end of the session, ideas were reviewed collectively. Participants indicated promising ideas using the Hits & Dots method, which helped identify directions for further development.

The outcomes can be found on the next pages and the ideation activities that were done individually after the session.





# Input from the test participants

Each colour is a different test participant. These quotes are translated with AI

→ What do you feel like when exploring these different algorithms?

I think it's funny. I also think it's new. It makes me curious. I immediately start wondering who is behind that algorithm. For example, with that featured one. I start thinking which brand deviated from algorithm. It almost becomes a kind of puzzle. Like, who could it be? How much does this algorithm actually say about the person it belongs to? You could also question whether it really reflects who that person is. It is really such a good representation! So I think curiosity is the main feeling.

"I like watching things like that, you know? It gives a kind of nice experience feeling. I actually really enjoyed just scrolling through it and looking at what other people see in general. But I noticed that anything that was more intense than something like this dog is wearing headphones actually made me instantly more bored, even if the content was very extreme. So sometimes you think, wow! And other times you think, oh, that's really boring. It's kind of one or the other. Sometimes it's interesting, but sometimes not."

Yeah, mainly curiosity. I think this one... sometimes it's just really funny. Yeah, it's kind of nice as well. There's just a bit of beautiful videos and you think, okay, that is probably the most personal one. Sometimes you also think, wow, I really don't need to see this, this is terrible. But when you do it together, there's no person controlling the scrolling, and because of that you actually spend more time looking at things that you would normally scroll past immediately. So it becomes more about curiosity. I'm curious about what kind of things appear in other people's algorithms, and what will show up next. That's also the whole capturing aspect of infinite scrolling.

Other questions:  
 • How much content do they want to see?  
 • What kind of content do they want to see?

I thought the number of algorithms was good, around four or five different ones. Maybe there could be more, because I feel like I could have gone through more of them if I had clicked through a bit faster. I only realised that later, even though you had mentioned it before.

So you enjoy seeing other algorithms and what kind of content they get?  
 "Yes, I really like that. I find it really interesting. And I also like that they're not too extreme, because otherwise I wouldn't believe it anymore."

Yes, it's a bit much. But would you be interested in seeing more posts and more algorithms?  
 "Yes, personally I would find that really interesting. It's one of my interests."

In terms of how long each algorithm was, I think it was fine. I think what there is already enough, because otherwise people might just start scrolling like they normally would on social media. Personally, I would have found it fun to see even more profiles besides the three that were shown. I think showing more diversity between algorithms would be really interesting."

It's nice that it's not only pushing one very specific type of content. Maybe you could look into making the pattern a bit less obvious."

"Yeah, I think for quite a long time. But that's also because it feels a lot like your normal algorithm. I already spend way too much time scrolling anyway. So I think here you just become captivated by someone else's account instead of your own. And especially when you look at it together with other people, you start talking about it the whole time. I noticed that just now."

That's a difficult question. With infinite scrolling, for a lot of people it's just memes, like half of it is random stuff. Memes can also be politically loaded sometimes. But in this demo there probably isn't enough content yet to really make statements about that."

I think it really depends on what would be discussed in that interview. If it were an interview where someone just talks a bit about their life, I'm not sure how useful that would be. On the one hand, I think it could be very interesting to add, but on the other hand I'm not sure what it would really contribute. Because what you already have here could already be quite powerful and really close to life. It's just not sure what an interview or a video of an interview would add. It might actually be good to attach a face to an algorithm. Maybe that could even contribute to more polarisation. Personally, I wouldn't want to see a face connected to it. Maybe more of a story behind it or some additional information, but not something that allows me to generalise about the person behind the algorithm.

But it could also be fun to maybe guess something like: this is Jeffrey, 38, from Wellington. What kind of content does he watch? That you look at it without having too much information. Although that might be difficult in an exhibition setting, because then you might have to watch for quite a long time before forming an opinion. At the same time, that could also be interesting. Both options could be interesting, for example including a political preference, but I wouldn't necessarily need to see a face attached to it. Age would be nice to know though, I think. Age for sure.

Yes, definitely. That would give more insight into what the original person actually thinks about it. Then you also start making the connection between how you interpret the content and how the other person interprets it. That might even stimulate more dialogue. Maybe you could even combine both approaches, or alternate between them. I think including the person's opinion about the video, especially if it's politically charged, could add an extra layer to the real. For example, if you see that the person whose algorithm it is thinks the video is terrible because of how they see the world, and then someone else says they completely disagree, that creates more of that quite complex polarisation. Compared to if someone simply says they don't want political videos on their feed, while another person might think these videos are actually interesting. In that case you're operating on a different level. The second option goes a bit deeper because it also adds that emotional or ideological layer. But I think it would be good to alternate it, otherwise it might become too heavy. If there are too many pop-ups saying what this person thinks about everything, it might take away from the intrinsic scroll feeling of quickly consuming content.

Yes, I think so. Especially things like facts or explanations, because algorithms are such a black box. I actually try to distance myself from social media because I often think I don't really know what happens with it. I don't know how it is shaped or where that data ends up. At the same time, I also don't fully understand how it works, so I would actually like to know more about it. Like, who really has access to all that data? Because that is also how money is made. The more extreme or unvarnished content there is, the more people react and keep watching.

People often say things like "my personal behaviour has nothing to do with it" or "I have nothing to hide, so it doesn't matter". But I still think it does matter. In a way, you're giving a kind of vote or donation. You're literally donating your algorithm to these big companies, and with that you're also donating a lot of information about yourself. I think there's this idea that your personal data will eventually be used against you individually. I'm not sure I fully believe that. I don't necessarily think someone will personally blackmail you with your data. But I do think the behaviour of a group that you're part of can be influenced through that data, and that influencing a group can have a much bigger impact.

These algorithms feel quite regular, and because of that it almost feels like I've just been scrolling on Instagram or other than gaining a new insight. If there were some kind of prompt or question, not something overly, but something thought-provoking, I think that would make it more interesting. I do like the playful element of scrolling and the idea that you want to keep scrolling. But without something extra, I might just walk away feeling like I spent some time on Instagram. I think it would be good to add something either at the beginning or at the end that encourages reflection.

What does the person whose algorithm this is actually think about it? What are their opinions? Sometimes it might be interesting to read that. Do you think that would be a nice? Yes, I think that could work well. But then, if there were something thought-provoking, I think that would make it more interesting. I do like the playful element of scrolling and the idea that you want to keep scrolling. But without something extra, I might just walk away feeling like I spent some time on Instagram. I think it would be good to add something either at the beginning or at the end that encourages reflection.

Yes, maybe you could alternate it a bit. I wouldn't necessarily include it directly in the quotes while scrolling. Maybe it could appear in between the scrolling moments. The quotes could appear over the video, and then when you swipe the videos away you get a kind of reflection slide, like a moment to realise what you just saw. That could work well, especially because you're not standing in a room with a hundred people at the same time. It might actually be nice to get reactions from other people, like someone saying "wow, I found this really intense" or "this was really funny" or something like that.

• Do they want to see it on a big screen? Or a smaller screen?  
 • Why?

That boundary we talked about between the online world and the real world is actually shown really nicely by making it this large. By making it the size of about the same size as a person, I think that's really cool. It also makes you aware that other people are watching you. There's a kind of vulnerability in that, like, wow, what actually happens when other people look into my algorithm? I think that makes you more aware of how normally you experience your social media in a very isolated and safe bubble.

This definitely does something. Because it's on a large screen, it feels much more confronting. It's more interesting and a bit more embarrassing, which is actually a good thing. It almost feels like standing there in your underwear.

I think you could really play with the confrontation of someone seeing you scroll through things in a public space with a large touchscreen, which is very up close and personal. But when it's displayed like this, in public, I think that would actually be really cool to experiment with.

But yeah, the bigger the better. It becomes more in your face. I think that's good, because normally a phone is quite small and it's more embarrassing, which is actually a good thing. But when it's displayed like this, it suddenly hits much harder.

And especially when you look at it together with several people, you start talking about it again and again. I already noticed that just now.

Based on these differences, I think it very quickly starts a conversation. Especially when you see clear contrasts. For example, the more right-leaning feed and the feminist one are really far apart. That makes you start talking with others about it, like going back to the first question we asked: who might be behind the algorithm? It might also make you start reflecting on your own algorithm.

Yes, I think so. Although I could also imagine myself quickly saying something like, "wow, that's bad" and then just walking on. And that wouldn't really lead to the best conversation. So I think there's still a balance to find there.

Yes, for me it would. I think so, actually. But I also have friends with whom I already discuss these kinds of things quite openly. So it's not hard for me to judge. But for me personally, yes, definitely.

# Analysed insights test moment 1

Curious about the person behind it and experiencing a rollercoaster of emotions.

Different algorithms spark users curiosity, especially about who might be behind them and how that person engages with this content.

It is very interesting to look at someone else's algorithm. Your emotions fluctuate a lot depending on the content you see.

Being in an algorithm you disagree with suddenly highlights how emotionally charged social media can be.

The amount of content is appropriate, but there should be a clear endpoint and a clear indication that users can move on to the next algorithm.

The length is good, maybe there could even be more profiles, but there should be a maximum amount of content to prevent endless scrolling.

The length is good. I would probably keep scrolling for a long time because it creates the same effect as real algorithms, so it might be good to include a stopping point and a moment for reflection.

Facts can be a good addition, as well as provocative, reflective questions.

The mix between humorous posts and political posts works very well.

Make sure there isn't a clear or predictable pattern in the content.

The algorithms should not be too extreme, otherwise they become less believable.

The amount of content is good, but it should be clear that users can also move on to the next algorithm if they don't want to watch everything.

Provide deeper insight into how a person experiences their algorithm, but be careful not to turn it into stereotypes.

I already think it's a very strong concept on its own, and I'm not sure what an interview would add. I wouldn't want to see a face attached to it, but perhaps more background information or a story behind the person.

Age could be interesting to include.

Mixing opinions and personal experiences could make the content more interesting.

I think it could be interesting to end with a reflective question that asks participants to write down their answer.

Facts could work well, especially since I personally don't understand much about how it works yet.

There should still be reflective questions, facts, or comments included so that it doesn't feel like I've just been scrolling on Instagram. There needs to be a certain trigger that either tells me something new or holds up a mirror. A moment for reflection at the beginning or the end could work well.

Facts could appear in between the scrolling moments, with quotes displayed over the videos.

Conversations about the algorithms start quite quickly, though I notice they happen faster when prompted by a question or a statement.

It's interesting how everyone responds differently to the various algorithms and the content within them. What people react to isn't always the same, even within an "IO" bubble.

Additional context such as opinions and experiences can be valuable when alternated, but it should avoid becoming stereotypical.

A large screen works very well, especially because it blurs the boundary between the online and offline world and breaks the safe, private bubble of scrolling by making the interaction public.

It has a strong effect, almost like standing there in your underwear, making the experience feel slightly more exposed or vulnerable.

A large screen in a public space makes the experience much more confronting.

Big screen test!

I would definitely start a conversation with others, especially when there are strong contrasts or when comparing it to my own algorithm.

Conversation does start, but it needs triggers that help guide or facilitate the discussion.

I would start the conversation, but I find that easier than most because I already discuss these topics with friends quite often.

People start looking up things from their own algorithm when they recognise something.

People start looking up things from their own algorithm when they recognise something.

It stimulates conversation, but it does need facilitation or guidance.

It's nice to include different experiences in it.

# E2: Test moment 2 (TM2)

## Goal of the session

The goal of this test was to evaluate the clarity and structure of the workshop concept and to assess whether the content effectively stimulates awareness and reflection about algorithmic social media environments.

Since the prototype at this stage focused primarily on the narrative structure, questions, and educational elements of the workshop, feedback from experts was collected to evaluate the quality and relevance of these components.

## Research questions

The test was guided by the following main research questions:

- Is the structure of the workshop clear, logical, and easy to follow for the target group?

Additional questions explored during the test included:

- Are the facts and quotes interesting, relevant, and clearly formulated?
- Do the reflective questions sufficiently stimulate meaningful discussion?
- Do the questions increase awareness of how algorithms can influence someone's worldview and shape their personal social media environment?

## Prototype

The prototype consisted of a digital version of the workshop structure, including the sequence of algorithmic feeds, facts, quotes, and reflective questions. The concept was presented in a PDF format together with an explanation of the workshop and the intended interaction.

This format allowed experts to review the content and structure of the workshop without needing to physically participate in the full interactive experience.

## Setup

Due to time constraints and the availability of the experts, the workshop was evaluated remotely. The prototype was shared via email together with a short explanation of the project and the research questions guiding the evaluation.

Experts were asked to review the material and provide feedback on the clarity, relevance, and potential effectiveness of the workshop.

## Test procedure

- The workshop prototype was prepared as a PDF document
- The document included an explanation of the concept, the workshop structure, and the guiding questions.
- The material was sent via email to experts working in the fields of youth, education, and social media.
- Experts reviewed the document and provided feedback on the research questions.
- The feedback was collected through email responses and online conversations.
- The insights were analysed and used to inform the next design iteration.

## Participants

The prototype was reviewed by three experts with experience in youth engagement, education, and social media topics.

## Data collection

Data was collected through qualitative expert feedback. Experts were asked to review the workshop prototype and respond to the research questions via email or during short online conversations.

# Analysed insights test moment 1

Here under you can find the analysed input from expert. These were further analysed into insights for the final design

### First question:

- Are the facts and quotes interesting, relevant, and clearly formulated?

Expert feedback for the first question:

- "I think the facts and quotes are certainly relevant and interesting, but the real added value, as is often the case, lies in the experience itself. It's not so much about reading the quotes, but about watching the different videos, shorts, or posts and reflecting on how they affect the participants themselves."
- "I would suggest going through the text and checking for terms that may seem obvious to you but might not be clear to all young people. For example: polarisation, donated, content, emotionally charged, certified, etc. It can help to still use important but complex terms, but to briefly explain them. For instance, you explain infinite scrolling, but terms like polarisation or donated may remain unclear for a significant number of young people. It may also help to avoid overly abstract language and long sentences."
- "I quickly come across the term 'polarisation,' followed by the question: 'How do you experience polarising content online?' That makes me wonder whether the target group already understands what polarisation means, or whether you are assuming that prior knowledge. From my experience at ProDemos, many of the groups we work with are not yet aware of what polarising statements are, simply because they do not fully understand the concept itself. It might therefore help to first explain the term or provide a clear example before asking that question."
- "I also notice that a second question immediately follows: 'What does that do to you?' I would consider separating these questions. For example, you could first present an example of a polarising statement and then ask what that statement does to the participant. Later in the workshop I also see two questions appearing on the same screen again. I would suggest always presenting questions separately, as this makes each question or statement clearer."
- "\*\*I think the facts are very engaging and would definitely appeal to groups of secondary school or MBO students. This one in particular is strong and encourages reflection: 'To what extent do you think infinite scrolling influences the amount of time you spend online?' However, this one feels quite complex in terms of language and sentence structure for many young people: 'Did you know that non-certified accounts more often contain misinformation, use harsher language, and show more intolerance towards other groups?' Instead, you could phrase it more simply, for example: 'Did you know that accounts that are not verified often contain more misinformation and harsher language?' My main feedback therefore relates to word choice and sentence length. These could be simplified without losing the message, which would make your tool more accessible to a wider audience."
- "You don't always have to respond directly to the participant; it might actually be better to maintain the natural flow of the algorithm."

- ### Second questions:
- Do the reflective questions sufficiently challenge participants to engage in a meaningful discussion?

Expert feedback for the second question:

- "I think it could, although it will also depend on what is written on the worksheet. You could include prompts that help start a conversation or discussion. I would also carefully consider whether you want to stimulate a discussion or rather encourage a dialogue."
- "For some of the reflection questions, I think young people might experience them as repetitive, for example the ones on pages 45 and 46, since both are about the effect of the algorithm on the feeling someone is left with."
- "I think the reflective questions at the end are essential: 'How do you think your own feed works? What will you take with you the next time you start scrolling?' That is what you are working toward, I think. That conversation, the discussion guided by a teacher or facilitator, really determines whether you will reach those goals, because if the class does not respond to it, no real learning outcome will take place."
- "Coaches: the workshop should be designed in such a way that the questions are triggered, rather than simply being shown."
- "Emotions are a good idea because they make it a bit more comparable. In that sense, it's a good idea."
- "If you want to emphasize the differences, it is a good idea to use content that you already know is polarizing. How can you make sure the content is well balanced? A milder version can already be used to make the topic discussable."

- ### Third question
- Leiden de vragen daadwerkelijk tot bewustwording van hoe algoritmes iemands wereldbeeld kunnen beïnvloeden, en hoe hun eigen algoritme hen vormt?

Expert feedback for the third question:

- "You do touch on it on page 68, but you could go into more detail about concrete actions you can take to avoid being too strongly influenced by the algorithms of social media companies."
- "So perhaps it could provoke or activate a bit more. For example: which polarizing post or feed have you recently come across that you completely agreed with, while someone else strongly disagreed? Or ask participants to come up with a statement themselves that could help counter polarisation."
- "It's also worth considering how you group people based on what they normally see. And how can you ensure that they are actually exposed to a different perspective?"
- "Boys and girls in your target group: do you want to address them together or separately?"
- "Putting people who don't know each other together can be more interesting, as their interpretations of the video may be more similar. When people already know each other, it can be more difficult to guarantee a sense of safety."

- ### Fourth question
- Is the narrative logically structured and easy for the target group to follow?

Expert feedback for the fourth question:

- "Yes, I think it is logically structured."
- "Guidelines for ensuring safety during a workshop."
- "It could be nice to ask about people's own experiences during the conversation, for example whether they ever come across things like this."

## E3: Test moment 3 (TM3)

### Goal of the session

The goal of this test was to explore whether mapping emotional responses while interacting with different algorithmic feeds stimulates reflection and discussion about the influence of algorithms on online experiences.

This iteration focused on testing the emotion mapping component that was added to the workshop. The test aimed to understand whether visualising emotional reactions helps participants recognise how different types of content affect them and whether this supports conversation between participants.

### Research questions

The test was guided by the following main research questions:

- Does the emotion mapping activity stimulate discussion about the influence of algorithms?

Additional questions explored during the test included:

- Do participants enjoy mapping their emotional responses while scrolling through algorithmic feeds?
- Does comparing emotion patterns stimulate conversation and reflection?
- What is the most intuitive way for participants to map their emotions (for example digitally, with a slider, or on paper)?

### Prototype

The prototype consisted of an updated version of the workshop in which participants mapped their emotional responses while interacting with different algorithmic feeds.

Participants were asked to indicate their emotional reactions to the videos they encountered while scrolling through the feeds. The emotional responses were mapped using a simple emotion scale. During this iteration, the emotion mapping was tested using a paper-based method to quickly explore how participants responded to the activity before developing a digital version.

### Setup

The test was conducted in a studio environment. A laptop displaying the workshop prototype was connected to a large screen so participants could collectively view the algorithmic feeds.

Participants interacted with the feeds while simultaneously mapping their emotional responses on paper.

### Test procedure

- The laptop was connected to a large screen displaying the workshop prototype.
- Participants were briefly introduced to the project and the purpose of the prototype.
- Participants were asked to scroll through the algorithmic feeds.
- While watching the content, participants mapped their emotional responses on paper.
- Participants compared their emotion maps and discussed the differences.
- A short discussion followed in which participants reflected on the experience and answered several follow-up questions.

### Participants

The prototype was reviewed by three experts with experience in youth engagement, education, and social media topics.

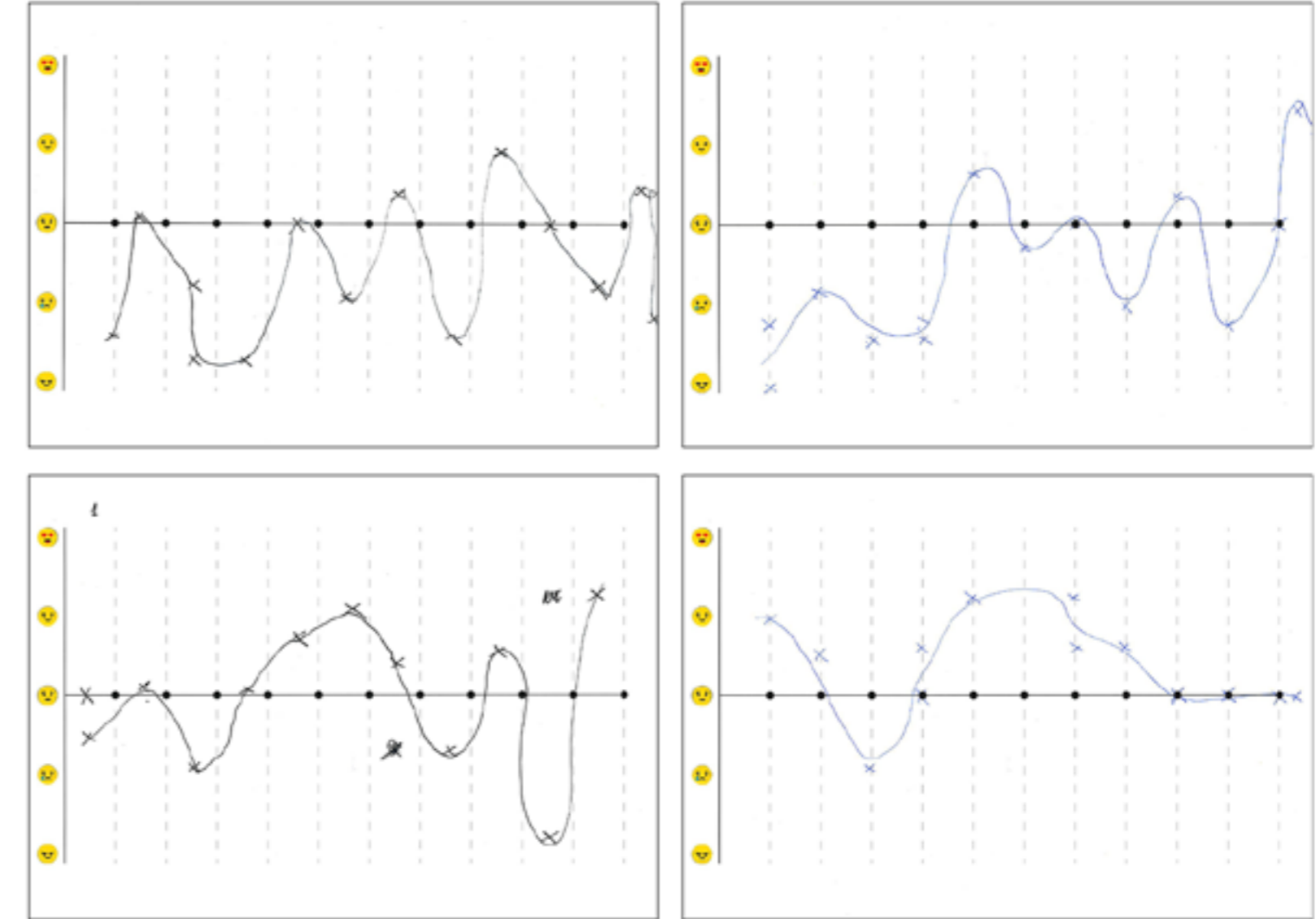
### Data collection

Data was collected through qualitative observations and participant feedback, including:

- observations of how participants interacted with the emotion mapping activity
  - the completed emotion mapping sheets
  - verbal reflections during the group discussion
- notes taken during the session

The collected data was analysed to identify patterns in emotional responses and how these responses contributed to reflection and discussion.

## Filled in emotion flows



## Analysed insights test moment 1

Here under you can find the analysed input from expert. These were further analysed into insights for the final design

### Main question:

- “Does the emotion flow trigger a conversation and discussion about the influence of the algorithm?”

The concept is strong and well thought through in terms of content. Participants felt that you clearly knew what you were doing. The topic (polarization and algorithms) naturally led to deeper conversations. The opening in particular, the question of whether people themselves experience polarization, worked as a strong starting point.

Lachrijver

### Other questions:

- “Does the algorithm maintain a good flow while participants are mapping their emotions?”

Transition from individual work to conversation. At first it felt more like a presentation, and only afterwards like interaction. Suggestion: introduce a shared activity earlier to help the conversation start more naturally.

Lachrijver

Clarify how emotions should be filled in. There was some confusion between “What do I feel?” and “Would I like or skip this?”. Some of the emotion icons (such as angry or sad) felt too specific, so more neutral options or a scale might work better. It would also help to clarify that the goal is to capture the participant’s first, raw reaction.

Lachrijver

- “Does it work well to compare the patterns?”

The emotion curve as a conversation starter. Comparing emotion curves worked well. It made differences visible without immediately creating conflict. Looking back at specific posts helped make the conversation more concrete. An insight was that emotions fluctuate strongly, while the content itself is quickly forgotten, and that contrast is powerful.

Lachrijver

- “What is the easiest way to map emotions? On paper or digitally, with a slider or without?”

Form of input. Using a tablet was seen as more pleasant than a worksheet or participants’ own phones. Using their own phones can lead to distraction. Filling it in anonymously and then showing statistics afterwards (for example the percentage of agreement) could deepen the conversation.

Lachrijver

“When you fill it in physically, your emotions are laid out on the table. That can be quite intense.”

Lachrijver

### Other:

Looking at someone else’s algorithm was interesting. It helped participants imagine what it might be like to be in a different bubble. It was confronting to think about what it would be like if this were your daily feed. It also made implicit biases more visible, especially when it resembled their own algorithms.

Lachrijver

The technology needs to work smoothly. Loading times or friction take energy out of the experience. Optimizing deadlines or performance is important. If it glitches or slows down, it immediately feels less professional.

Lachrijver

Time and energy. It took quite a long time. Standing instead of sitting could increase energy levels.

Lachrijver

Group dynamics. Gender or group composition influences how open people are. In mixed groups, participants may adjust their responses. A facilitator can help when sensitive topics arise, although participants generally do not expect extreme conflicts.

Lachrijver

“I probably wouldn’t realize myself if the posts I see could be polarizing. This made me aware of the blind spots I have.”

Lachrijver

## E4: Final evaluation (TM4)

### Goal of the session

The goal of this test was to evaluate whether the workshop creates awareness of the influence and potential pitfalls of participants’ own algorithmic feeds, particularly in relation to polarisation.

This session focused on understanding whether participants become more conscious of how algorithms shape their social media experience, and whether this awareness leads to reflection and potential behavioural change.

In addition, the test explored the desirability, feasibility, and viability of the workshop, including whether participants enjoy the experience, understand the process, and whether the workshop can realistically be implemented in different contexts.

### Research questions

The test was guided by the following main research questions:

- To what extent does the workshop increase participants’ awareness of the influence of algorithms on their online experiences and their role in contributing to polarisation?

Additional questions explored during the test included:

- Does this awareness lead to reflection, action points, or more digitally resilient behaviour?
- Do participants enjoy the workshop and find it valuable?
- Is the workshop understandable and easy to follow?
- Is the workshop feasible to organise and facilitate?
- Can the workshop be implemented in different contexts, and would young people attend it?

### Goal

### How is this achieved?

**Determine if the workshop creates awareness of the pitfalls of their own algorithms.**

Survey at the beginning and ending of the workshop to see if their perspectives changed (individual)

**Desirability: Do the participants enjoy the workshop and value it?**

Interview afterwards and observations during the workshop

**Feasibility: Is the workshop understandable and are they able to go through the workshop?**

Letting them speak out loud during the workshop

**Viability: can the workshop be implemented? Will youth go to the workshop and can it be hosted at different places?**

Interview after the workshop (together) & with experts afterwards.

### Prototype

The prototype consisted of a workshop setup combining a digital interface, physical materials, and guided facilitation. The digital interface was projected using a beamer and connected to a touchscreen laptop. Participants interacted directly with this touchscreen device to navigate through the workshop and engage with the content. To map their emotional responses, participants used a Google Docs file. The collected responses were later visualised using simple graphs created in Excel. This approach was intentionally low-fidelity, allowing for quick testing and iteration of the concept without developing a fully digital system. In the final phase of the workshop, participants received a printed brochure to support individual reflection and summarise their experience. Additionally, the facilitator used a facilitator booklet to guide the session, structure the steps of the workshop, and support the discussion moments.

Overall, the prototype combined digital interaction, low-fidelity data visualisation, and physical materials to explore how participants reflect on their algorithmic experiences.

## Setup

The test was conducted at the Healthy Start Hub in an open environment where participants were able to stand, walk around, and explore the workshop.

A laptop connected to a beamer was used to display the prototype. Additional materials included a phone to record conversations, chargers, and a power bank.

Drinks and snacks were available to create a comfortable and informal setting. The session involved three participants and a facilitator. Judith and I observed during the workshop

## Test procedure

The session started with a short introduction which I guided, everyone could introduce themselves and I explained the goal of the project.

### Pre-workshop survey (individual)

Participants first completed a short individual survey to understand their current social media behaviour and awareness. They responded using a 1–4 scale where applicable and were asked to briefly explain their answers

- How do you identify?
- What is your age?
- How much time do you spend on social media per day?
- I am aware of what I see on social media. (1 = not aware at all – 4 = very aware)
- I am aware of what influences the content in my social media feed. (1 = not aware at all – 4 = very aware)
- I am aware of my social media feed influences me (1 = not aware at all – 4 = very aware)
- On social media, I feel like I am in a “bubble.” (1 = not at all – 4 = very much)
- What do you experience as positive about your social media feed? (short answer)
- What do you experience as negative about your social media feed? (short answer)

### Workshop session

Participants were introduced to the workshop and the prototype. The facilitator explained the goal of the workshop, how the device works, and the steps participants would go through. Observations were made by Judith and I on how participants interacted with the prototype and with each other.

### Post-workshop survey (individual)

After completing the workshop, participants filled in a second survey using the same 1–4 scales to allow comparison.

- I am more aware of how my social media feed is shaped. (1 = strongly disagree – 4 = strongly agree)
- I am more aware of how my social media feed influences me. (1 = strongly disagree – 5 = strongly agree, mistake in the survey)
- I am more aware of my “bubble” on social media and its potential pitfalls. (1 = strongly disagree – 4 = strongly agree)
- During the workshop, I experienced that others see a different online world than I do. (1 = strongly disagree – 4 = strongly agree)
- The workshop made me aware of my emotional responses to content. (1 = strongly disagree – 4 = strongly agree)
- I felt comfortable sharing my opinion during the workshop. (1 = strongly disagree – 4 = strongly agree)
- To what extent do you think this workshop will influence your future behaviour on social media? (1 = not at all – 4 = very much)
- What did you find valuable or enjoyable about the workshop? (short answer)
- What (if anything) will you do differently on social media after this workshop? (short answer)
- Do you have any suggestions for improving the workshop? (short answer)

### Group discussion and reflection

A semi-structured group discussion followed in which participants reflected on their experience and the workshop as a whole.

The discussion was guided by questions such as:

- When did you feel most aware of your emotions during the workshop?
- Did you feel like you were in someone else’s “bubble”? What was that like?
- Did you experience the workshop as playful and accessible, or confusing?
- Did you feel comfortable sharing your opinion? Why or why not?
- Was there space for multiple perspectives?

## Participants

The workshop was tested with three participants between 19 en 22 years old from Rotterdam or Amsterdam. There was one facilitator of the age of 25 years old.

## Data collection

Data was collected through a combination of qualitative and quantitative methods, including:

- pre- and post-workshop surveys (1–5 scale and open questions)
- observations during the workshop
- recorded group discussion

The data was analysed to identify changes in awareness, patterns in responses, and insights into the desirability, feasibility, and viability of the workshop.

## Pre-survey outcomes

- How do you identify?

Hoe identificeer je je?  
3 antwoorden

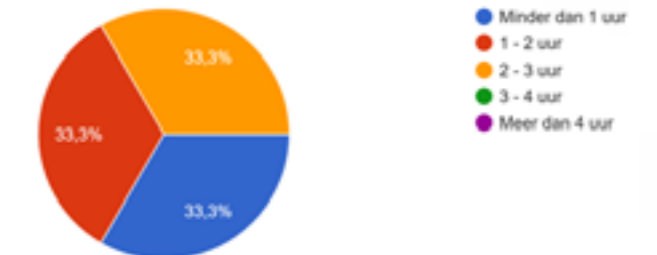


- What is your age?

**22, 21, 19**

- How much time do you spend on social media per day?

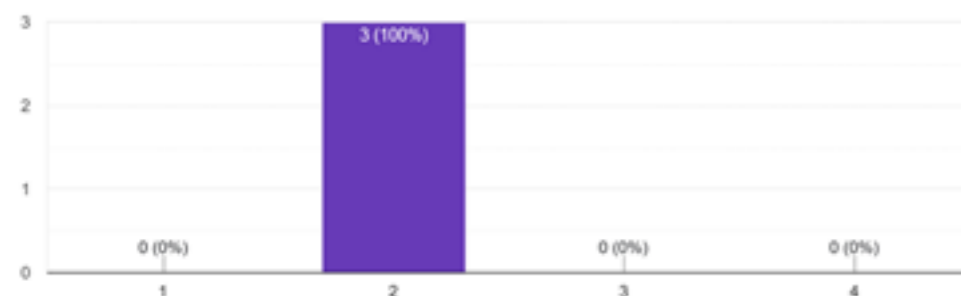
Hoeveel tijd besteed je per dag aan social media?  
3 antwoorden



- I am aware of what I see on social media. (1 = not aware at all – 4 = very aware)

Ik sta bewust stil van wat ik te zien krijg op social media

3 antwoorden



- Explanation  
When it comes to politics on my Instagram, I do pay attention, but the rest is mostly just random stuff you forget after 10 seconds.

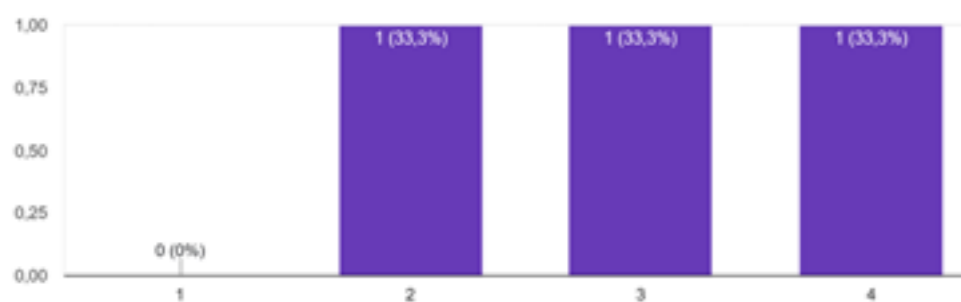
I often only realise that after I've closed the app, maybe around 20% of what I saw actually sticks with me.

I usually don't really think about it, unless it's about a more important topic.

- I am aware of what influences the content in my social media feed. (1 = not aware at all – 4 = very aware)

Ik ben me bewust van waardoor mijn feed op social media wordt beïnvloed.

3 antwoorden



- Explanation  
Yeah, I know algorithms exist and that you see more of something if you like it, comment on it, etc.

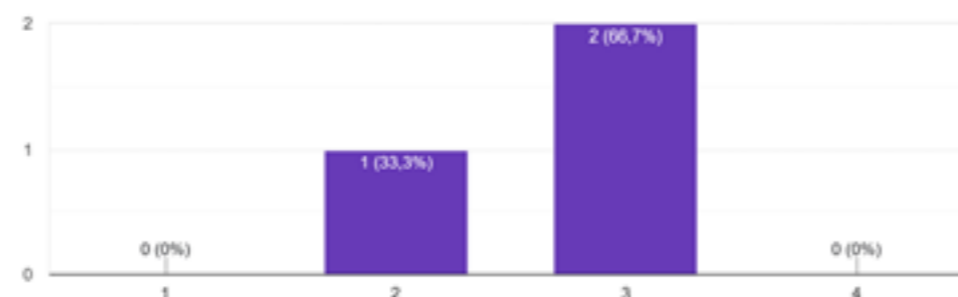
My environment and interests are what my algorithm is mostly based on, and because I keep engaging with that, I mainly see that kind of feed.

I don't really think about it.

- I am aware of my social media feed influences me (1 = not aware at all – 4 = very aware)

Ik sta bewust stil bij hoe mijn feed mij beïnvloedt.

3 antwoorden



- Explanation  
I sometimes think about it, but then I tell myself that it doesn't influence me.

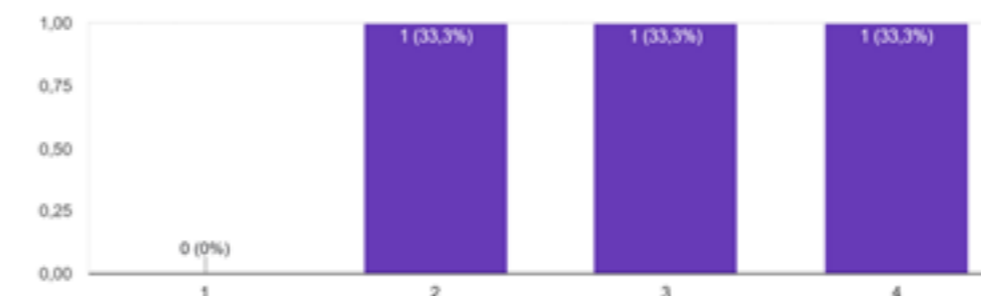
Especially when it comes to trends, I do notice that I'm influenced by them. For example, I like making certain clothing choices.

I rarely think about it, not never.

- On social media, I feel like I am in a "bubble." (1 = not at all – 4 = very much)

Op social media zit ik in een bubbel.

3 antwoorden



- Explanation  
I do get a lot of the same things and the same viewpoints, which are usually more "left-leaning."

My algorithm mostly shows things that I also like to see or do in my daily life.

I do come across certain information, but there's also information I've never seen on my feed.

- What do you experience as positive about your social media feed? (short answer)  
The funny things that don't really matter.

I often get inspiration, especially in areas like style, art, or products.

It can be educational.

- What do you experience as negative about your social media feed? (short answer)

Sometimes it becomes too political, and it can get really tiring to constantly see the same negative things happening in the world.

The constant speculation around politics keeps me occupied and also creates a vague or distorted picture of what's actually going on. For example, Trump appears a lot on my feed, which makes me feel quite negative and even a bit anxious.

Certain topics just don't show up on my feed.

## Observation notes during the workshop

### Judith

#### General

- I think the portrait orientation of the screen works well, also in this setting, because it resembles a phone
- I really like the scrolling through the feeds! Well done. It also triggers nice reactions from participants
- At the end there was a discussion about more extreme algorithms: I wouldn't show those if they include death/violence/illegal content. Starting the conversation is good though. Maybe you could add a question to the "Did you know?" section about extreme content on social media → "Do you ever come across violent or illegal content?"

#### Introduction statements

- Good statements, a nice way to introduce the topic
- As a facilitator, I would consciously consider whether or not to share personal experiences ("I personally...") and with what goal (e.g. to create openness and equality, but not to influence the group too much)

#### Feed 1

- Do people really end up in "bubbles"? Or is it better phrased as "can you end up in a bubble"?
- You could also introduce "take a look at someone else's feed!" more clearly in the interface with a short text
- The discussion while videos are playing in the background can feel a bit chaotic. I would limit discussion to moments after scrolling, or when a question appears on screen (but maybe I'm just easily overstimulated)
- Discussing emotions: asking "Who selected a negative emotion for this post?" might feel a bit direct, especially if participants don't know each other. You could keep it more general, like: "Interesting to see the variation, your emotions really differ between posts and between people"

#### Feed 2

- This feed (and the next one) could also be introduced more clearly: "Take a look at someone else's feed!"

- Interesting that participants start judging the person behind the feed. I wouldn't actively focus on this in the workshop (and maybe not ask about it directly), but it's an interesting side effect that it comes up

#### Feed 3

- "Emotion flows" might be a bit complicated wording. Maybe rephrase? For example: "Let's look at how you felt while going through this feed"
- Participants start scrolling faster I think that's fine (in most settings). It's about their experience
- Question: do participants feel like they are rating their own emotions (how do I feel right now?) or the posts (how much do I like/dislike this post)? Does that distinction matter? What would you prefer?
- I wouldn't explicitly ask: "What kind of person does this algorithm belong to?" because that can lead to reinforcing stereotypes. Maybe simplify the question on screen: "How could this algorithm influence someone?"

#### Closing

- Maybe you could visualise the reflection more in the interface and make it more specific? For example, letting participants drag/rank feeds based on:
  - \* "Which feed did you enjoy the most?"
  - \* "Which feed is the most addictive bubble?"
  - \* "Which feed is the most negative?"
  - \* "Which feed is the most political?"
  - \* "Which feed is the funniest?"(just suggestions not necessarily final) And then as a closing question: "What about your own bubble?"
- The brochure is nice! I can imagine giving it to participants to reflect on at home. But in a school/class setting, it could also be interesting to go through it more extensively together

#### Future development (not necessary for now)

- Could you create a plan for how viewing and rating posts/feeds could be further developed? Rating emotions on a separate phone feels a bit disconnected. I would suggest either doing everything on personal devices or everything together on one interface (the latter sounds more engaging)
- Could you create a plan for updating and expanding the social media

feeds? That would really support the long-term sustainability of the project

#### Length / simplification

- Have you thought about shortening the workshop? I would consider reducing discussion moments, for example:
  - \* removing the introduction statements
  - \* skipping discussion during the "Did you know?" section
  - or limiting responses to just a few participants. For example:
    - \* "Who recognises this?"
    - \* "How?"
    - \* "Who has a very different experience?"

### Lois

#### Introduction

- Statements are engaging and work well
- "I've already seen enough Trump on my For You page"
- "I do feel a bit ashamed of using YouTube Shorts"
- "Snapchat is mainly a communication tool"
- Participants recognise themselves in each other's experiences
- I can see that some people are exposed to misogynistic content
- People with more extreme right views might talk less with people on the extreme left
- "My opinion hasn't changed, but it has been shaped/distorted"
- → Interesting that the facilitator also adds information
- Earlier introduction with the screen
- → Maybe reduce this

#### Algorithms

- Good to ask questions in between
- Algorithm 1: unclear whose perspective it represents
- Algorithm 2: feels very realistic / what people actually engage with
- (e.g. someone with more right-leaning views)

#### Analysis / Observations

- People forget what they like
- Overload of content

- Facilitator (Bart) guides participants through the analysis → this works well
- → maybe provide even more guidance/tools here
- Do people crave a "useful" algorithm?
- "Manosphere" algorithm
- → perceived as clearly right-leaning
- Maybe include more questions about polarisation
- → e.g. how can content contribute to polarisation?
- It helps to have a facilitator with knowledge of social media

#### Discussion & dynamics

- Just having a conversation about it already helps
- Interesting question: what happens when you see content outside your bubble?
  - → participants can be a bit hesitant
  - → acknowledging that more extreme content exists can already help start discussion
- Suggestion: introduce content from outside someone's algorithm
- → but this can also feel quite polarising
- Sometimes participants discuss things in between steps
- The prototype is not always followed strictly
- → if participants ask questions, it might help to clarify what is part of the workshop and what is extra

#### Reactions & insights

- I'm always curious about the comments/reactions
- Without comments, there might be less extreme content
- It's good to consciously reflect on algorithms
- Question about identifying your own "colour" (personal profile)
- Emotion mapping itself is not necessarily polarising, but it does help start conversation
- It does influence the kind of environment you are in
- "I forget everything quite quickly"
- The algorithm felt quite neutral
- → but because it feels far removed from something factual, it can also create frustration
- Navigating after answering questions is sometimes unclear

- Some content didn't feel necessary
- Asking what participants do want to see works well

*Experience of the prototype*

- "Actually scrolling is really fun"
- → strong interaction element
- Nice moment to reflect afterwards
- Important to include diverse perspectives/people

*Polarisation*

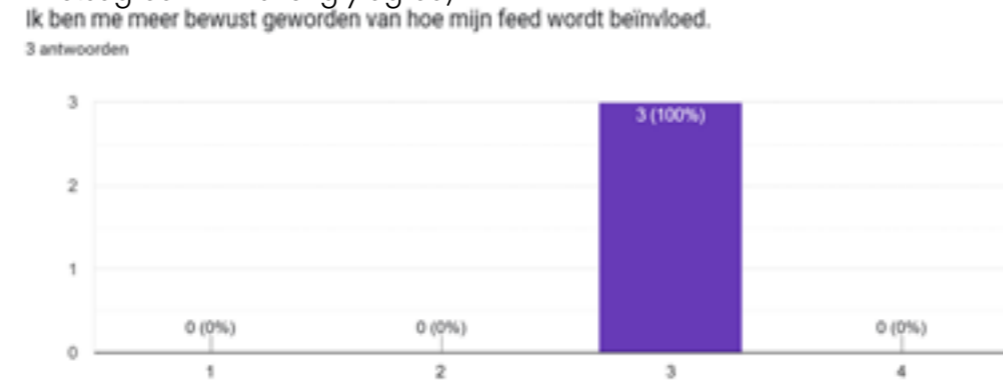
- Would like to see more explicit focus on polarisation
- Include more diverse viewpoints
- Show clearer contrast between perspectives

*Length & structure*

- Participants did not think the workshop was long, it did feel long for the facilitator.
- Consider distinguishing between:
  - essential questions (must ask)
  - optional questions (if there is time)

**Post-survey outcomes**

- I am more aware of how my social media feed is shaped. (1 = strongly disagree – 4 = strongly agree)



- I am more aware of how my social media feed influences me. (1 = strongly disagree – 5 = strongly agree, mistake in the survey)



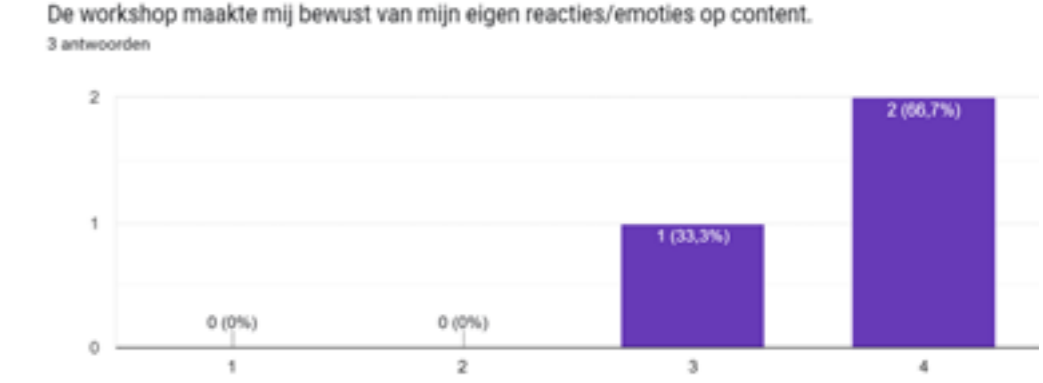
- I am more aware of my "bubble" on social media and its potential pitfalls. (1 = strongly disagree – 4 = strongly agree)



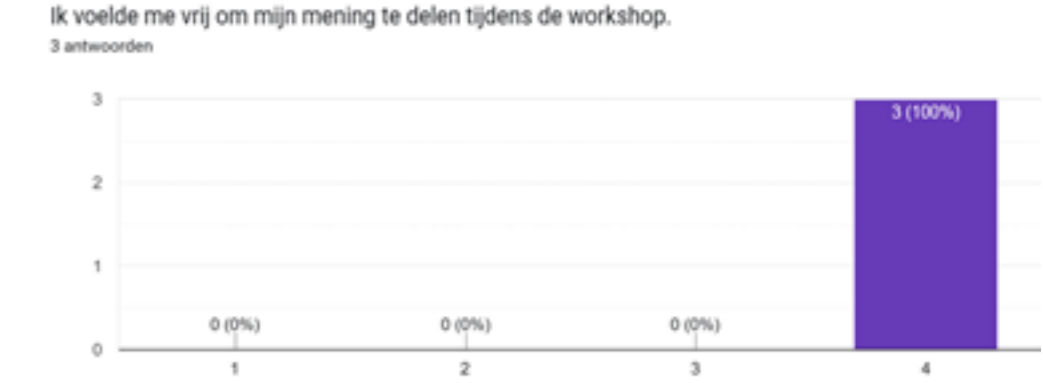
- During the workshop, I experienced that others see a different online world than I do. (1 = strongly disagree – 4 = strongly agree)



- The workshop made me aware of my emotional responses to content. (1 = strongly disagree – 4 = strongly agree)

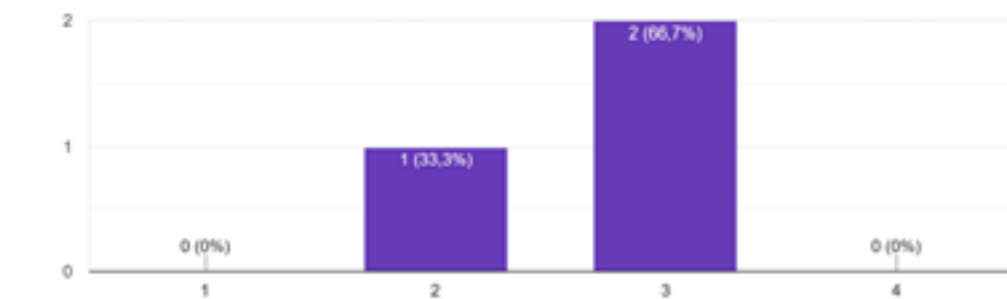


- I felt comfortable sharing my opinion during the workshop. (1 = strongly disagree – 4 = strongly agree)



- To what extent do you think this workshop will influence your future behaviour on social media? (1 = not at all – 4 = very much)

In hoeverre denk je dat deze workshop je gedrag op social media in de toekomst zal beïnvloeden?  
3 antwoorden



- What did you find valuable or enjoyable about the workshop? (short answer)

Seeing how others view the same videos, and noticing similarities or differences in how people interpret them.

Getting insight into other people's feeds, and it was nice to be able to talk about it in depth with others in the workshop.

It was really interesting to take a look at someone else's feed and see how different it can be. Being able to actually scroll through it was a great addition. I also liked the continuous discussions, as it made it clear how opinions can differ.

- What (if anything) will you do differently on social media after this workshop? (short answer)

Trying to follow the news more through objective platforms.

Since I recently deleted it, not that much anymore, but on YouTube, which is the only platform I still use, I will pay more attention to what I watch.

Being more conscious of how I can influence my own algorithm.

- Do you have any suggestions for improving the workshop? (short answer)  
No :) It was interesting and enjoyable to have a critical discussion about this topic together.

The videos sometimes lagged, and the presentation slides were occasionally already discussed before you got to them, not a big problem, but a bit inconvenient.

The more, the better. I might have found it even more interesting if the participants' opinions had differed more.

## Group discussion and reflection (Summarised)

### Facilitator:

This is a group reflection to evaluate the workshop. Since this is the first time the full workshop has been run, it's useful to reflect on what worked and what didn't. I'd like to start with how it was for you to explore these algorithms together and map your emotions. Did that work well? Did it give you any insights?

### Participant 1:

Yeah, I really liked discussing it together and looking at the videos more critically. It made the topic more interesting. But I do think that in this setting you automatically become more aware of what you're watching. You pay more attention to what it does to you. Normally, when I'm just scrolling in bed, I watch much more mindlessly and don't really think about it.

### Participant 2:

Maybe that also means that later, when you're scrolling again, you'll look at it differently.

### Facilitator:

That would be interesting to hear. Another goal was to let you experience other people's "bubbles." How was that for you?

### Participant 2:

I could actually imagine the type of person behind the feed quite easily. I was linking it to people I know.

### Participant 3:

Yeah, same. And I really liked seeing someone else's feed. It was interesting.

### Participant 1:

I also recognised things from my own past. Like, my algorithm used to look different a few years ago, and I could see similarities with that. So it also made me realise how much it changes over time.

### Facilitator:

Do you usually talk about this with friends, or was this different?

### Participant 1:

I've talked about it before with a friend, where we compared our feeds and noticed differences between platforms like TikTok and Instagram. But this format made it more structured.

### Participant 3:

I think doing this with friends would be interesting, but also quite personal. It feels like you're exposing something about yourself.

### Participant 1:

Yeah, even though it's "just content," it still says a lot about you.

### Facilitator:

That's why I chose to use real feeds but keep them anonymous. Would you be more open to sharing your own feed with friends?

### Participant 2:

Yes, with friends it feels different. I already send them videos, so in a way we already share parts of our algorithm.

### Facilitator:

My project is also about polarisation and how algorithms can create bubbles. Do you feel like that came through in the workshop?

### Participant 2:

A bit, but I think our group was quite similar in opinions. You could see that in the graphs as well. I think if you had a more diverse group, the differences would be more visible.

### Participant 1:

Yeah, and maybe the content could be a bit more extreme sometimes. That might trigger stronger reactions and more discussion.

### Facilitator:

Do you think it's necessary to actually show extreme content?

### Participant 1:

Not necessarily. Just talking about it already helps, because we know it exists on people's feeds.

### Participant 2:

And "extreme" doesn't only mean violence. It can also be political content, body image content, or things like manosphere videos.

### Facilitator:

What did you think of the emotional mapping?

### Participant 2:

It worked well to start conversations, but maybe it would be nice if you could see which result was yours. Then you could choose to share it and compare more directly.

### Participant 1:

Yeah, that could make the discussion more concrete. Like asking each other why you rated something differently.

### Facilitator:

Were there things that stood out positively?

### Participant 3:

Scrolling through the feeds was really fun. That worked very well.

**Participant 2:**

Yes, that made it interactive. And I think it would become even stronger with a more diverse group of participants.

**Facilitator:**

At the end, we focused on your own algorithm. How was that?

**Participant 1:**

I found that a bit more difficult, because I already think quite consciously about social media. But it was still useful to reflect on what kind of content I don't actually want to keep seeing.

**Participant 2:**

I think it worked well as a step after looking at others first. You first analyse others, and then yourself.

**Facilitator:**

Do you think the workshop might influence your behaviour?

**Participant 3:**

Yes, at least a little. It makes you more aware that you can influence your own algorithm.

**Facilitator:**

How did the length feel?

**Participant 1:**

It didn't feel that long.

**Participant 2:**

No, even though it was about two and a half hours, it didn't feel like that because it was interactive.

**Participant 3:**

Yeah, you're constantly watching and talking, so it stays engaging.

**Facilitator:**

From a facilitation perspective, was it clear enough?

**Participant 1:**

Yes, but I think the structure of the questions could be improved. Sometimes I asked questions that also appeared later on the screen, which felt repetitive. It would help to distinguish between questions you have to ask and questions that are optional.

**Facilitator:**

And the setup itself?

**Participant 2:**

It worked well overall. Only some videos lagged a bit, but that's a technical issue.

**Facilitator:**

One last question: how was it to use your phone for the emotion mapping?

**Participant 1:**

For us it was fine, but I think with younger participants it could be distracting.

**Participant 2:**

Yes, especially in a school setting, phones might pull attention away from the workshop.

**Facilitator:**

Any final thoughts?

**Participant 1:**

I think it's a really interesting topic, and it already helps that you create space to talk about it.

**Participant 2:**

Yes, just having the conversation is valuable.

