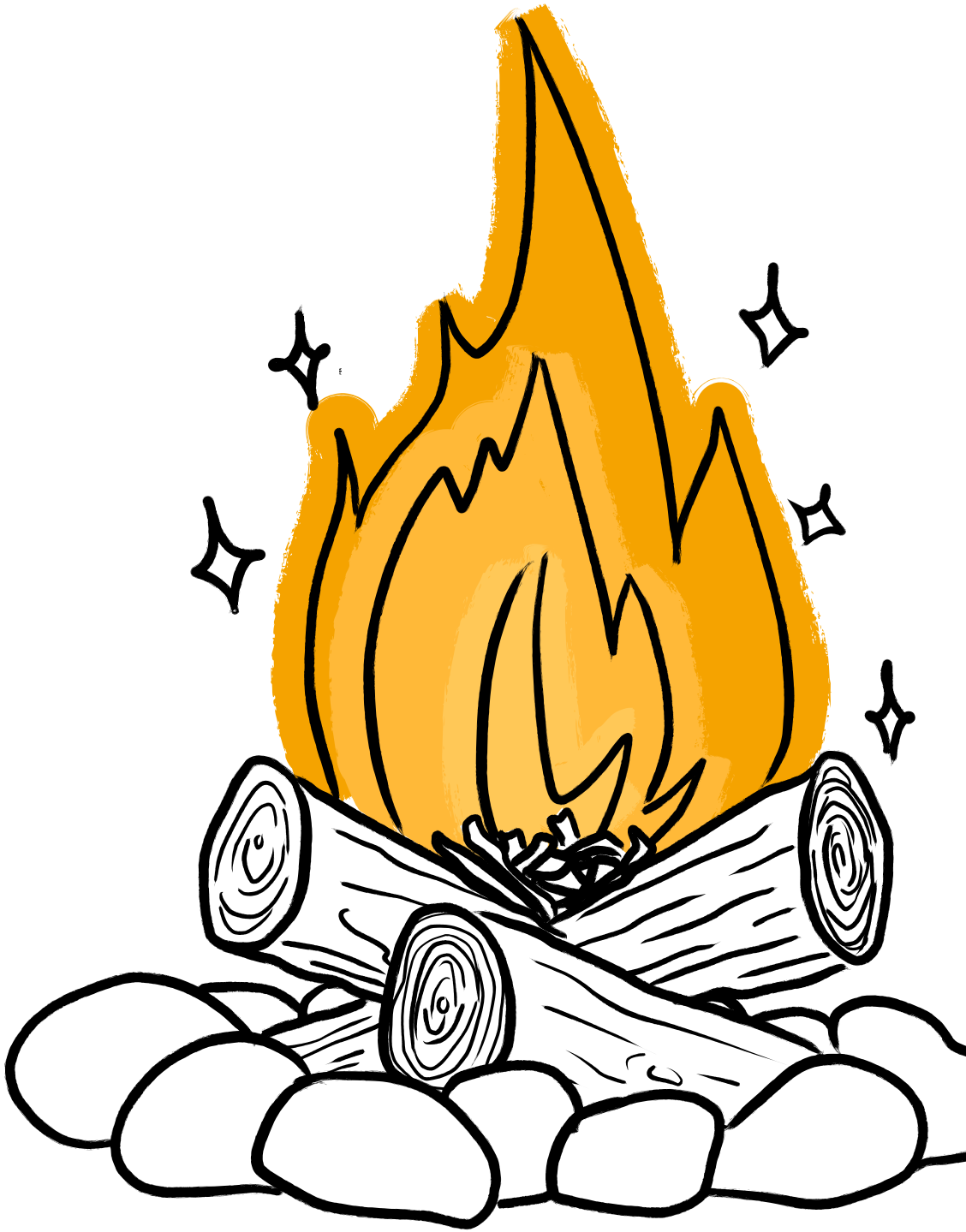
IGNITE

STIMULATING CREATIVE CONFIDENCE IN TEENAGERS



Roos-Anne Klok

MSc. Graduation Thesis
March, 2026

Stimulating creative confidence in adolescence

Ignite: a design-based intervention in Dutch secondary education

MSc. Graduation Thesis
March, 2026

Author

Roos-Anne Klok
Design for Interaction
Faculty of Industrial Design Engineering
Delft University of Technology

Chair

Dr. Ir. JanWillem Hoftijzer

Mentor

Dr. Miléne Guerreiro Gonçalves



Preface

"I've never done it before, so I think I can do it."

A quote that I long thought was from Pippi Longstocking (turns out that's not true... shocking, right!) but one that perfectly captures how I approach life. As long as I haven't tried something, I can't say I can't do it. And if it doesn't work right away, I trust that I'll find a way to make it work. For a long time, I assumed everyone thought this way.

It wasn't until I learned about fixed and growth mindsets that I realized this isn't true for everyone. Some people genuinely believe they are "not creative" or "just not good at certain things." That idea has always fascinated me. Because if creativity isn't something you're born with, why would it belong to only a few?

Over the years, I've often been told that I'm "very creative" or "always come up with innovative solutions." Honestly, I don't see it that way. I'm not a genius, and my ideas don't come from talent alone. They come from curiosity, perseverance, and a willingness to try. That's why I am convinced that everyone is creative, some people just need a little push, or the confidence to start.

During my studies, I learned how to involve others in creative processes and saw how powerful it can be when people experience their own creativity. At the same time, I noticed how difficult this can be, especially when fear of failure or self-doubt get in the way. This realization became the starting point of my graduation project: not to tell people that they are creative, but to design experiences that allow them to discover it for themselves.

I chose to focus on teenagers (aged 12-18), a group that is rapidly developing, exploring their identity, and forming beliefs about what they can and cannot do. With adolescence comes the need to fit in, to conform to social norms, this combined with a pretty strict educational framework might influence how they see risk-taking and their own creative self-beliefs.

I think that if there is a moment to nurture creative confidence, it is now

This project aims to support teenagers in realizing that they are far more creative than they might think, and that this creativity is something worth holding on to.

Of course, I did not do this alone. I would like to thank everyone who contributed to this project in any way, from the bottom of my heart.

First of all, I want to thank the teachers who opened their classrooms to me, and especially the true stars of this project: the teenagers. Thank you for your openness, enthusiasm, and honest feedback. I loved seeing you take small creative risks, grow in confidence, and hearing you say things like, "Wow, I'm actually quite creative." Moments like those made me feel that, no matter the outcome, this project was already worth it.

I would also like to thank my supervisors, Jan Willem and Milene, for their valuable guidance, critical questions, and insights throughout this process. Your support helped me sharpen my thinking and shape this project into what it has become.

Finally, I want to thank my dear family and friends and boyfriend for listening to my endless stories, sharing your experiences with education, brainstorming possible directions with me, and celebrating the beautiful moments along the way, but also helping me through the challenges. Thank you for always being there!

I am proud to present to you my graduation project. I hope that you, as a reader, can feel the impact that creativity can have, and that it reminds you to always look for that creative fire within yourself.

Love, Roos-Anne

Abstract

This graduation project explores how to stimulate creative confidence among Dutch high school students aged 12 to 16. While creativity is widely recognized as an essential 21st-century skill, secondary education often lacks the time, structure, and safe environments necessary to foster it.

Through literature research and generative-and co-creation sessions with students, the project identified that creative confidence is not an fixed talent but develops through active "mastery experiences".

However, a dual barrier exists in education. Students face a high structural and psychological "Activation Threshold" driven by performance pressure, fear of failure, and a lack of autonomy, which prevents them from engaging in creative tasks. Simultaneously, teachers face a "Creativity Gap" they recognize the value of creativity but lack the preparation time and practical tools to confidently facilitate it.

To address this, the design goal shifted from teaching creativity as a theoretical skill to creating low-threshold experiences where 'doing' precedes 'believing', allowing students to safely enter a self-reinforcing "Creative Confidence Loop".

The resulting design is the Ignite framework, a strategic, dual-layer ecosystem. The Student Experience Layer provides a continuous learning line: it starts with a Kickstart workshop to redefine creativity, is sustained by Creative Sparks (15-to-20-minute cross-curricular micro-interventions embedded in regular subjects), and is deepened through periodic Project Weeks.

Because these materials are curated and "plug-and-play," the framework effectively removes the preparation burden for teachers. To ensure long-term cultural change, this is supported by The Fire Pit, a systemic layer providing strategic tools for school leadership and teaching teams to embed creative habits permanently.

Validation of the Creative Sparks in real-school contexts demonstrated a statistically significant increase in students' creative resilience and proved highly feasible for teachers to implement.

Ultimately, this project illustrates that creative confidence is a dormant spark waiting for the right fuel. By simultaneously solving the teacher's workload constraints and the student's fear of failure, Ignite provides the necessary conditions to let it grow.

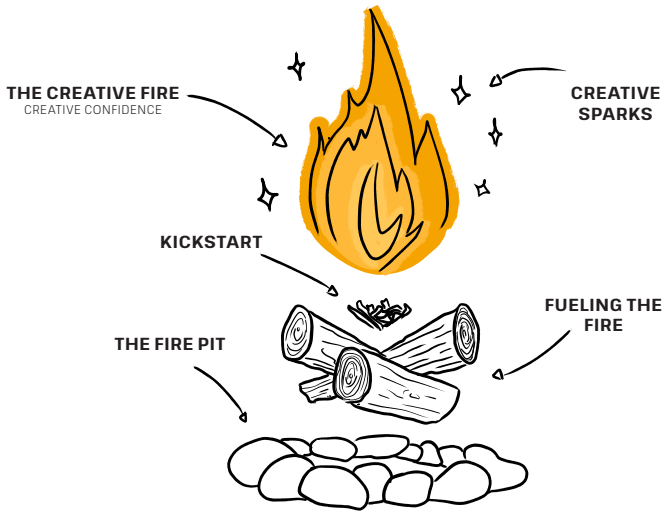


FIG 01: The Ignite metaphor

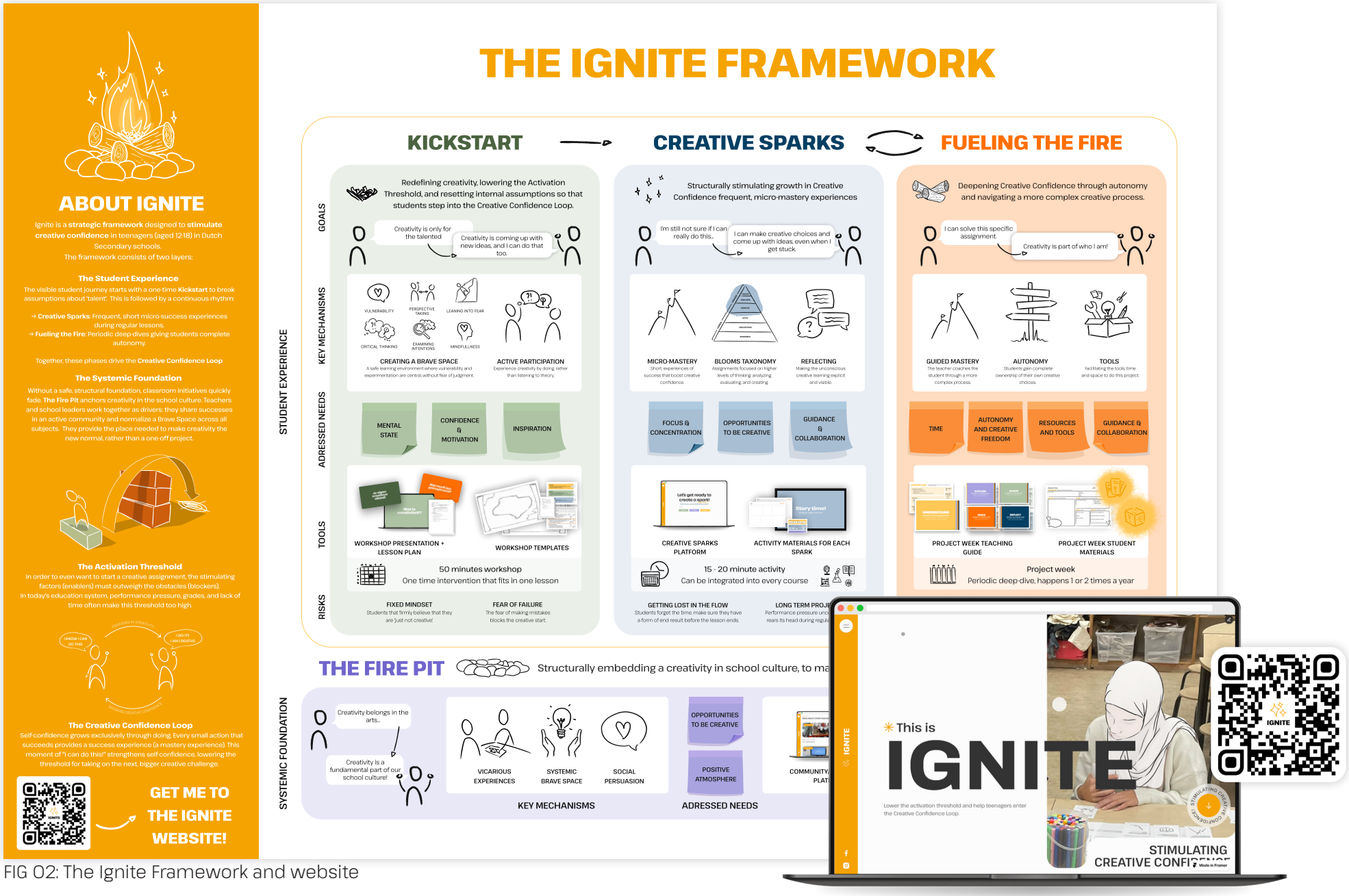


FIG 02: The Ignite Framework and website

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READING GUIDE

To help you navigate through this report and all of its information , several design elements have been integrated into the layout.

COLOR CODING

Each chapter has its own distinct color. You will see this color reflected in the text, headings, and visuals throughout the chapter.



NAVIGATION BAR

At the bottom of every page, a navigation layer shows your current position in the project's timeline.

METHODOLOGY ICONS

The visuals introduced in the Project Structure will reappear in the chapters. These icons indicate which specific design methods were used to reach certain insights.

DESIGNERS NOTE

I've also added a designers' note, which you'll probably spot by the handwritten look. It's basically just me sharing a thought, explaining specific terms or providing some context so you can understand my thought process better.

I hope you will enjoy reading this report! And if you want to quickly scan through it I can suggest just reading the Key Insight parts ;)

Introduction

This project is about stimulating creative confidence in teenagers in Dutch High schools. This chapter introduces the project, its relevance and context and describes the approach to answer the main research question that is the core of this graduation project.

PROJECT RELEVANCE & CONTEXT

Adolescence is a key stage in life marked by rapid cognitive, emotional, and social changes. In this period, teenagers are developing their identity, exploring personal skills, and rebuilding a sense of self (Espinosa, 2010)

To navigate this complex phase and prepare for future societal challenges, creativity is increasingly recognized as a critical skill (Cropley, 2022). Creativity, can be defined as the generation of novel and valuable ideas (Hennessey & Amabile, 2010) or as the ability to create something new and adapted to its context (Lubart, 2015) but one thing is certain, it goes beyond traditional arts.

Creativity can only flourishes when basic psychological needs are met according to Maslow (1987).His study emphasizes safety, belonging, and self-esteem. This brings us to the importance of Creative Confidence (CC) The confidence a person has in their ability to be creative. It is one of the Creative self-beliefs and motivates people to engage in creative activity. Part of Creative Confidence is also Creative Self-Efficacy.

According to Bandura (1977, 1995) self-efficacy, the belief in one's ability to achieve results, is fos-tered by four key factors. Especially during adolescence, when self-confidence can fluctuate, having successful, meaningful creative experiences can increase creative self-efficacy which positively im-pacts motivation and confidence.

Educational environments have a key opportunity in in offering these experiences, especially when creativity is embedded in education through real-world, design-based challenges.

Despite its importance, there is a disconnect in educational practice. Schools, often lack the time and structure to offer students these creative experiences (Jefferson & Anderson, 2017; Sidorova, 2022)). Creativity is mostly incorporated through music and the arts. However, creativity extends beyond that.

While research indicates that design-based learning and maker activities can enhance problem-solving skills, it remains unclear how to effectively capture, integrate, and evaluate these creative outcomes within a standard school context. This research aims to bridge that gap.

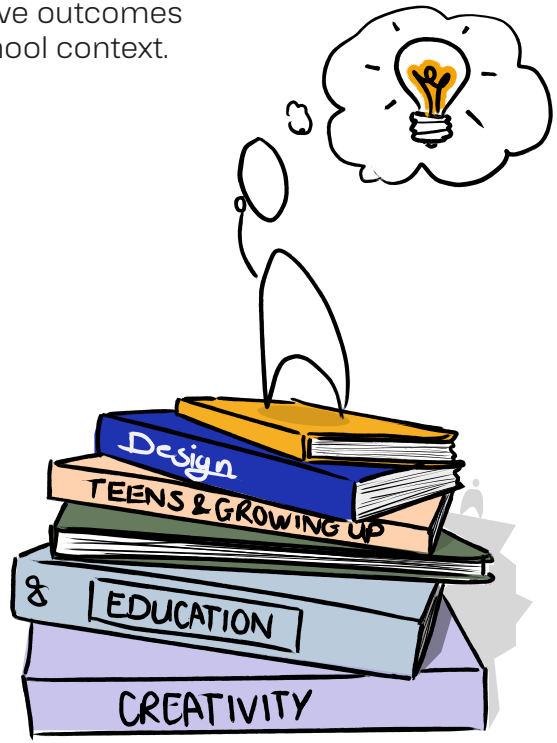


FIG 03: Gap in knowledge

PROJECT AIM

Many teenagers (12-18) do not see themselves as creative or capable of designing, even though adolescence is a crucial phase for developing confidence and autonomy (Espinosa, 2010; Puozzo & Audrin, 2021). While schools emphasize 21st-century skills like creativity, they often lack meaningful, hands-on opportunities for developing creative confidence (Jefferson & Anderson, 2017; Sidorova, 2022).

This leads to the main research question:

How can we stimulate the development of creative confidence for Dutch teenagers (12-18) in high school?

To be able to fully answer this question, it can be divided into the following sub-questions:

1. What is creative confidence and how does it develop?
2. What is currently happening in education to stimulate creative confidence?
3. What are the current views of teenagers on their own creative confidence?
4. What do teenagers need to stimulate creative confidence at school?



FIG 04: Creativity

PROJECT STRUCTURE

The project will follow a triple diamond approach, drawing on methods from human-centered design and co-creation to actively involve teenagers and teachers. This approach ensures that the design leverages their experiences, perspectives, and creative potential.

Not all research questions will be answered via literature review, some will be answered through generative workshops and other creative sessions held with teenagers at high schools.

This project is structured in three phases:

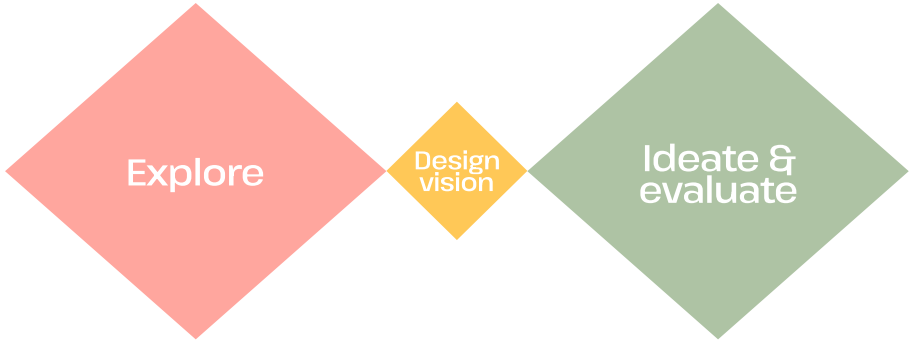


FIG 05: Project structure

The methods that are used in the three phases are shown on the right and will be explained in more detail on the next page.



FIG 06: Methods used in the three phases

EXPLORE PHASE

The goal of the explore phase is to dive deeper into the context to answer the research questions. During this phase multiple different methods have been used to gather insights and analyze them.

METHODS



Desk Research

To get an understanding of Creative confidence and how it develops. Diving into how this can be used in an educational context (RQ 1 + RQ2)



Exploring Creativity Session

Multiple explorative sessions have been done with teenagers on different high schools. This was done to gather insights into how teenagers view creativity and their own creative confidence. (RQ3 + RQ4)



Context Mapping

To analyze the data gathered in the explorative session context mapping was done to get a clear overview of the insights. This approach is based on the approach from the book convivial toolbox from Sanders & Stappers (2020)



Opportunities & Blockers

From the gathered information, opportunities and blockers are highlighted (RQ4)

DESIGN VISION PHASE

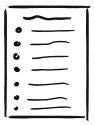
The goal of the Design vision phase is to translate the identified opportunities and insights into a starting point for the next phase in which the design will be made. Multiple methods are used to get clear output for the design vision

METHODS



Design Goal

Based on the insights from the explore phase a design goal is formulated.



Design Requirements

A final list of design requirements is made to support ideation.



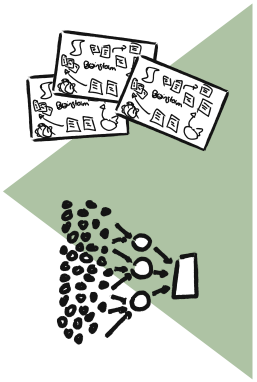
Co-Creation Session

A co-creation session has been done to validate insights and Design Requirements and already generate possible design concepts

IDEATE & EVALUATE PHASE

The goal of the final phase is to develop and test tangible design concepts that are made based on the design vision. This is partially done together with teenagers to ensure relevance, feasibility, and meaningful impact in school context

METHODS

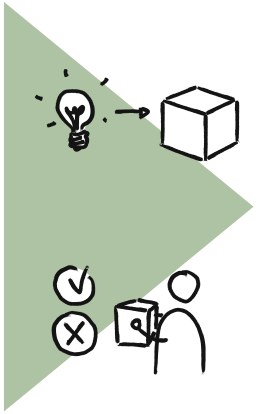


Idea Generation Techniques

Multiple techniques have been used to generate ideas to realise the design goal.

Concept Generation

The developed design ideas were turned into concepts and validated with a C-box based on the design requirements to converge to a final design direction



Prototyping

Prototyping is used to realize, visualize and validate the final design direction and turn it into the final design.

Validation Session

The final design is validated in a “real life” setting. Based on these validations, design limitations and recommendations for future research can be proposed.

ETHICAL CONSIDERATION

When conducting research with teenagers, ethical awareness and thoughtful participant recruitment are essential. Working with minors requires special attention to aspects such as informed consent, privacy, and participant well-being. This was taken into account in all phases of the process.

This was done by applying for a Human Research Ethics Commission (HREC) approval. The process followed ethical guidelines to ensure voluntary participation and informed consent their parents or guardians. Participants were informed about the study’s goals, the type of activities involved, and their right to withdraw at any time. To safeguard privacy, data was anonymized and handled with care.

Explore

The goal of this phase is to create an understanding of creative confidence, how it works and how it is currently stimulated in Dutch High schools. This is done by answering the research questions through desk research and explorative workshops. This helps to get a better understanding of the problem space and shows where an intervention can have impact.

The activities that were done and the connected research questions it answered are structured in the figure 7:

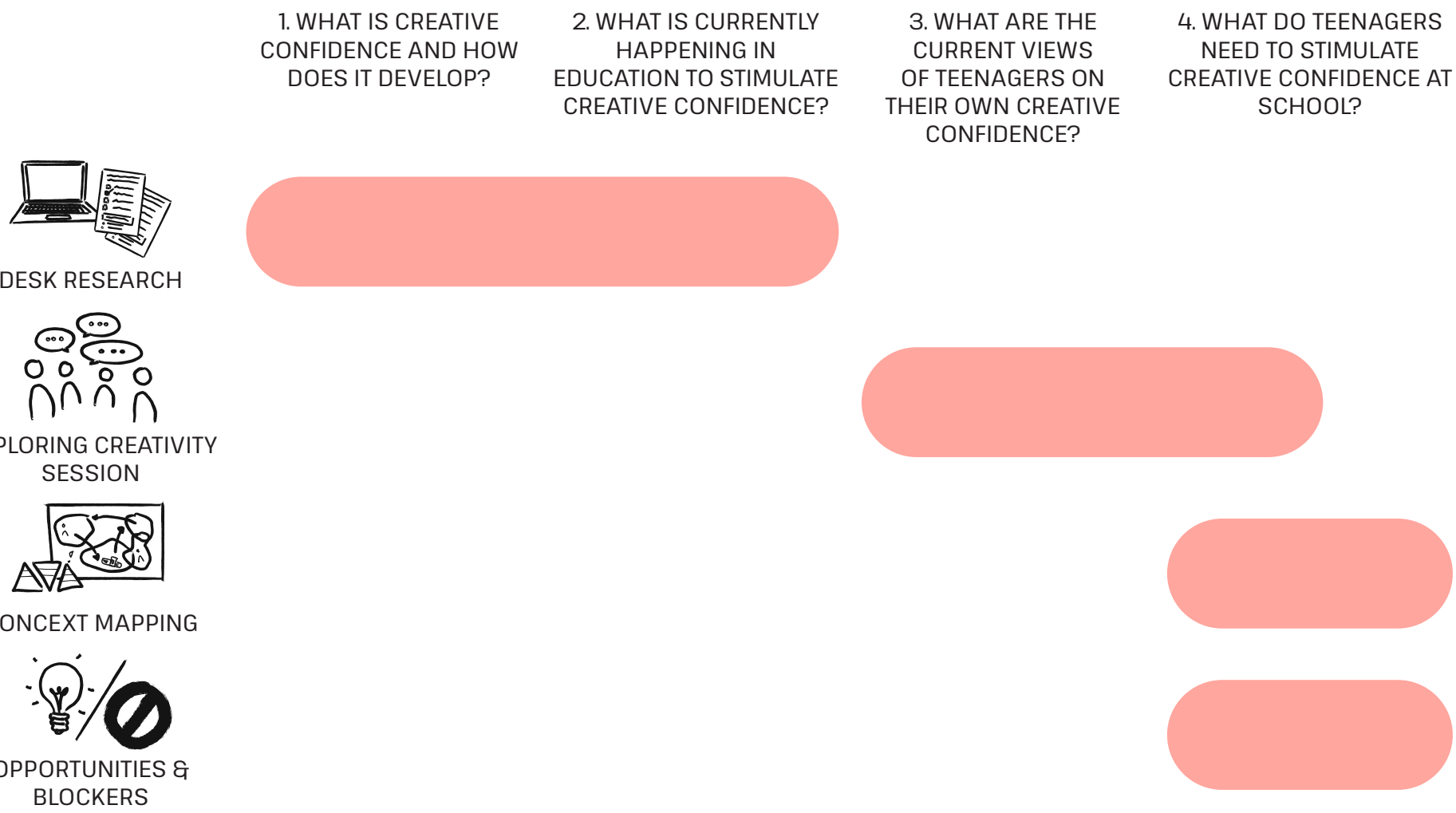


FIG 07: Overview of methods used for answering research questions

DESK RESEARCH

To give more insights into research question 1 and 2 desk research was done. This forms the base layer for the explorative activities that followed to answer research questions 3 and 4. The research questions are addressed separately and followed by their own key insights.

What is creative confidence and how does it develop?

Adolescence is a critical phase of human development marked by rapid cognitive, emotional, and social change (Espinosa, 2010).

During this time, creativity can play an important role in shaping identity, navigating uncertainty, and expressing oneself. In this section, we explore what creativity is, how creative self-beliefs (CSBs) and creative confidence (CC) influence teenagers, and how these qualities develop.

WHAT IS CREATIVITY

Creativity can be defined in several ways. Hennessey & Amabile (2010) describe it as a process that involves the generation of novel and valuable ideas, while Lubart (2015) emphasizes ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints).

From now on in this report, creativity is defined as:

The ability to think of or make something that is unique, new and useful.

CREATIVE CONFIDENCE

Understanding creativity also means looking at how people perceive their own creative abilities. Beghetto & Karwowski (2023) explain in their studies that the creative perception people have of themselves are defined as creative self-beliefs (CSBs).

These CSBs influence people's creative motivation and creative output. Suggesting that people, also teenagers, who do not see themselves as creative are less likely to engage in creative tasks or generate ideas.

Figure 8 maps out the CSBs.

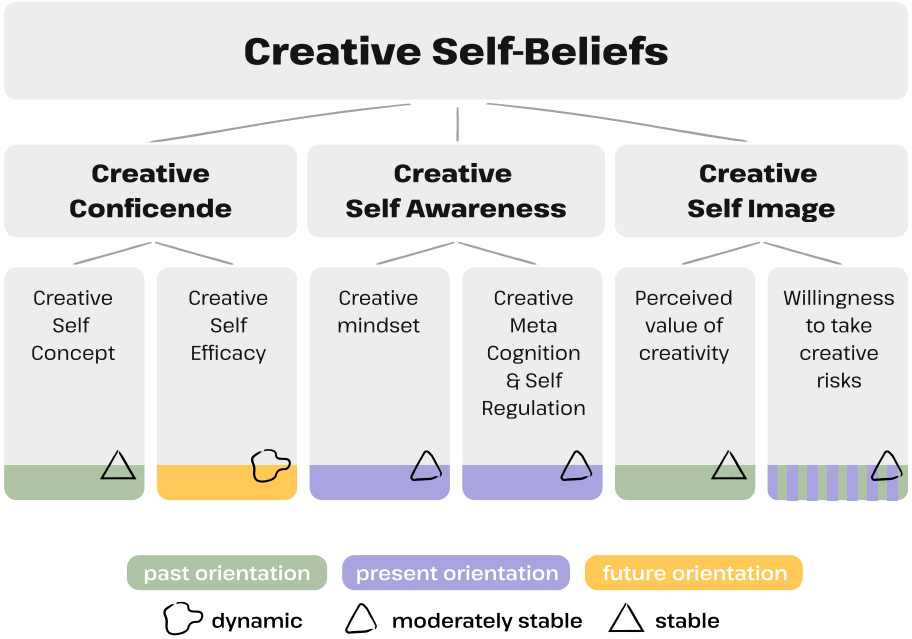


FIG 08: Overview of creative self beliefs according to Beghetto & Karwowski (2023)

CSBs not only influence the way peple see themselves but they also shape how you look at creativity itself.

As showed in figure 8, the concept of creative self-beliefs consists of three categories: **creative confidence, creative self-awareness** and **creative self-image.**

These self-beliefs vary in three factors:

- **Temporal orientation (past, present, future)**
  This represents whether the self-belief is based on past, present or future performance or experiences with creative activities.
- **Specificity (general to situational)**
  Broader is "I am creative", more specific is "I can creatively solve this specific problem"
- **Stability (stable to dynamic).**
  This is the ability to change the beliefs, ranging from almost fixed to changeable.

For this research we are focusing on Creative Confidence, this is because of it's two sub-categories: **Creative Self Concept (CSC)** and **Creative Self Efficacy (CSE).**

As you can see in figure 8 CSE is the most dynamic one of the self beliefs and therefore is more likey to change.

CREATIVE SELF CONCEPT

Creative self-concept refers to the "feelings and judgement a person has on their own confidence to perform creatively" according to Beghetto & Karwowski (2023).

These feelings are based on past experiences. It can be feelings like "I enjoy coming up with creative solutions to problems". This Creative self-belief is considered relatively stable, so it won't change based on one creative experience but it is able to change over a longer period of time.

CREATIVE SELF EFFICACY

Self-efficacy refers to a person's belief in their ability to use their skills effectively to succeed in a specific task (Bandura, 1977; Puozzo & Audrin, 2021).

Creative self-efficacy can be defined as "**the belief that one has the ability to produce creative outcomes**" according to Tierney & Farmer (2002) or as Gajda et al. (2016) phrase it as "the perceived confidence to creatively perform a particular task, in a specific context , at a given level of performance."

Creative Self Efficacy is the more dynamic form of creative confidence. It plays a role in determining if someone will attempt to do a task, but also in people's level of engagement, even when facing difficulty Beghetto & Karwowski (2017)

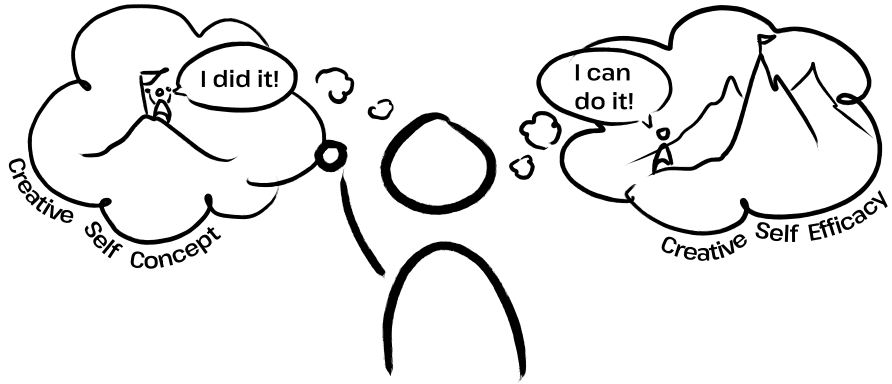


FIG 09: The difference between CSC & CSE

HOW TO DISTINGUISH CSC & CSE

When people are asked to consider their own creative ability, their creative self-concept is likely to be activated first. But when people have the opportunity to be creative when doing a task creative self-efficacy is activated. This is a way to distinguish the two subcategories of creative confidence.

HOW CAN CREATIVE CONFIDENCE BE BOOSTED?

Understanding what shapes creative self-efficacy allows us to consider how it can be strengthened. Developing creative confidence or creative self-efficacy is essential for helping teenagers see themselves as creatives.

According to Bandura (1977) self-efficacy is shaped not only by previous experiences but also by specific psychological and social factors. Understanding these factors helps to design environments and experiences that strengthen creative confidence.

FOUR KEY FACTORS INFLUENCING SELF-EFFICACY

Bandura (1977) identifies four factors that may increase self-efficacy:

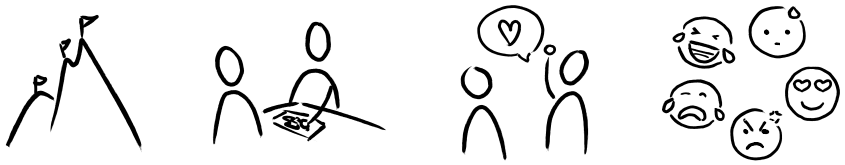


FIG 10: Four key factors influencing CSE according to Bandura (1977)

Of these, mastery experiences are the most important one. These occur when you are doing a task step by step and experiencing that you indeed can succeed, reinforcing the belief that "I can do this."

Csikszentmihalyi (1990) describes these moments as "optimal experience". Optimal experience refers to a moment of excitement and joy which becomes a significant memory. These experiences often happen when someone pushes themselves to the limits to achieve a goal.

These experiences strengthen a person's Creative Self-Efficacy.

To ensure mastery experiences are positive, creative tasks should match the participants skill level while still providing a manageable challenge.

When the balance between difficulty and capability is right, teenagers remain engaged and gain confidence through success. This is a mental state called flow Csikszentmihalyi (1990)

Vicarious experiences refer to observing others succeed, especially people that are relatable. Witnessing someone similar achieve a goal can make that goal feel attainable, encouraging self-belief.

Social persuasion is a factor that influences how you feel during a creative activity. Beghetto & Karwowski (2023) highlight that supervisory support and positive feedback from teachers can significantly boost the creative self-efficacy of children during the creative process. But negative feedback, discouraging remarks or lack of support can bring your creative self-efficacy down

Finally, emotional and physiological states play a role. Feeling energized, calm, or motivated can enhance engagement and positive perception of creative activities, whereas fatigue, anxiety, or stress can reduce self-efficacy.

BRAVE SPACES

To create conditions for "optimal creative experiences," the environment itself matters. People thrive when creativity is encouraged and when there is room to try, fail, and learn without fear of judgment but also room to be challenged. This can be captured by the concept of a "brave space."

There are several guidelines into how to create a 'brave space', Stubbs (2019) defines six pillars of a brave space:



FIG 11: The six pillars of a brave space according to Stubbs (2019)

Together, these principles foster a supportive culture where creativity can flourish through exploration, collaboration, and reflection.

With these foundations in mind, an important question arises:

Are schools currently able to provide teenagers with such empowering creative experiences? And if not, what structures or interventions could help them do so?

WHY CREATIVITY MATTERS DURING ADOLESCENCE

Adolescence represents a period of rapid cognitive, emotional, and social development. Espinosa (2010) notes that this stage is crucial for building a sense of identity, exploring personal skills, and forming a vision for their life.

Teenagers gradually separate themselves from the identity constructed in childhood and begin to rebuild a new sense of self in relation to others and their environment. This is part of the psychological process that is needed to create a positive relationship with their own identity, the people around them, and their hopes and dreams.

Creativity can play an important role in this developmental journey. It offers teenagers a way to explore who they are and how they relate to the world. Through creative activities, they can experiment, express emotions, and translate internal experiences into tangible outcomes, strengthening both self-knowledge and confidence.

There is more and more evidence that creative confidence and self-efficacy shape creativity and creative accomplishments during a person's life, but also specifically during childhood and adolescence Karwowski & Barbot (2016).

Creative Self-efficacy has been shown to be involved in success or failure at school (Smeding et al., 2015) and other research suggests that when students have a higher level of self-efficacy, they are more interested in carrying out, even the most complex tasks (Bandura, 1995).

Creative activities also help teenagers to grow on an emotional and social level. Engaging in creative activities helps teenagers to connect with others, fostering empathy, collaboration, and communication skills. According to de Mezerville (2019) teenagers are better prepared to take part in society actively

and authentically when they have learned to use their own creative voice.

Besides increasing the motivation to take part in creative activities, boosting their (creative) self-efficacy also helps teenagers to boost their self-confidence, a global self-regard determined by the perception of having the capabilities to handle a variety of situations effectively, according to Rizzi et al. (2020).

In summary, creativity supports teenagers by helping them explore and express their identity, strengthening their self-confidence and creative self-efficacy, and fostering motivation and perseverance when facing challenges.
Creative activities promote social connection and collaboration, allowing teenagers to build empathy and learn from others. Together, these aspects make creativity a vital element in helping young people grow into confident and engaged individuals.

All of this research shows us what creative confidence is and how it can develop and grow over time. It is shaped by experiences, social support, and environment, and is crucial during adolescence for identity exploration, motivation, and social-emotional growth. However, it does not show us how and if this is used in education. That is something we will dive into in the next sections.

KEY INSIGHTS OF ANSWERING RQ1

This section looked into how creative self-beliefs (CSBs) and creative confidence (CC) influence teenagers, and how these qualities develop over time.

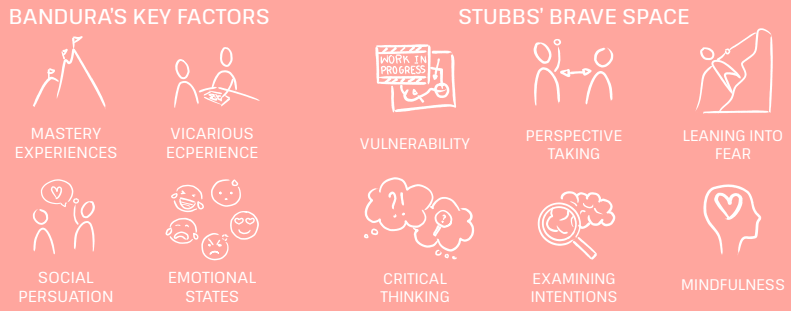
This was done in order to answer research question 1:
What is creative confidence and how does it develop?

We have learned that:

- → Creativity is the ability to think of or make something that is unique, new and useful
- → Creative self-beliefs (CSBs) shape influence motivation, participation, and creative output (Beghetto & Karwowski, 2023).
- → Creative confidence is composed of:
  Creative self-concept & Creative self-efficacy



- → Factors that boost creative self-efficacy are:



- → Creative activities help teenagers explore who they are and express emotions, thoughts, and values.

What is currently happening in education to stimulate creative confidence?

Now that we know how creative confidence is developed and how you can create the ideal environment to stimulate the growth of creative confidence we want to dive deeper into how and if this is currently used within the context of Dutch High school education.

This section explores what is currently happening within education with regards to creativity and creative confidence.

THE DUTCH EDUCATION SYSTEM

Before we dive into how schools integrate creativity into their everyday practice we first need to look at how Dutch High schools are organized.

At the end of primary school, around age 12, students receive a school recommendation based on their teachers assessment and standardized testing (CITO tests)
This recommendation determines the placement into one of the educational tracks in secondary education. The tracks are described below and an overview is seen in figure 12
(Het Nederlandse onderwijssysteem | Het Onderwijsloket, 2024)

- Praktijkonderwijs (PrO)
  Mainly practice-oriented education.
- VMBO (pre-vocational secondary education)
  Contains four learning paths ranging from theoretical to highly practical.
- HAVO (senior general secondary education)
  Preparing students for universities of applied sciences.
- VWO (pre-university education),
  Preparing students for research-oriented higher education.

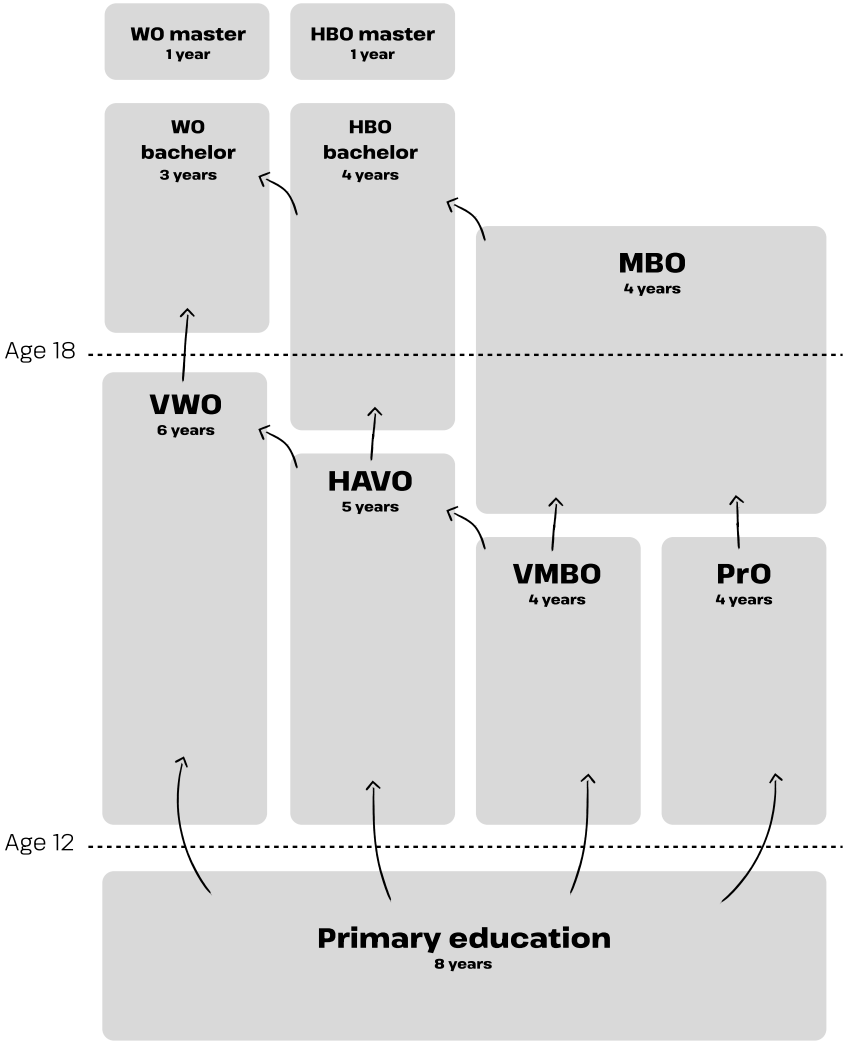


FIG 12: Overview of Dutch education system

Throughout their education transitions between levels is possible, especially in the early years. This relatively flexible system allows students to grow into the educational level that fits their needs the best.

THE DUTCH CURRICULUM

Dutch schools have significant autonomy in how their curriculum is shaped and implemented. However, there are national core goals (kerndoelen) developed by Stichting Leerplan Ontwikkeling (SLO), the Dutch national expertise center for curriculum development.

These core goals define what subjects' schools should teach their students. But schools are free to decide how these subjects and topics like creativity are implemented into the school curriculum.

This autonomy has led to a large variation between schools, and has also led to the development of specialized programs such as Technasium (Technical, design program additional to gymnasium), TTO (Bilingual education), Montessori, Dalton or other types of education.

As a result of this, the way topics like creativity are embedded into schools depend on the school's vision, available time, teacher interests and available resources.

RECOGNITION OF CREATIVITY AS A CORE SKILL

In recent years, there has been growing recognition that creativity is not only valuable in the arts but a crucial skill for learning and development across all educational domains..

According to Calavia et al (2023) creativity is recognized as one of the most important skills of the 21st century. This is also reflected, in the 21st century skills framework developed by the SLO.

The SLO wants schools to integrate creative thinking and design-based approaches into their curricula. Within the national curriculum renewal, the SLO has included creative thinking as part of the core goals (kerndoelen) as seen in figure 13. This demonstrates that the government recognizes the relevance of creativity in the development of children and teenagers and is looking for ways to integrate it into the curriculum.

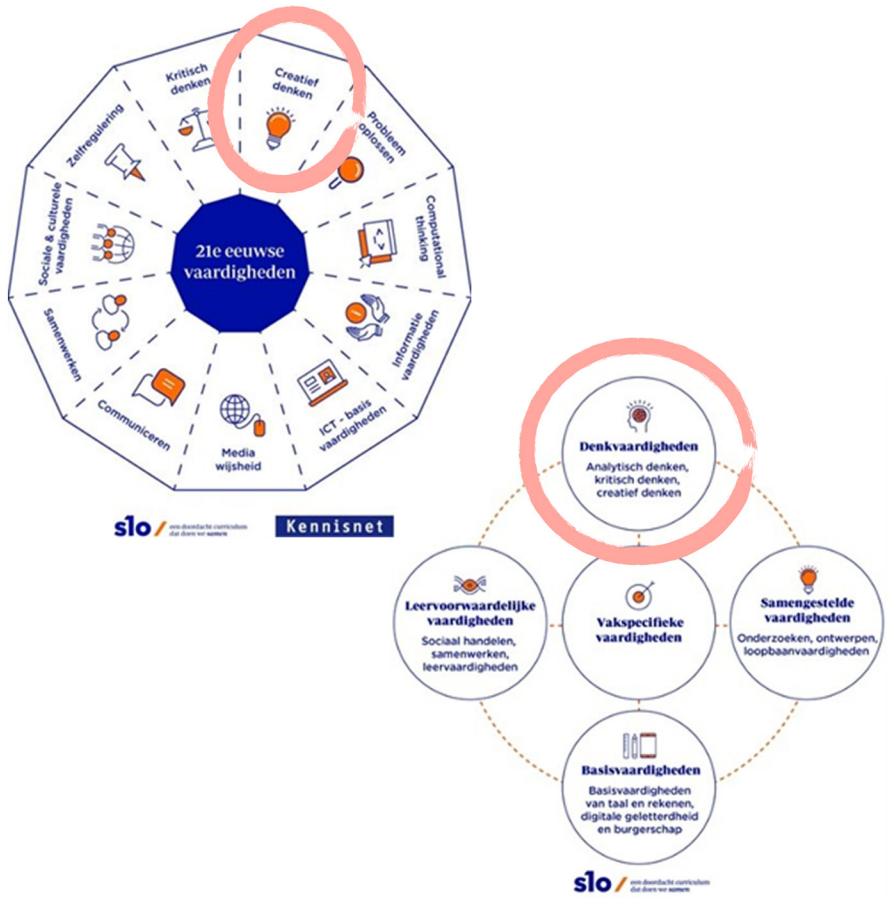


FIG 13: Creativity in national plans SLO

CURRENT EXAMPLES OF CREATIVITY IN SCHOOLS

Since Dutch schools do not have a standardized method for integrating things like creativity across schools, each school decides how and to what extent it includes creative thinking in its curriculum. The SLO is working on standardized guidelines, but progress is limited.

I have looked into different approaches to include creativity into education that currently exist and have summarized and mapped them in figure 14 below. Each type of approach with their own advantages and challenges. A more detailed overview can be found in the appendix C

Category	Advantages	Challenges
Design-Based Projects/ Education. (Technasium, O&O)	Increases motivation and ownership Promotes collaboration and creative problem solving while working on "real life" problems	Students must choose this type of education Exam pressure Special O&O teachers needed
Project education/ thematic learning	Encourages systems-oriented thinking. Students learn to make connections between disciplines.	Difficult to organize within existing subject structures, School wide structure is needed
Teacher professionalization (training courses in creative thinking/creative ability)	Professional learning communities can strengthen creative culture within schools. Ensure support within teams.	Limited time and budget for training. Dependent on teachers' own interest. Difficult to achieve lasting impact in school culture.
After school programs: Makerspaces / design workshops / Techlabs	Practical, tangible learning experiences boost self-confidence Freedom to explore personal projects	High costs for materials, maintenance, and supervision. Students must be self-motivated, there is no mandatory contact moment
Art and culture education (Culture Profile Schools, workshops by external organisations)	Accessible to various types of learners (not only those who are strong in theory). Contributes to personal development	Often dependent on subsidies or individual projects. Limited time budget in the timetable. Creative subjects are vulnerable to budget cuts.

FIG 14: Examples of approaches integrating creativity in schools

When looking at all of these different initiatives we can see that many depend on student motivation. Students need to choose to go to a specific school that integrates creativity into education, to follow a specific program or dedicate their own free time into developing their creativity.

Next to the dependency on the students own motivation and choices, a lot of the initiatives that foster creative thinking are focused on technical or physics related projects and tend to target "higher-performing" students in the levels HAVO & VWO, limiting the reach of creativity-focused education.

When looking for examples of implementing creativity you can see by the big amounts of websites and blogs about it that teachers see and acknowledge the importance of creative thinking as a skill, however they might not know how to integrate it into their teachings.

This is sometimes referred to as the "Creativity gap" (Makel, 2009): teachers recognize fostering creativity as part of their role but struggle to build creative confidence in their students, partly because they themselves lack confidence in their creative skills.

While some guidance or project packages exist for education like the "Your turn initiatives" and the website ontwerpenindeklas.nl from the Wetenschapsknooppunt that is an initiative from the Technical University Delft. However, these are often focused on primary education. Despite the wide range of creative exercises available through online platforms, there is no established pedagogical approach to support the integration of creative thinking across different subject areas.

Therefore, while creativity is officially recognized as important, its actual presence in everyday classroom practice varies widely.

MEASURING CREATIVITY

In secondary education grading the outcomes students' work is a big part of the evaluation process. However this does have impact on the level of creativity for teenagers. However, this focus significantly impacts the level of creativity in teenagers. According to the Self-Determination Theory by Ryan & Deci (2000) external controls, such as grades, undermine a student's autonomy.

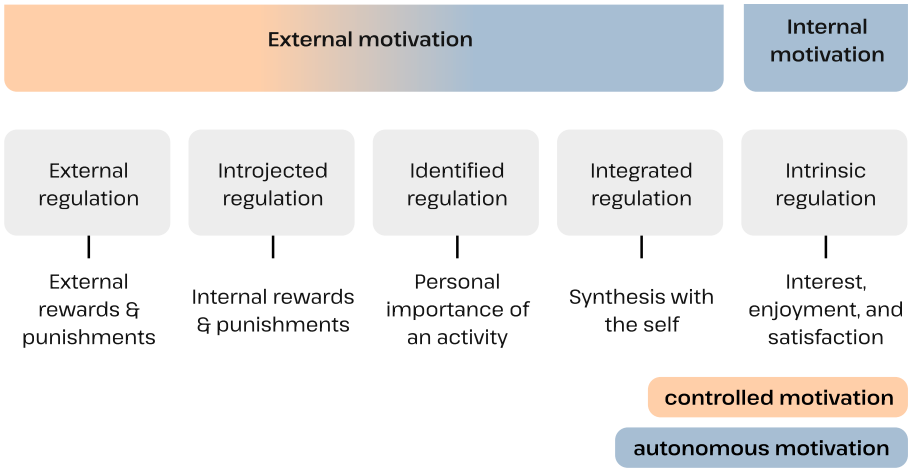


FIG 15: External vs. Internal motivation according to Ryan & Deci (2000)

As shown in the motivation continuum (see figure 15), when a student's drive is shifted toward Controlled Motivation (specifically External Regulation), their focus moves from the task itself to the external reward or punishment. Ryan & Deci indicate that as soon as motivation becomes purely extrinsic, the quality of deep learning and creativity declines. They state that having intrinsic motivation results in high-quality learning and creativity.

This is further supported by the work of Amabile (2018), who explores the Intrinsic Motivation Principle of Creativity. Her decades of research prove that individuals are most creative when they are intrinsically motivated and do not feel pressure of being judged. When the focus shifts to "evaluation expectation" (the expectation that you will receive a grade) they instinctively go for the safest, most predictable route. This "playing it safe" kills originality and risk-taking.

Ultimately, the way in which schools evaluate creative outcomes and processes determines the level to which students are willing to show their creativity.

In summary, Dutch secondary education values creativity and recognizes its relevance for student development. Creativity is recognized as a 21st-century skill (SLO; Calavia et al., 2023) but still schools struggle to embed it systematically.

Variation between schools, reliance on student choice, teacher confidence issues, and assessment challenges all limit the consistent development of creative confidence among teenagers.

KEY INSIGHTS OF ANSWERING RQ1

This section looked into what Dutch schools in secondary education are currently doing to stimulate creativity and the growth of creative confidence.

This was done in order to answer research question 2:
What is currently happening in education to stimulate creative confidence?

We have learned that:

- → **Creativity is officially valued but weakly embedded in practice.**
  National frameworks emphasize creative thinking, yet its implementation varies widely and depends heavily on individual schools and teachers. (Stichting Leerplan Ontwikkeling, 2022, 2025)
- → **Curricular autonomy creates unequal access.**
  Schools choose how (and whether) to integrate creativity, resulting in major differences between schools and across educational tracks.
- → **Opportunities often rely on student self-selection.**
  Creative programs typically require students to opt in (e.g., Technasium), which excludes less confident or less motivated students, especially outside HAVO/VWO.
- → **Teachers experience a "creativity gap." (Makel, 2009)**
  They value creativity but lack confidence, time, and practical tools; creative processes feel counterintuitive to the linear, outcome-focused teaching culture.
- → **Grades scare away creativity.**
  Traditional grading systems act as "extrinsic constraints" that undermine student autonomy (Ryan & Deci, 2000) The expectation of being evaluated causes students to avoid intellectual risk and choose the safest path to a high grade, which effectively kills originality (Amabile, 2018).

EXPLORING CREATIVITY SESSIONS

Now that we know more about creative confidence, how it develops and how creativity is currently supported in Dutch secondary education. We have learned that although creativity is recognized as an important part of education it is still hard to implement into the school curriculums.

However, it is still unknown if teenagers view themselves as creatives, and what they think they need for their creativity to thrive. (RQ 3&4) This is not something that is found in literature that is why I have chosen to my own data collection through generative sessions.

The generative research approach developed by Sanders & Stappers (2020) uses the act of "making" to access tacit and latent knowledge (what people know, feel and dream.) While traditional research methods often only capture explicit information (what people say and think), generative sessions allow researchers to reach a deeper level of understanding regarding what teenagers truly feel.

This is why generative sessions have been chosen as the primary research method. The relationship between these levels of knowledge and the specific techniques used to uncover them is illustrated in figure 16.

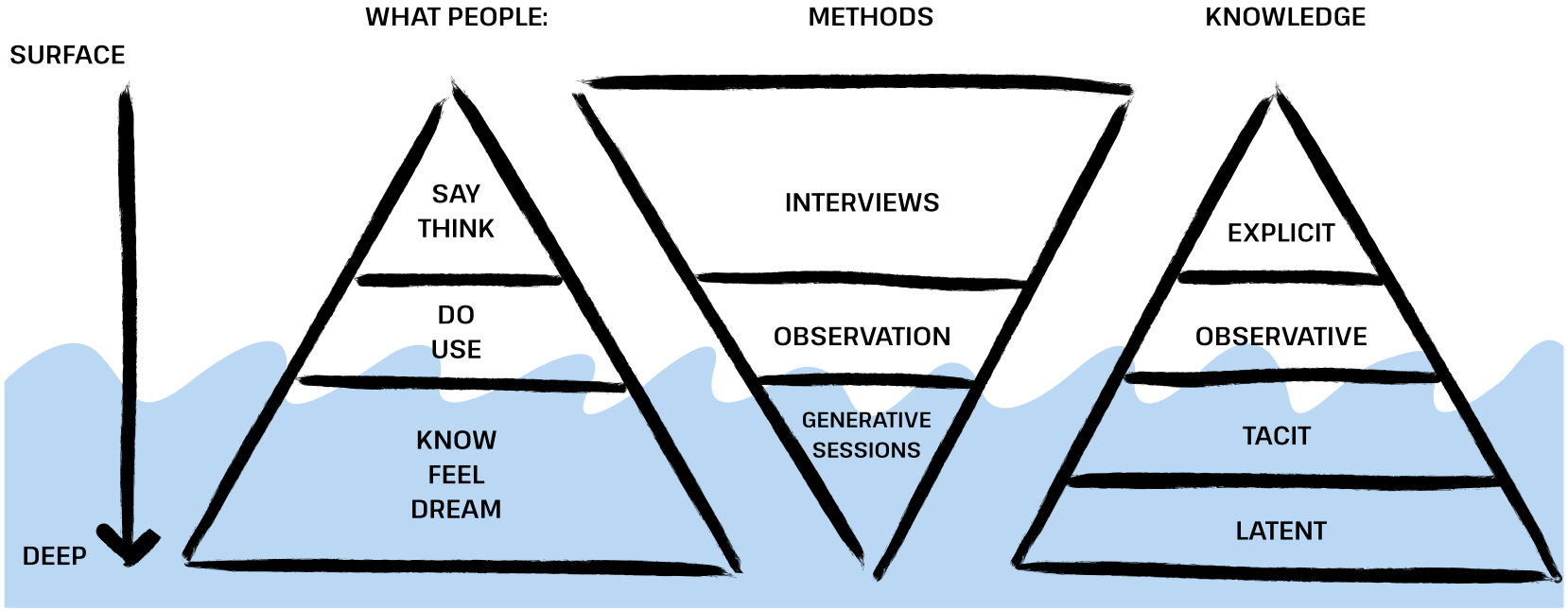


FIG 16: Levels of knowledge (Sanders & Stappers, 2000)

Aim of the session

Understanding how teenagers experience creativity and how they perceive their own creative confidence is a crucial step in designing interventions that truly support their creative development.

To gain insights into these perspectives I did my own data collection through a total of three generative session conducted with 64 Dutch high school students (ages 12-15) which I will call the Exploring creativity session from now on.

The following sub research questions were made to support the set-up of the exploring creativity sessions:

1. **How do teenagers define and view creativity in general?**
2. **What are the current views on (their own) creative confidence?**
3. **What helps teenagers to be creative, and what blocks them?**
4. **How can school help students to be more creative?**

These questions are directly connected to RQ 3&4:

- What are the current views of teenagers on their own creative confidence?
- What do teenagers need to stimulate creative confidence at school?

Method

PARTICIPANTS

Two secondary schools participated in the "Exploring creativity" sessions. A total of 64 students aged 12-15 years old took part spread over three sessions. The participants were enrolled in HAVO and VWO tracks, and two out of three classes were also enrolled in a Technasium track.

Technasium is a specialized STEM-focused educational stream in Dutch secondary education (HAVO/VWO) that emphasizes practical, project-based learning

The participants were recruited via my personal network and connections from previous IDE projects. The reason that the age range is from 12-15 is also due to the fact that sessions with older teenagers could not be arranged due to availability. Participation was voluntary and conducted with informed consent from schools and parents/guardians.

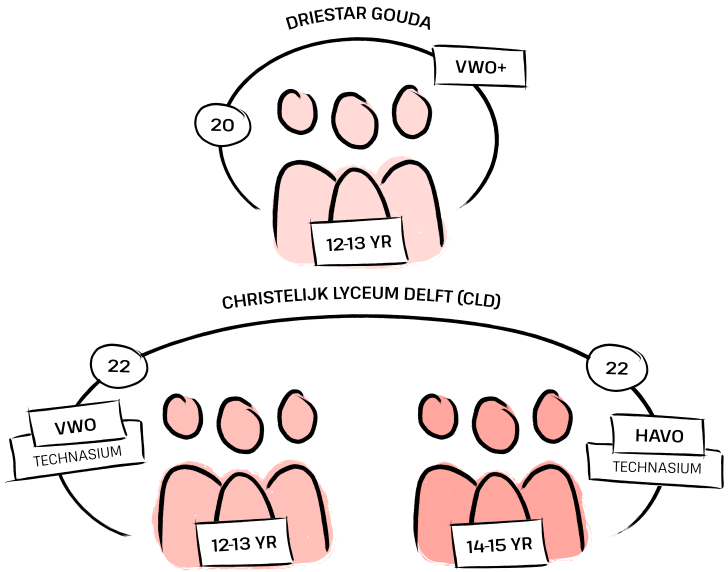


FIG 17: Participants Exploring Creativity Session

CONTEXT, LOCATION & TIMING

A total of three sessions were conducted:
- Two sessions of 50 minutes at the CLD Delft.
- One extended session of 80 minutes at the Driestar Gouda.

The extended session included an additional group assignment ("Creative school of the future"). This was possible due to the flexibility of the schedule of the students & teacher involved.

All sessions took place during regular school hours within a classroom at the schools.

SESSION SET-UP

Each session consisted of three core activities: a Creative Self-Efficacy (CSE) questionnaire, a "What is creativity?" brain dump, creating their Creative islands. The extended session at the Driestar also included the "Creative school of the future" activity.

Each session alway starts with a brief introduction and the ground rules explaining that I am there to learn from the teenagers and that nothing is right or wrong, and nothing will be used against them. This creates a safe space for research but also encourages a brave space.

The session planning and activities are shown in figure 18.

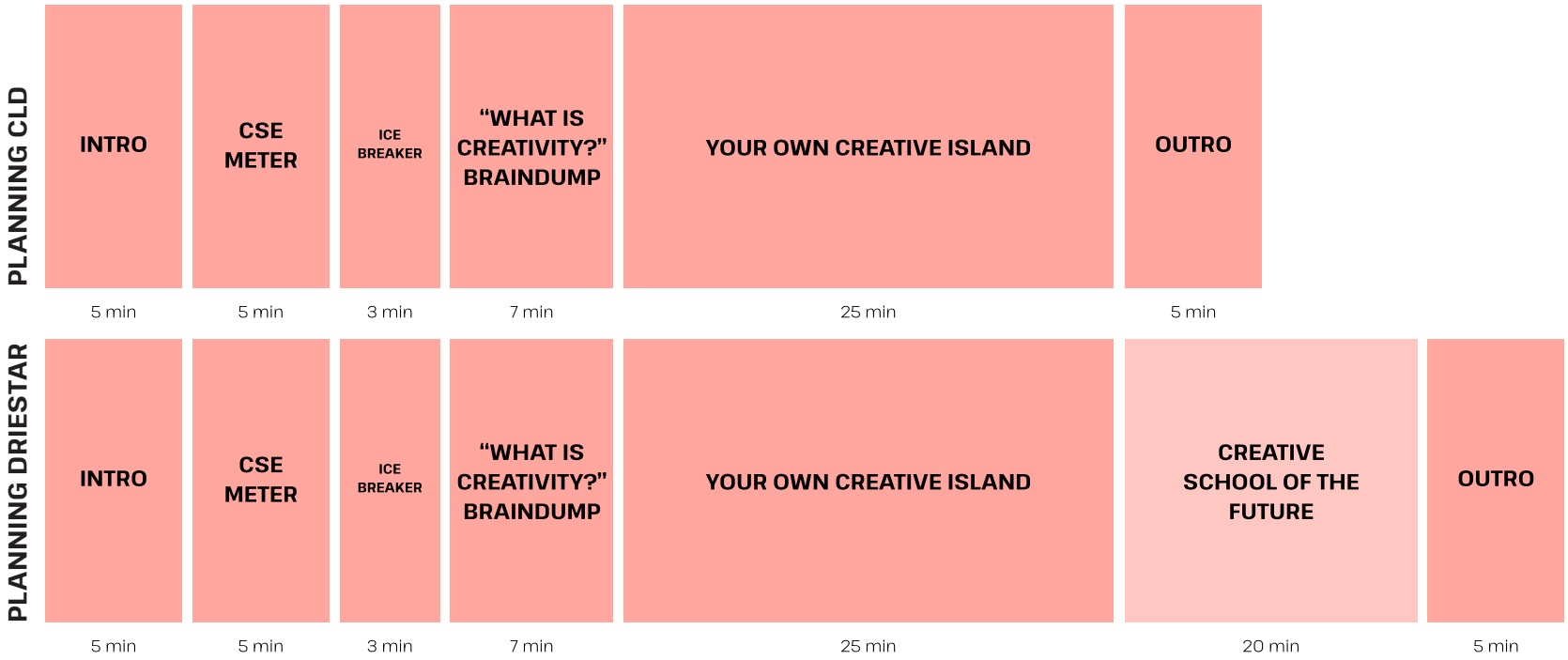


FIG 18: Exploring Creativity session set-up

CREATIVE SELF-EFFICACY (CSE) QUESTIONNAIRE

Students completed a short CSE questionnaire using a 5-point Likert scale. This adapted questionnaire from Ginns et al. (2023) was chosen because it is developed and proven to measure creative self-beliefs of children and teenagers based on the creative self-efficacy framework for adults by Abbott (2010). The complete questionnaire can be found in appendix D

This activity provides insight into SQ2: How do teenagers view their own creativity?



FIG 19: CSE forms Exploring Creativity session

"WHAT IS CREATIVITY?" BRAIN DUMP

Students participated in a braindump to describe what creativity means to them. in a braindump all participants are allowed to say what pops into their heads when thinking of a certain topic, in this case "Creativity"

After sharing their interpretations, a shared definition was introduced to align understanding on the concept of creativity.

This activity provides insight into SQ1: How do teenagers define and view creativity in general?

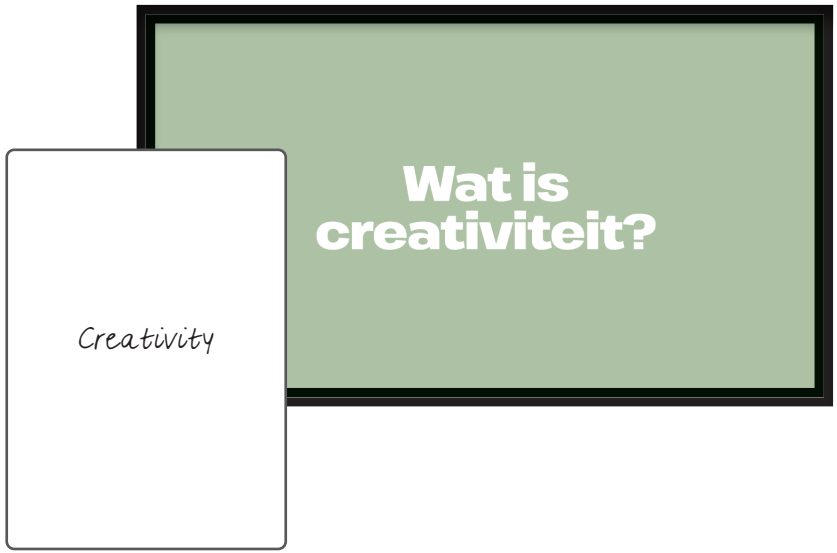


FIG 20: "What is creativity?" Braindump Exploring Creativity session

YOUR OWN CREATIVE ISLAND

Students were told to create a visual representation of their own “Creative Island,” mapping enablers and blockers of their creativity. They could use a prepared template or draw freely. They also received a card with guiding questions when needed.

After creating their islands, students reflected in pairs using post-its and example interview prompts to deepen their awareness and enrich their visual island.

At the end, a plenary reflection and conclusion was done to share their insights with each other.

This activity provides insight into SQ3: What helps teenagers to be creative and what blocks them?

The materials used are shown in figure 21 below and can also be found in appendix D



FIG 21: Template and guiding prompts Creative Island activity

CREATIVE SCHOOL OF THE FUTURE

In groups of 3-4, students designed their ideal "Creative school of the future," focusing on environment, tools, teaching style, and atmosphere. These guiding topics were displayed in front of the classroom to support their ideation.

This activity provides insight into SQ4: How can school help students to be more creative?

DATA COLLECTION

The following data was collected:
- CSE questionnaire scores (quantitative)
- Photographs of Creative Islands
- Post-it reflections on islands
- Written end reflections
- Observational field notes

All outputs were anonymized before analysis.

Data analysis

Quantitative data from the CSE questionnaire was analyzed using descriptive statistics (mean scores per item and overall average).

Qualitative data (Creative Islands, post-its, reflections, and notes) was analyzed using a thematic analysis approach. Enablers and blockers mentioned by students were extracted and entered into a database. Codes were clustered into higher-level themes through iterative comparison. In a final step, emerging themes were ranked based on the number of mentions and rewritten into needs. These needs were also compared to theoretical constructs related to creative self-efficacy and creative learning environments to support interpretation.

Pilot study

Before rolling out the 'Exploring Creativity' sessions on a larger scale, a small pilot was conducted to test the workshop materials. This session was held with two 15-year-old students, representing the upper age limit of the target group. The pilot revealed that the initial drawing assignment was too abstract. Rephrasing the prompt to: "You are the owner of your own creative island" immediately removed their hesitation to start, and was therefore adopted for all subsequent sessions.



FIG 22: Pilot test Exploring Creativity

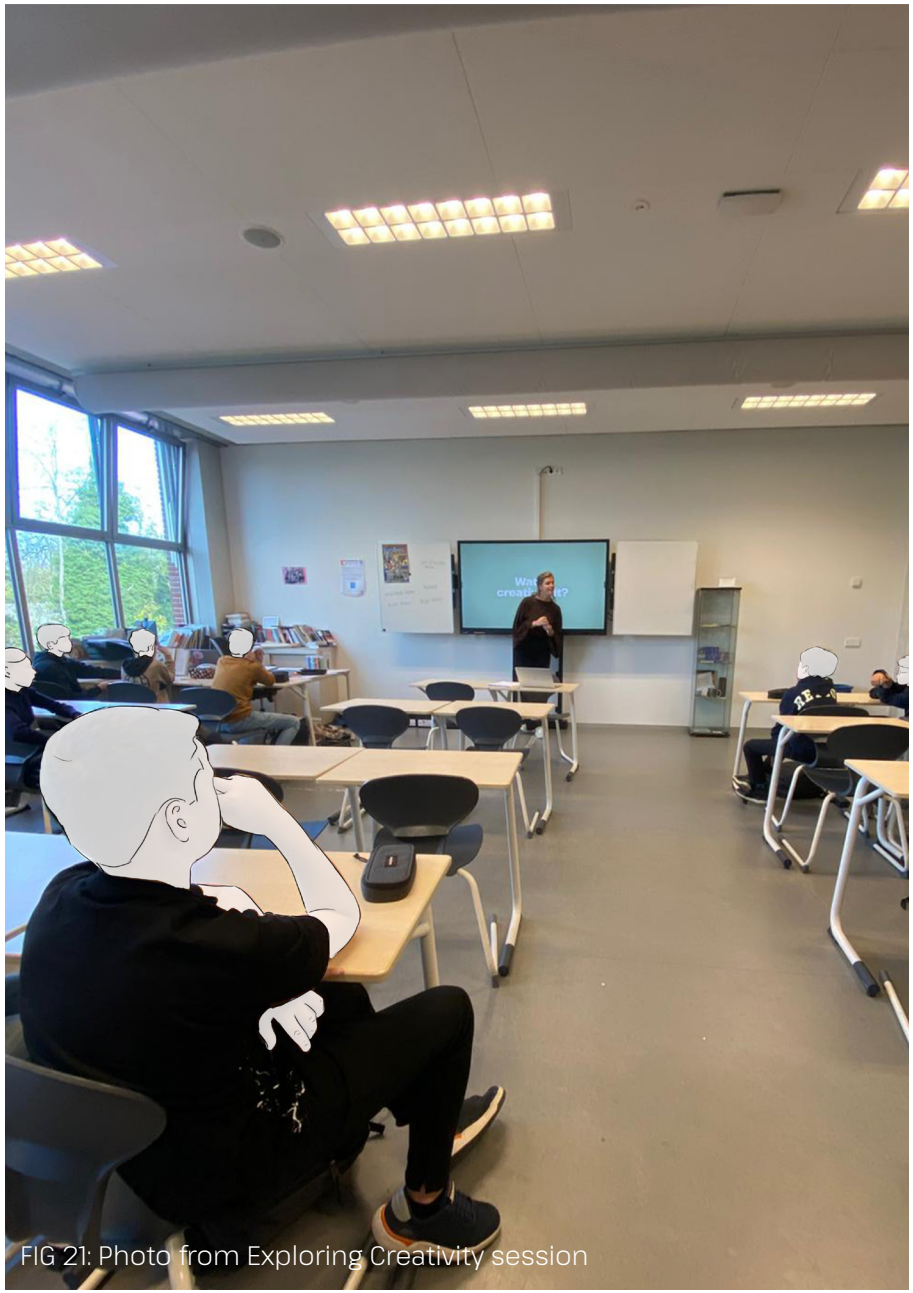


FIG 21: Photo from Exploring Creativity session

Results

CREATIVE SELF-EFFICACY (CSE) SCORES

The average CSE score across all participants was 3,7 out of 5. With 5 being the highest level in terms of CSE. This suggests that students have a reasonably positive view of their creative abilities. Figure 24 below shows the scores per element.

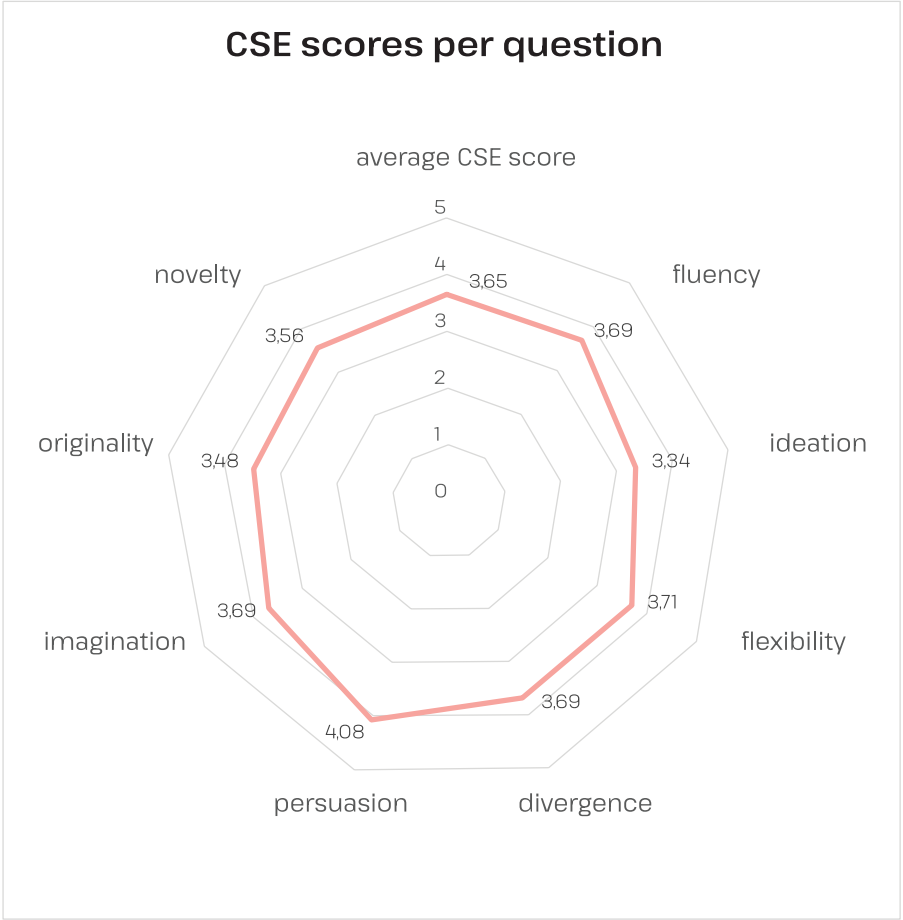


FIG 24 Average CSE scores from Exploring Creativity session

FIXED VS GROWTH MINDSET

The questionnaire also included a part about growth and fixed mindset. This means if the students think creativity is something they can grow and develop or if they think they have a fixed level of creativity. When looking at the results most students seem to have a growth mindset. Only 24 out of 64 students showed patterns associated with a more fixed mindset regarding creative growth.

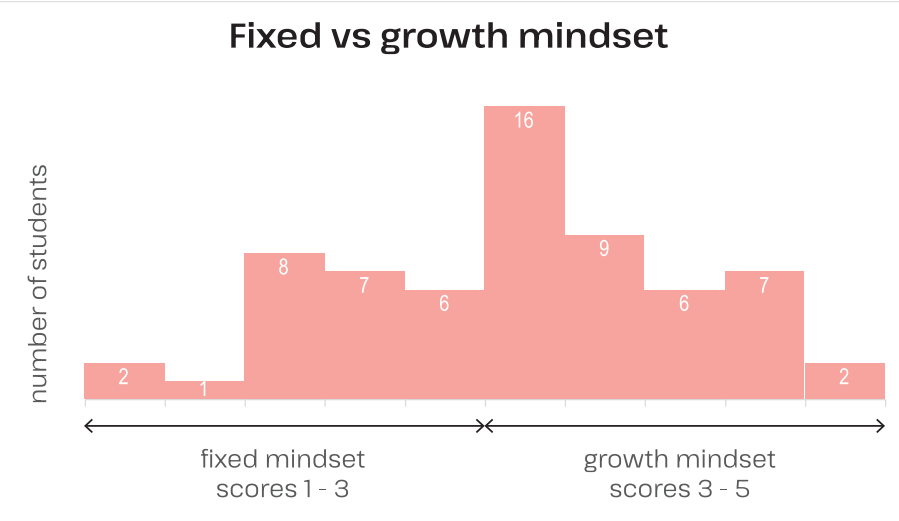


FIG 25: Fixed vs Growth mindset Exploring Creativity Session

"WHAT IS CREATIVITY?" BRAIN DUMP OUTCOME

Students initially associated creativity primarily with visible artistic skills (drawing, music, crafting). After discussion, additional elements emerged:

- Imagining
- Generating ideas
- Problem-solving
- Making ideas tangible

Across the three sessions, groups eventually converged toward a common definition:

Creativity is the ability to think of new and unique ideas and carry them out or make them real.

The results from the sessions are shown in figure 26:

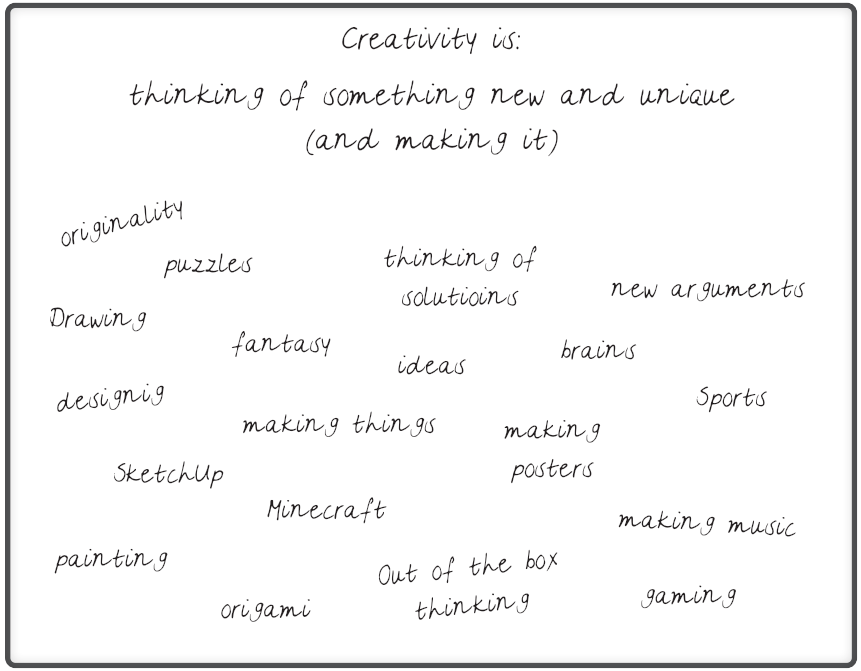


FIG 26: "What is creativity?" Braindump visualized

THE CREATIVE ISLANDS

The Creative Islands activity generated rich qualitative data about how teenagers perceive their personal creative worlds. By visually mapping their "islands," students expressed the conditions that enable creativity but also the obstacles that hinder it.

These visualizations, combined with written post-its reflections and discussions, allowed access to a deeper tacit knowledge and often unspoken insights about their experiences with creativity.

A few examples of the creative islands created by the students:



FIG 27: Some results of the Creative Island activity

Analysis of the Creative Islands revealed two overarching groups: Enablers and Blockers. Within these groups, multiple recurring themes surfaced, revealing what teenagers to be an enabler or blocker.

It was interesting that School was explicitly mentioned as a blocker by 36 of the 64 participants.

These themes were grouped and rewritten into needs. These needs were also linked to the theory when possible, to enforce the connection between literature and the needs found in practice.

Figure 28 shows the process from Post-its on islands to the finalized needs.

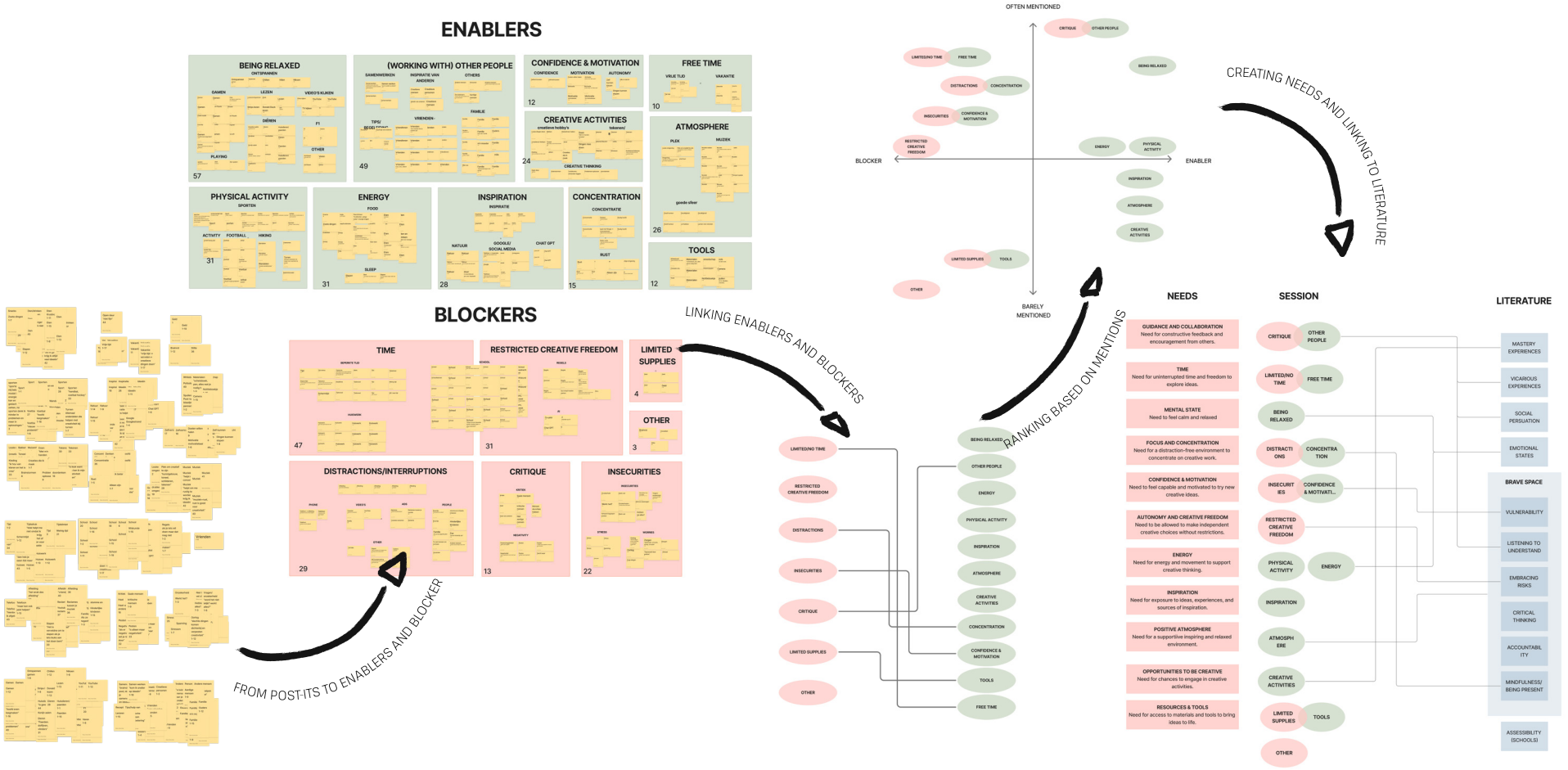
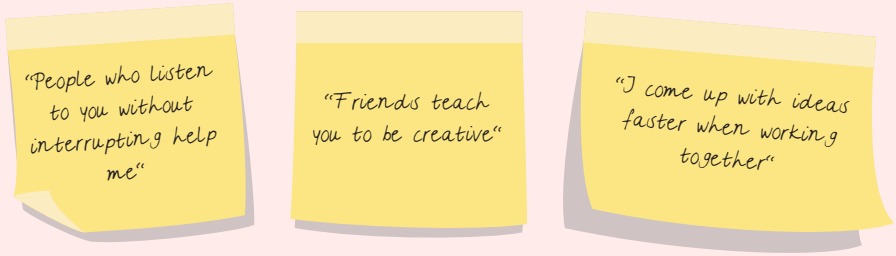


FIG 28: From Post-its on Creative Islands to needs linked to research

The needs that emerged from the data analysis are the following (ranked on frequency of mentions)

1. GUIDANCE AND COLLABORATION
Need for constructive feedback and encouragement from others.

Teenagers expressed a strong need for positive guidance, collaboration and being heard while doing creative activities. They mentioned that a good collaboration helps them in their creative process and makes them feel supported. On the other hand, they also mentioned the negative impact of critics, distractions and negativity from other people.



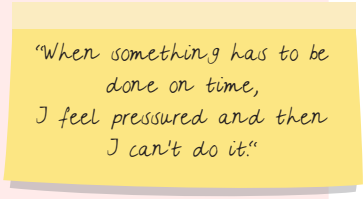
LINK TO DESK RESEARCH

Vicarious experiences and social persuasion mentioned by Bandura (1977) as factors that increases the creative self-efficacy can be linked to this need. Beghetto & Karwowski (2023) further highlight that supportive feedback during the creative process can significantly boost creative self-efficacy.

In addition to this, the need also connects to the brave space principle of "perspective taking" really listening to understand (Stubbs, 2019). When teenagers know that it is a safe space to experiment and others are not judging you, they are more likely to take risks and share their ideas which is positive for the creative confidence development.

2. TIME
Need for uninterrupted time and freedom to explore ideas

Teenagers indicated that creativity requires time without pressure. Tight schedules, deadlines, and constant interruptions reduce their willingness to engage creatively and limit exploration.



LINK TO DESK RESEARCH

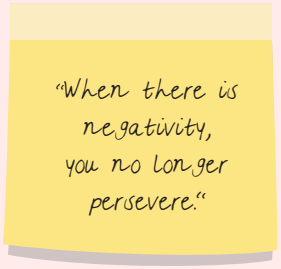
Desk research shows that schools often lack the time and structure to offer meaningful creative experiences (Jefferson & Anderson, 2017; Sidorova, 2022).

Creative confidence develops through mastery experiences, which require time for trial, failure, and iteration (Bandura, 1977). Without uninterrupted time, students are less likely to enter or sustain creative engagement.

3. MENTAL STATE
Need to feel calm and relaxed.

A calm mental state appears to be a prerequisite for creativity.

Stress, pressure, and negative emotions were frequently mentioned as blockers that prevent teenagers from starting or continuing creative activities.



LINK TO DESK RESEARCH

This directly relates to emotional and physiological states, one of Bandura's four factors that influence self-efficacy (Bandura, 1977, 1995).

The research indicates that stress and anxiety lower creative self-efficacy, while feeling calm and emotionally safe increases engagement and confidence during creative tasks. Maslow (1987) similarly states that creativity can only emerge when basic psychological needs such as safety and emotional stability are met.

4. FOCUS AND CONCENTRATION

Need for a distraction-free environment to concentrate on creative work.

The importance of being able to focus and the absence of distractions, both digital as social, were mentioned by 44 teenagers out of a total of 64.

"I sometimes get distracted by text messages."

Teenagers all have their own different way of achieving focus and concentration.

"Music helps me concentrate."

VS

"Silence is good for concentration"

5. CONFIDENCE & MOTIVATION

Need to feel capable and motivated to try new creative ideas

„Sometimes I doubt, Won't it look ugly? Does everything work?"

Low motivation and internal blockers prevent engagement in creative activities.

Teenagers mentioned insecurities 22 times to be a blocker in being able to be creative.

LINK TO DESK RESEARCH

Students with low creative self-beliefs are less likely to attempt creative tasks in the first place. (Bandura, 1977, 1995) Creative confidence requires engaging in creativity, yet insecurities and low self-efficacy prevent teenagers from engaging. This proves that there is a need for confidence and motivation to engage in creative activities.

6. AUTONOMY AND CREATIVE FREEDOM

Need to be allowed to make independent creative choices without restrictions.

Teenagers feel restricted in their creative freedom at school due to performance pressure and grading standards. The pressure to perform for grades or having to stay within the safe boundaries of an assignment was often mentioned as a blocker of creativity. Out of the 64 participants 36 mentioned school as a blocker.

„Having to do things a certain way means that my creativity is instantly gone"

„If it's for a grade, I feel pressured and then I can't do it."

„Even in art class you all just have to make the same thing, because you get a grade"

LINK TO DESK RESEARCH

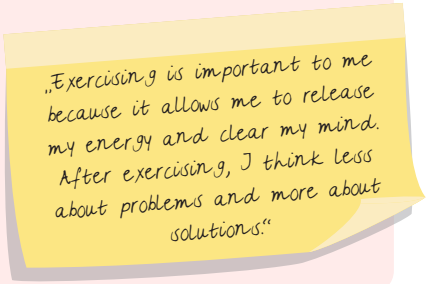
Research by Amabile(2018) and Ryan & Deci (2000) showed that teenagers need intrinsic motivation to start creative activities. This also relies on their autonomy, when the focus shifts to "evaluation expectation" (the expectation that you will receive a grade) students instinctively go for the safest, most predictable route. This "playing it safe" kills originality and risk-taking

7. ENERGY

Need for energy and movement to support creative thinking.

Physical activity and movement helps teenagers release tension and reset their minds according to the creativity islands.

Teenagers expressed that being active and feel energized helped them to be creative.



8. INSPIRATION

Need for exposure to ideas, experiences, and sources of inspiration.



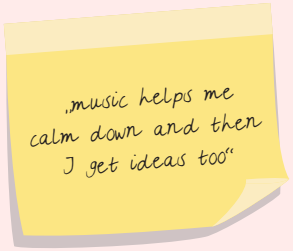
Teenagers expressed the need for sources of inspiration, they mentioned sources they often used such as Pinterest, social media, but also AI was mentioned.

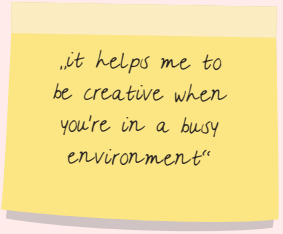
Other sources of inspiration like nature were also mentioned often.

9. POSITIVE ATMOSPHERE

Need for a supportive inspiring and relaxed environment.

Having a positive and encouraging environment helps teenagers to get into a creative mood. However this might be a different setting for each teenagers.





LINK TO DESK RESEARCH

This also links back to getting into a positive physiological state mentioned to positively impact creative self efficacy. (Bandura, 1977).

10. OPPORTUNITIES TO BE CREATIVE

Need for chances to engage in creative activities.

Having free time, holidays and being bored were mentioned as factors to start being creative. This suggests that teenagers need actual opportunities to practice creativity, not just encouragement.



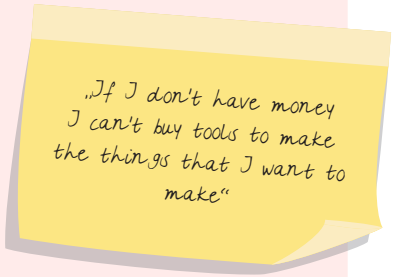
LINK TO DESK RESEARCH

Bandura (1977) emphasizes that having mastery experiences are the strongest driver of self-efficacy.

11. RESOURCES & TOOLS
Need for access to materials and tools to bring ideas to life.

In the exercise teenagers expressed that they need to have the right tools available to fully unlock their creativity. This enables them to make their ideas physical.

Teenagers also mentioned the limitations of money and resources often blocked them.



CREATIVE SCHOOL OF THE FUTURE

When asked to envision their ideal 'creative school of the future', students prioritized autonomy, relaxation, and practical exploration. Their ideas were categorized into four main areas:

- Facilities:
  Vibrant, multi-purpose spaces focused on relaxation and movement, featuring 'chill rooms', sports facilities, and playful elements like slides.
- Rules:
  High autonomy with flexible schedules (e.g., later start times), no homework, and the freedom to use phones or listen to music during class.
- Curriculum:
  A shift from theoretical to practical, student-chosen subjects (such as gaming, DJing, and cooking) and a lot of free time.
- Teachers:
  A changing dynamic where teachers act as approachable, supportive coaches rather than strict instructors.



FIG 29: Presenting of the Creative School of the Future in a session

Overall, these outcomes align with the needs from the Creative island activity such as Autonomy, Mental State, and Time. It shows that teenagers believe their creativity flourishes best in a relaxed, self-directed environment, free from rigid academic pressure and strict evaluation.

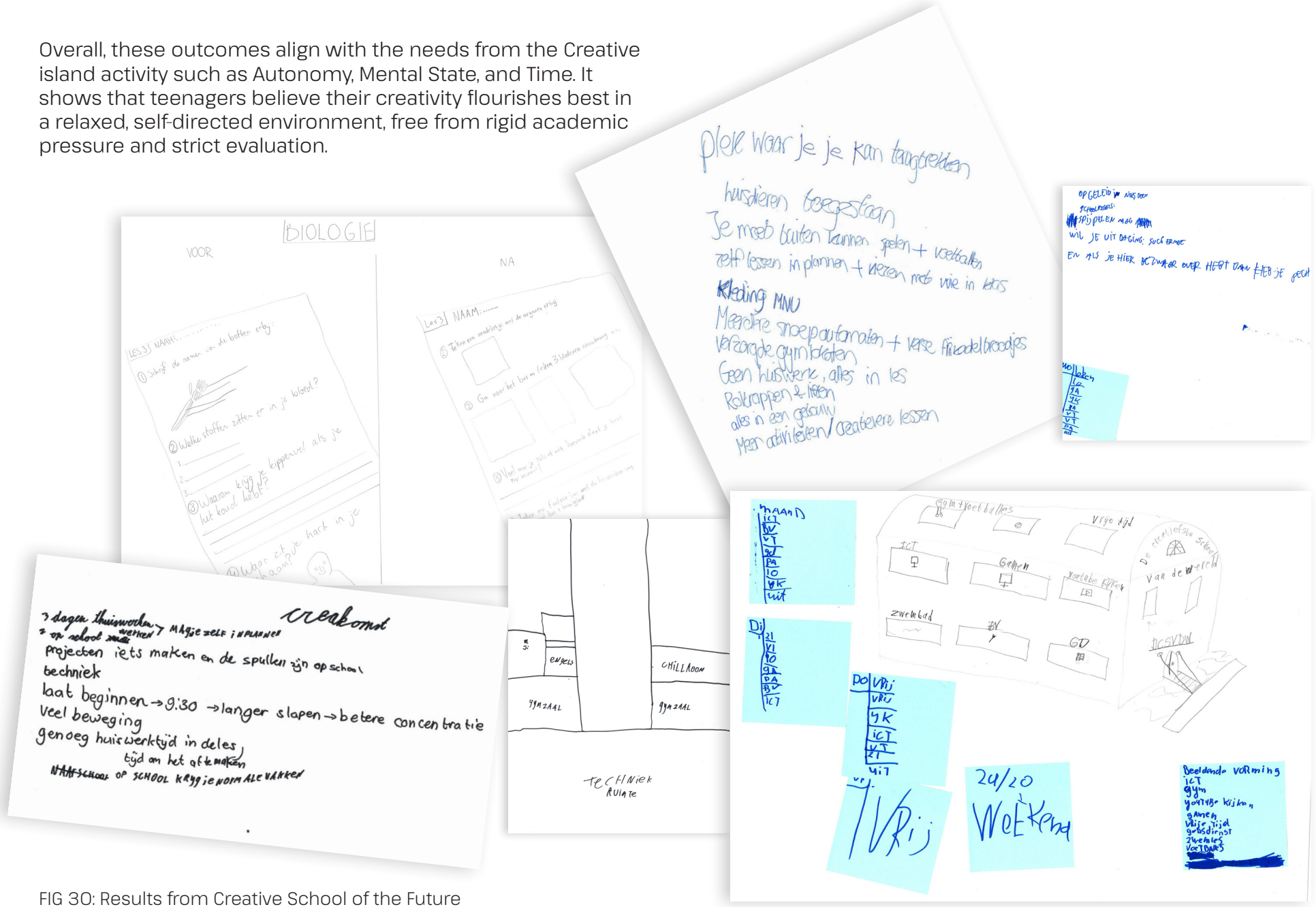


FIG 30: Results from Creative School of the Future

KEY INSIGHTS OF THE EXPLORING CREATIVITY SESSION

The Exploring creativity session provided very rich data to answer research questions 3 and 4:
What are the current views of teenagers on their own creative confidence? And what do teenagers need to stimulate creative confidence at school?

By analyzing the results, four distinct insights emerged:

TEENAGERS RECOGNIZE CREATIVITY, BUT OFTEN DEFINE IT IN A LIMITED WAY

(Relates to SQ1: How do teenagers define and view creativity in general?)

The sessions revealed teenagers are not lacking creativity, but have a narrow understanding of what creativity is and where it exists in their daily lives.

Initially, creativity was mostly associated with visible and aesthetic skills such as drawing, music, or crafting. As a result, teenagers may not see themselves as creative, even though they regularly engage in creative thinking without labeling it as such.

When prompted, students quickly recognized that problem-solving, imagining, and generating ideas are also creative acts.

The opportunity lies in reframing creativity for teenagers: shifting the focus from 'artistic output' to 'everyday creative thinking.' By making these hidden skills visible, students can recognize the creativity they already have.



FIG 31: Photo of Exploring Creativity

CREATIVE CONFIDENCE MIGHT BE CONTEXT-DEPENDENT

(Relates to sub-question 2: What are the current views on (their own) creative confidence?)

The average score of 3.7 out of 5 on the Creative Self-Efficacy questionnaire suggests that students are not without confidence. However, the Creative Islands exercise revealed that whether this translates to creative action depends on many different factors. Insecurities, fear of failure, and fear of judgment can cause students to freeze and avoid creative tasks, even when interest or ideas are present.

The data shows us what teenagers need to be creative. By designing interventions that take these needs into account, we can create a environment where taking a creative risk feels accessible and fun rather than dangerous.

ENABLERS NEED TO OUTWEIGH BLOCKERS, CREATING A THRESHOLD FOR CREATIVE ENGAGEMENT

(Relates to sub-question 3: What helps teenagers to be creative, and what blocks them?)

The decision to engage in creative activity is not solely based on motivation or interest, but on whether enabling conditions outweigh perceived risks. When this balance is negative, creative engagement is avoided, preventing the development of creative confidence.

For many students, blockers can outweigh enablers at school, 36 out of the 64 participants explicitly named "school" as a blocker. The traditional school environment characterized by fixed assignments, grading, and a lack of autonomy conflicts with the needs students identified for creativity, such as autonomy, relaxation, freedom, and time to experiment. Internal factors (low confidence, stress, fear of failure) and external factors (lack of time, distractions, restrictive school assignments) accumulate into a high threshold that must be overcome before a teenager is willing to engage creatively.

This shows us a problem: creative confidence can only grow through doing, yet the conditions needed to start doing are often not met at schools.



FIG 32: Photo of Exploring Creativity

THE POWER OF LOW-STAKES EXPERIENCES

(Relates to sub-question 4: How can school help students to be more creative?)

Tackling creative insecurity can feel overwhelming for both students and teachers. When faced with large, complex creative assignments, students can become demotivated or stressed. However the explore sessions revealed something hopeful: when students were given a low-stakes, supportive environment during the sessions themselves, many experienced moments of insight, enjoyment, and pride. The reflection at the end of the sessions showed that students became more aware of their own creativity simply by engaging in it.

This proves that creative confidence does not require large interventions, but can be activated through small, accessible, and well-supported mastery moments. Also known as the process of guided mastery (Bandura, 1995)

Together, these insights show that the main challenge is not a lack of creativity or interest among teenagers, but a lack of conditions that lower the threshold to engage creatively. Creative confidence is learned through experience, yet many students never enter this learning loop due to internal insecurities and external constraints. This shows a strong opportunity for design interventions that focus on student needs and mastery experiences rather than teaching creativity as a skill.

LIMITATIONS AND BIAS

An important limitation in this process is that access to participants was dependent on schools willingness to collaborate. As a result, the sample primarily consisted of Technasium school (42 out of 64 students) and to students within a relatively high academic level (HAVO/VWO).

This may have introduced a selection bias, as these students might already be more familiar or comfortable with creative assignments compared to other educational tracks. Therefore, the findings should be interpreted with this context in mind.

KEY INSIGHTS OF THE EXPLORE PHASE

The explore phase provided a lot of date from both the desk research and the Exploring creativity sessions with a total of 64 teenagers. This phase was all about answering the research questions and identifying key factors in stimulating creative confidence.

This section summarizes the explore phase by explaining two patterns that became visible and connect all four research questions: **The Creative confidence loop** and **the Activation threshold.**

Together, all of the insights from the explore phase form the foundation for the design intervention and clarify why developing creative confidence in secondary schools is challenging, and where opportunities for design lie.

The Creative Confidence Loop

Our research confirms that creative confidence is not a fixed talent but a dynamic creative self-belief fueled by experience. This mechanism is best understood as a self-reinforcing cycle, or as I would like to call it the Creative Confidence Loop (Shown in figure 33)

Confidence only grows through doing. Creative Self-Efficacy, the dynamic belief in one's ability to succeed in a specific task, is primarily strengthened by Mastery Experiences.

Each small success, or "I can do this" moment, reinforces competence and lowers the barrier to engage in the next, slightly more challenging creative task.

Avoidance stops growth, those who already have low creative self-beliefs are less likely to attempt creative tasks, fearing failure or negative judgment.

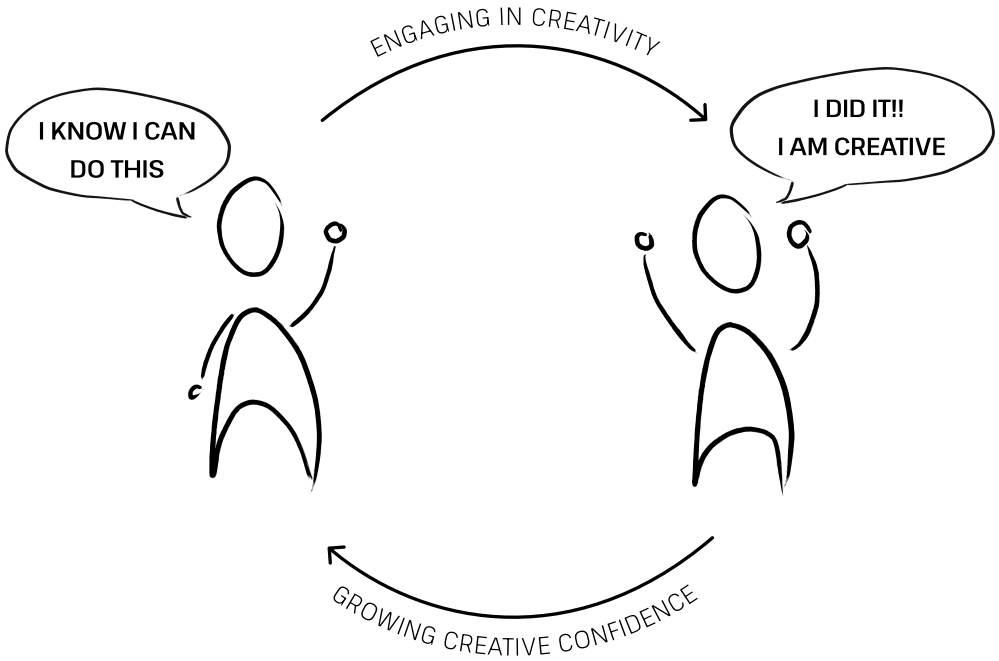


FIG 33: The Creative Confidence Loop

They recognize the risks and often choose to not participate to protect their self-image.
The result, teenagers with low creative confidence get stuck outside the loop.

The Activation Threshold

To understand why teenagers get stuck outside the Creative Confidence loop, I looked at the insights from the exploring creativity sessions and the literature that show us how to build creative confidence.

For a teenager to enter the Creative Confidence Loop, the supportive factors (enablers) must outweigh the blockers. This is what I call the Activation Threshold.
Currently, the traditional school environment often stacks the deck with blockers, making the Activation Threshold too high for hesitant students to cross.

This leads to a critical problem: the very mechanism needed to build creative confidence (doing) is actively avoided by the teenagers who need it most.

Problem statement

The problem is that the current context does not provide the right structure and conditions that teenagers need to develop their creative confidence. This creates an Activation threshold, which can prevent them from entering the Creative Confidence loop.

We cannot change the educational system as a whole, but as the Exploring Creativity session also showed Creative confidence does not need large interventions.

We need an intervention that lowers the Activation threshold and offers the opportunity for micro mastery experiences. By making the first step into creativity feel safe, effortless, and fun, we can help teenagers enter the loop and stimulate their creative confidence.

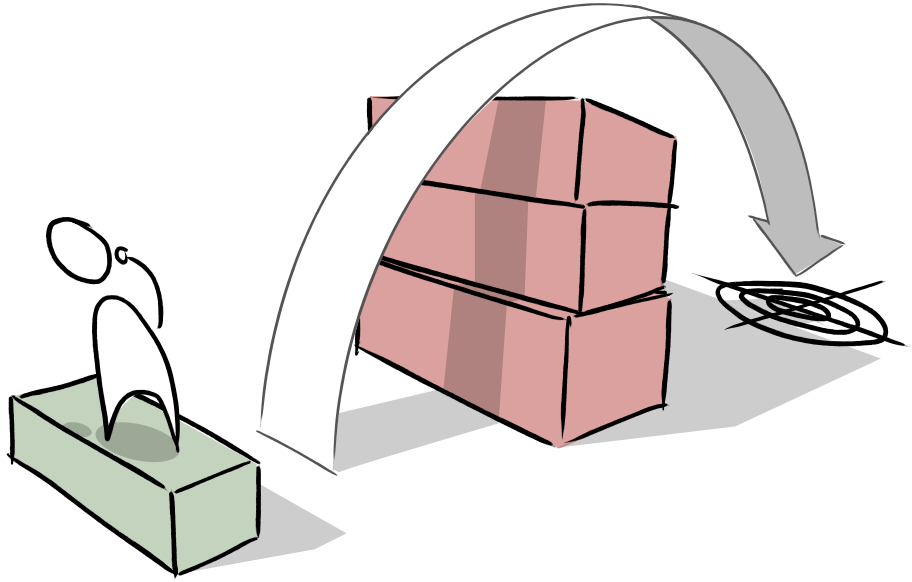


FIG 34: The Activation Threshold

Design Vision

The Explore phase revealed that fostering creative confidence is not about teaching skills, but about lowering the Activation Threshold so teenagers can safely enter the Creative Confidence Loop. To ensure the upcoming ideation phase directly targets this mechanism, a clear design goal and design requirements are needed.

DESIGN GOAL

Design goal is:

Design an intervention that lowers the Activation Threshold, enabling Dutch high school students (12-18) to safely take the first step into the Creative Confidence Loop, thereby stimulating their creative confidence.

The Activation Threshold is when blockers outweigh enablers of creativity which causes teenagers to be hesitant of perticipating in creative activities.

Dutch High school students are the main target group for this design, the design hopes to help them, however this does does nog mean that they will be the only people interacting with it.

The Creative Confidence Loop is the self reinforcing cycle of growing Creative Cofidence. When you are confirent you are more likely to engage in creave activities and challenges, which will boost your confidence when the challenges are overcome.

Creative Confidence is the confidence a person has in their ability to be creative. It is one of the Creative self-beliefs and motivates people to engage in creative activity.

This goal serves as the definitive benchmark for this project. Every concept generated in the ideation phase will be evaluated against its ability to facilitate this accessible, first creative step within the school context.

INITIAL DESIGN REQUIREMENTS

To transform the psychological and contextual insights from the explore phase to actionable design decisions, the findings from Literature and the Exploring Creativity sessions needs and insights have been translated into concrete requirements.

To maintain focus during ideation, these are divided into Core Requirements (must-haves to successfully trigger the Creative Confidence Loop) and Supporting Principles (nice-to-haves that enrich the experience).

Core requirements

The intervention must:

1. Enable quick, achievable creative actions that create small mastery experiences.

   Bandura (1977, 1995) Opportunities

2. Provide a intuitive start to directly lower the Activation Threshold.

   Activation Threshold Confidence & Motivation

3. Support autonomy by allowing students to make their own creative choices

   Ryan & Deci (2000) Amabile (2018)

   Autonomy & Creative freedom

4. Create a brave space in which experimentation and mistakes are normalized.

   Stubbs (2019) Positive atmosphere

5. Be feasible within typical school constraints, such as limited time and minimal resources.

   Time Resources & Tools

6. Be easy to understand and facilitate by teachers, without requiring creative expertise or extensive preparation.

   Makel (2019) Guidance & Collaboration

7. Support reflection on the creative process.

   Bandura (1977, 1995) Creative Confidence loop

Supporting principles (nice-to-haves)

The intervention should:

8. Provide accessible, non-prescriptive sources of inspiration.

   Inspiration

9. Allow switching between individual and collaborative modes.

   Bandura (1977, 1995) Guidance & Collaboration

10. Incorporate light physical movement or embodied interaction.

    Energy

11. Facilitate constructive and supportive peer feedback.

    Stubbs (2019) Guidance & Collaboration

12. Minimize distractions during the creative task where possible.

    Focus & Concentration

13. help students enter a calm, low-pressure mindset before starting.

    Mental state

CO-CREATION

Aim of the session

To move from the explore phase and the design vision to ideation and concept development, a co-creation session was organized to validate the Design vision.

While the Exploring Creativity session identified teenagers' needs, enablers, and blockers related to creative confidence, this session aimed to:

1. **Validate the needs and conditions identified in the Explore phase.**
2. **Investigate which creative confidence boosters teenagers prioritize and why.**
3. **Generate initial design directions together with teenagers.**

Method

PARTICIPANTS

A total of nine students aged 12-15 participated in the session. Participants were recruited through an outreach email distributed by a teacher.

This was done on a school who did not already participate in the Exploring creativity session. Participants came from different classes and school years from Wolfert Tweetalig in Rotterdam.

Participation was voluntary and data was anonymized.

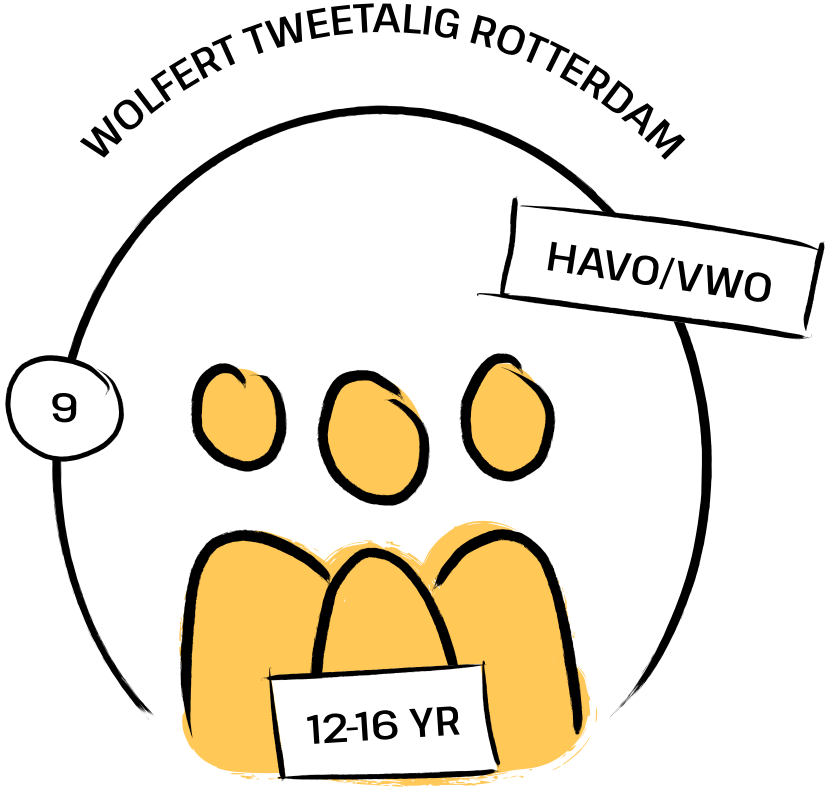


FIG 35: Participants Co-Creation Session

CONTEXT, LOCATION AND TIMING

The session lasted approximately 90 minutes and took please in an art room at the Wolfert Tweetalig school. The session took place outside of school hours.

SESSION SET-UP

The co-creation session alternated between individual reflection, small group activities and plenary discussions. The session was introduced with a brief explanation and the ground rules (from Exploring Creativity session) to create a brave space. All of the session materials can be found in appendix F in full detail

The session planning and activities are shown in figure 36.



FIG 36: Co-Creation Session planning & activities

REALITY CHECK

Students were presented with ten short statements representing internal, social, and external needs related to creativity. These statements were derived from the Explore phase findings.

Each student received five dot stickers and could distribute them freely across statements.

Students could either select five different statements or assign multiple stickers to one statement to indicate priority. Voting was followed by a plenary discussion.

This activity was to validate the needs and conditions identified in the Explore phase. (SQ1)

REALITY CHECK MATERIALS



FIG 37: Reality check materials for Co-Creation session

CREATIVE CONFIDENCE BOOSTER

Students received a full set of fourteen Creative Confidence Booster cards. Each card represented a potential 'booster' based on literature (e.g. mastery experiences, autonomy, brave space principles) and findings from the exploring Creativity session. One blank card allowed students to add their own ideas.

Students individually selected their top five boosters and wrote short explanations for their choices. This was followed by a group discussion.

The goal of this activity was to investigate which creative confidence boosters teenagers prioritize and why. (SQ2)



FIG 38: Creative Confidence booster materials for Co-Creation session

SCHOOL OF THE FUTURE

In groups of 2-3, students designed their ideal "Creative school of the future," focusing on environment, tools, teaching style, and atmosphere. These guiding topics were displayed in front of the classroom to support their ideation.
The groups also presented their visions to the rest.

The goal of this activity was to generate initial design ideas. (SQ3)

Although this activity was also done in the Exploring creativity session, I was curious to see what these students would come up with without deep diving into their own creativity first.

CO-CREATION BRAINSTORM

Based on previous activities, a brainstorm was started as a group. First every student wrote down their own ideas on Post-Its. After this we clustered all of the ideas as a group. Based on these clusters new ideas also arose.

The goal of this activity was to generate initial design ideas. (SQ3)

Data analysis

Quantitative data from dot voting and ranking boosters was analyzed using frequency counts to identify prioritized needs and boosters.

Qualitative data (written explanations, group outputs, and field notes) was analyzed through an iterative interpretative process. Rather than applying a strict coding framework, the analysis focused on identifying patterns, recurring arguments, and notable contrasts across discussions and collected data.

Results

PRIORITIZING NEEDS AND CREATIVE CONFIDENCE BOOSTERS

The Reality check and Creative confidence booster activities were designer to test the broad spectrum of needs identified during the Explore phase against the priorities of the students.

The dot voting results of the Reality check showed a clear hierarchy. External needs were prioritized over internal and social needs. The highest-ranking statements were directly related to practical external needs:

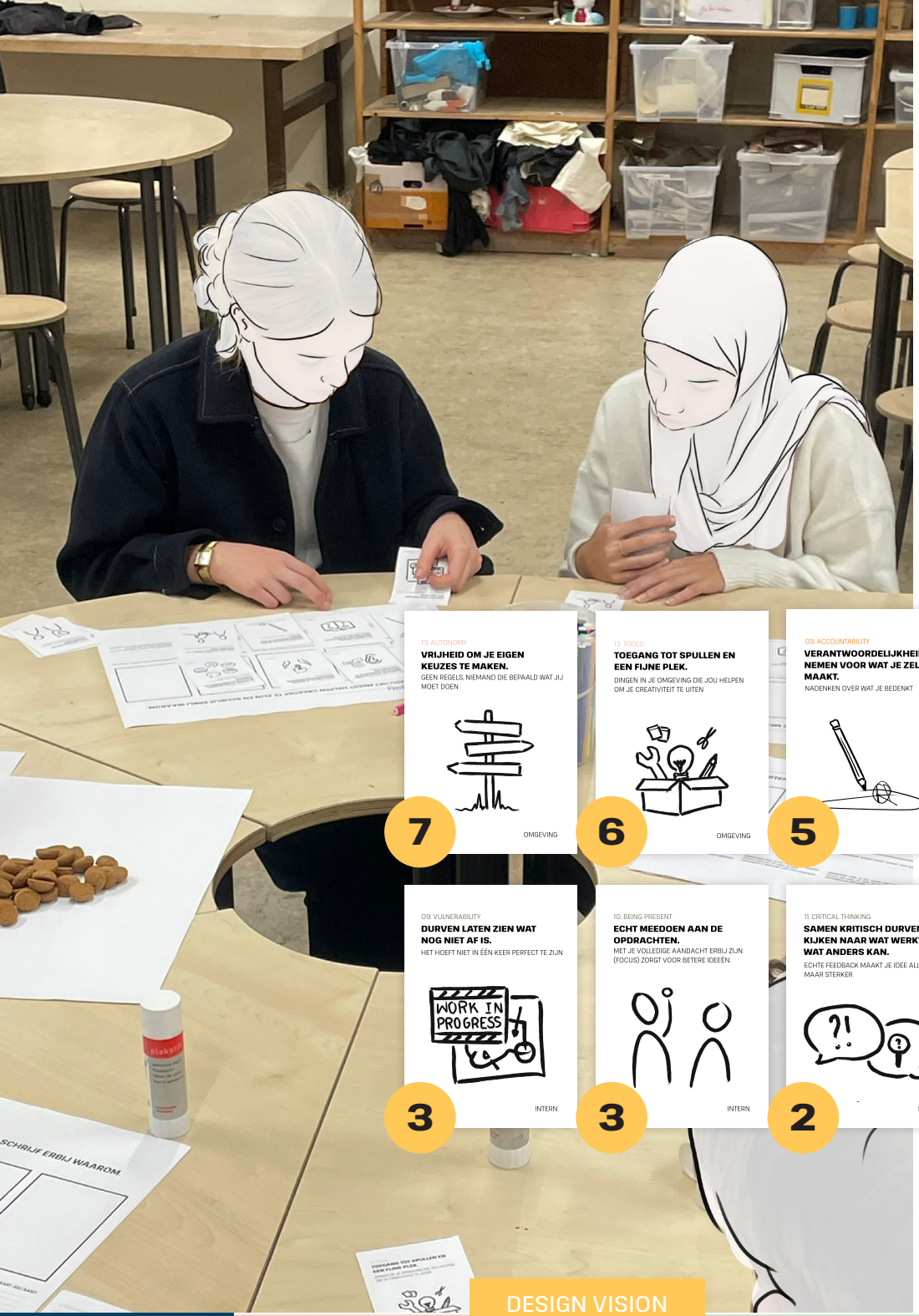
- Resources & tools (9 votes)
- Autonomy & creative freedom (9 votes)
- Time (7 votes)

Internal needs such as mental health (2 votes) and confidence & motivation (1 vote) received significantly less priority from students.

Need	Score
Resources & Tools	9
Autonomy & Creative freedom	9
Time	7
Inspiration	5
Focus & Concentration	5
Guidance & Collaboration	3
Metal state	2
Confidence & Motivation	1
Positive Atmosphere	1
Energy	0
Opportunities to be creative	0

Ranking needs Explore phase
Guidance & Collaboration
Time
Metal state
Focus & Concentration
Confidence & Motivation
Autonomy & Creative freedom
Energy
Inspiration
Positive Atmosphere
Opportunities to be creative
Resources & Tools

FIG 39: Results of reality check activity



A similar pattern emerged in the Creative confidence booster selection where autonomy and availability of tools were chosen the most followed by accountability.

Boosters related to emotional safety such as Vulnerability or social persuasion were acknowledged but treated as secondary conditions.

Written explanations accompanying the selections frequently referred to:

- Wanting freedom to decide how to approach tasks
- Needing practical resources to execute ideas
- Feeling responsible for outcomes
- The importance of feeling emotionally safe



FIG 40: Results of Creative confidence booster activity

FUTURE VISIONS AND EARLY CONCEPT DIRECTIONS

Beyond prioritizing needs, this co-creation session also actively generated the students vision for the future ideal creative school and possible concept directions.

In the School of the future activity recurring themes included flexible schedules, practical and active learning, green and inspiring spaces, and teachers who are enthusiastic and engaged.

Students envisioned a school environment that supports responsibility, collaboration, and learning by doing, rather than purely assessment-driven education.

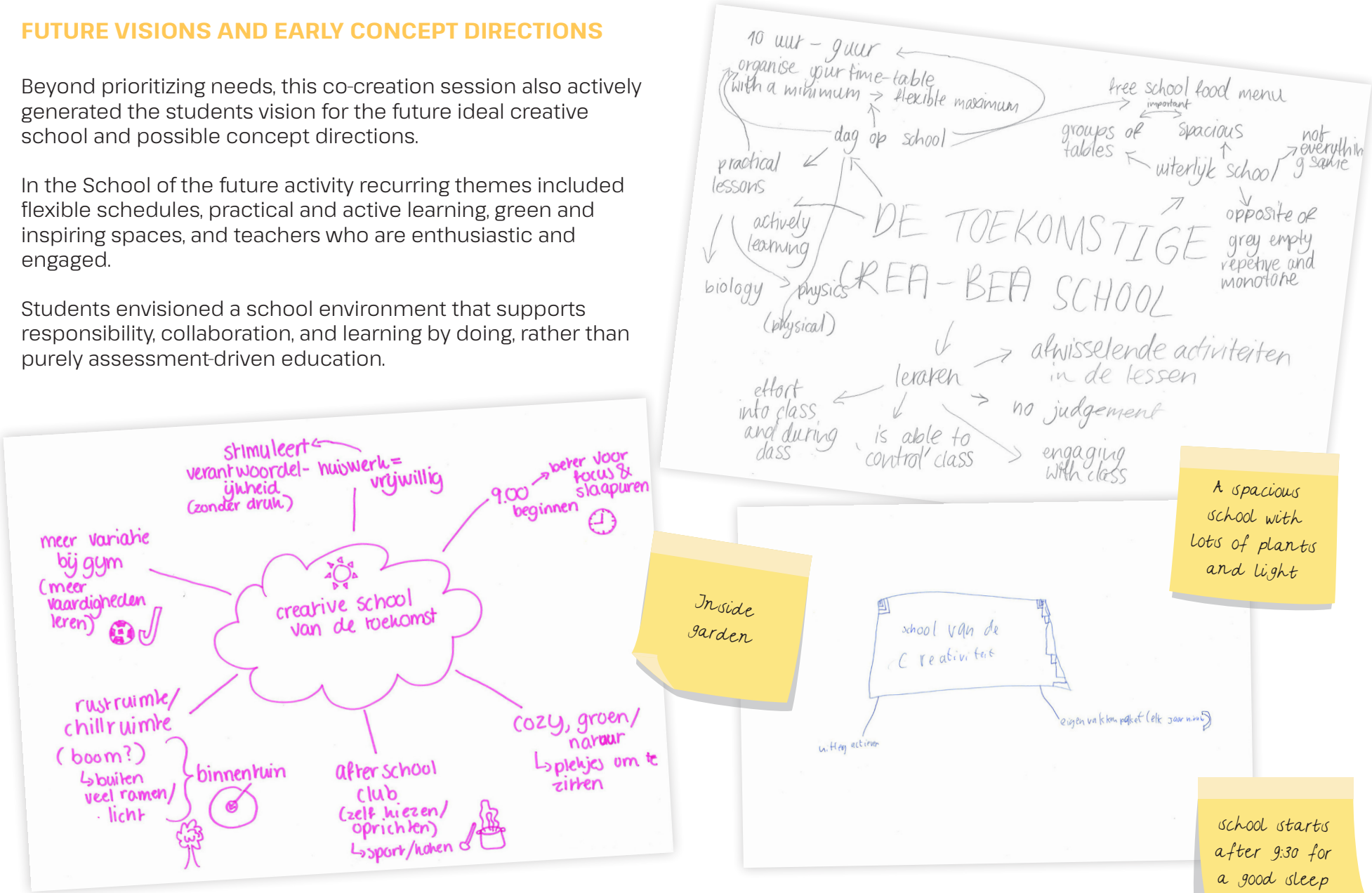


FIG 41: Results of Creative School of the future

Spacious and colorful schools with a lot of nature

Engaging lessons with a range of activities and practical examples.

Teachers who keep control and put effort in the lesson

Free food

Being able to create your own collection of courses (within boundaries)

homework = voluntary (encourages responsibility without pressure)

After school clubs for real life skills

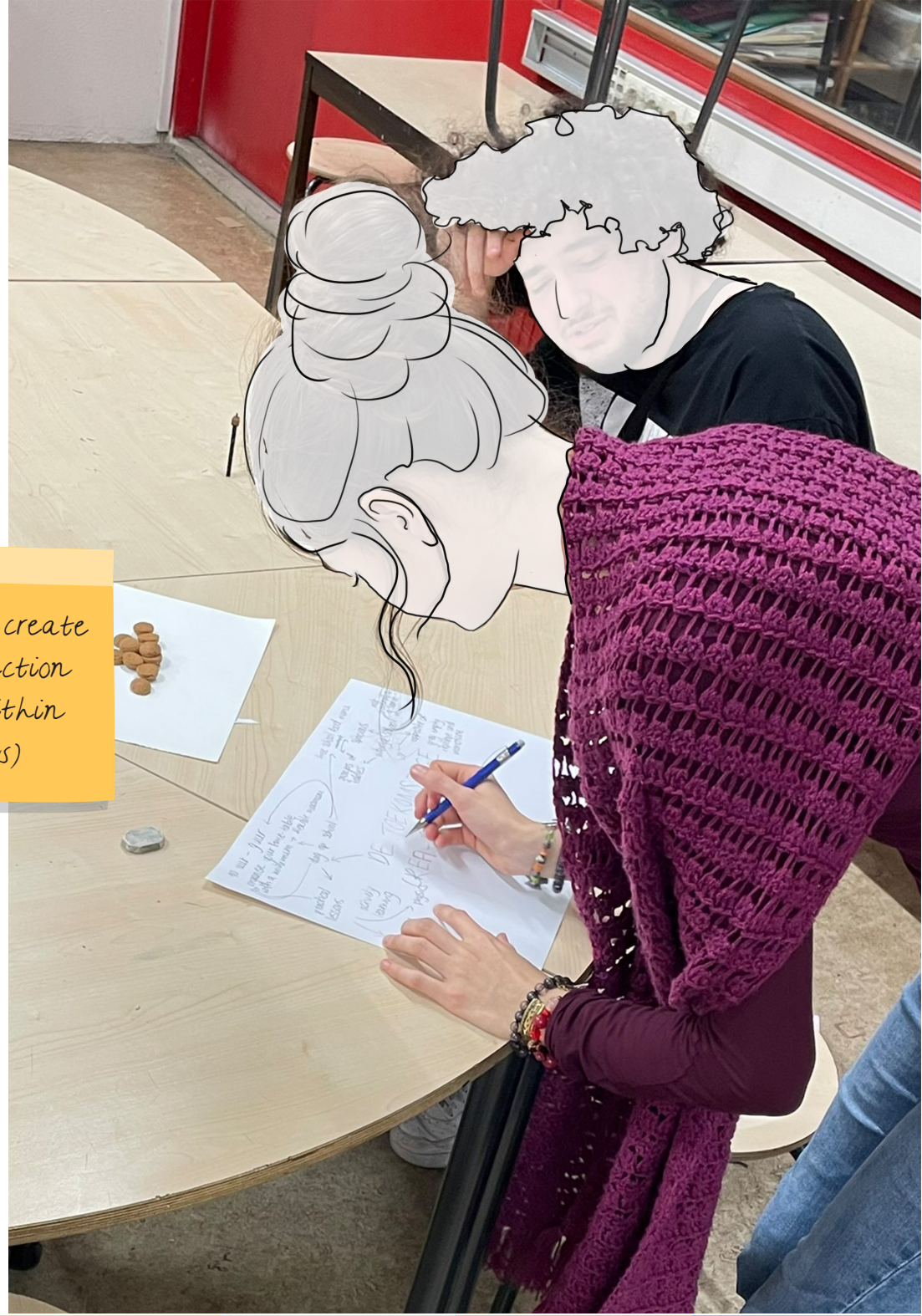


FIG 42: Results of Co-Creation activity

When translating these visions into concrete concept directions or interventions the students proposed ideas such as:

- Micro-challenges that enable small creative successes
- Projects integrated withing existing courses.
- Peer-to-peer learning and coaching structures
- Physical and visual spaces to showcase unfinished and finished work
- Short creative reset moments focused on calm and focus

These ideas function as early concept directions rather than finished solutions, providing direction for further design development which will be used in the Ideation phase.

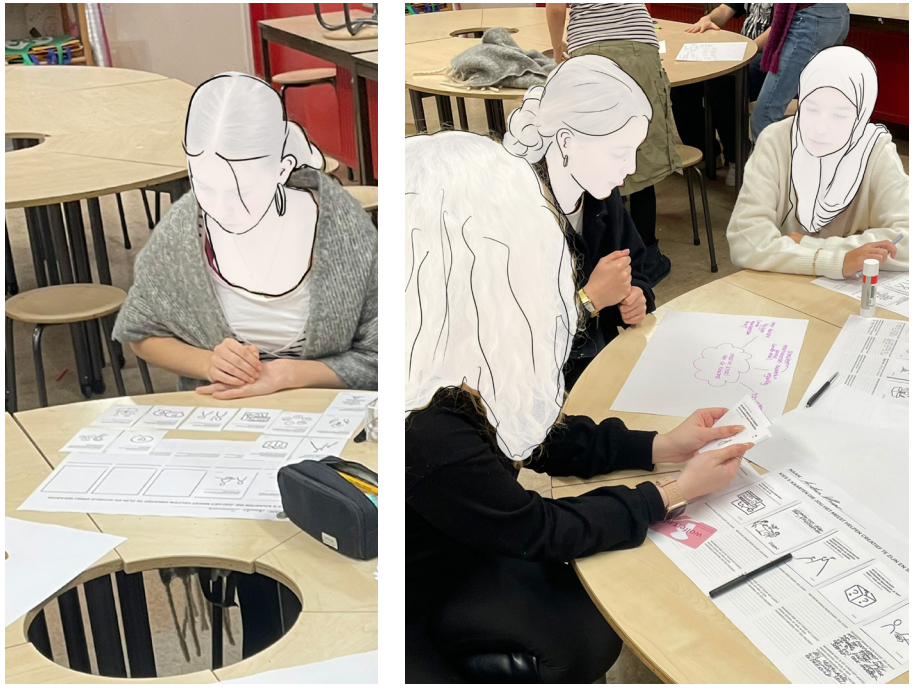


FIG 43: Photos of Co-Creation session

KEY INSIGHTS OF CO-CREATION SESSION

Comparing the broad insights from the Explore phase with the date from the Co-creation session reveals two crucial insights for the upcoming Ideation phase:

→ **The structural nature of the activation threshold.**
While the Explore phase established that creative confidence relies on internal psychological states, the co-creation session results show that students do not experience this as the biggest blocker.

Students consistently frame their barriers in terms of external, structural limitations. While internal factors such as confidence are relevant the lack of time, rigid constraints and the absence of tools are mentioned more frequently.

This suggests that currently the Activation Threshold is primarily an external problem within the context of schools.

→ **Preference for Micro-interventions**
Interestingly, when students were asked to design solutions, they did not propose massive systemic changes of the curriculum.

Instead their ideas focused on 'micro-challenges' and integrated projects into existing courses. Or the availability of a creative space to create and show their projects.

This enforces the thought of creating a low-threshold intervention that smoothly fits into the reality of current education.

FINALIZED DESIGN REQUIREMENTS

The Co-creation session confirmed the validity of the initial design requirements, however the session did clearly show a hierarchy of importance. Therefore the design requirements are restructured and prioritized into three tiers:

Primary drivers

To successfully lower the Activation Threshold, every concept generated in the next phase must demonstrably fulfill these criteria. These requirements directly address the primary structural blockers identified by the students.

1. Support autonomy by allowing students to make their own creative choices
   Ryan & Deci (2000) Amabile (2018) Autonomy & Creative freedom
2. Be feasible within typical school constraints, such as limited time and minimal resources.
   Makel (2019) Guidance & Collaboration
3. Enable quick, achievable creative actions that create small mastery experiences.
   Bandura (1977, 1995) Opportunities

Foundational core requirements

These requirements are essential for safely guiding students into the Creative Confidence Loop, but they rely on the primary drivers to get the students to participate in the first place. They provide the necessary pedagogical and emotional foundation:

4. Provide a intuitive start to directly lower the Activation Threshold.
   Activation Threshold Confidence & Motivation
5. Create a brave space in which experimentation and mistakes are normalized.
   Stubbs (2019) Positive atmosphere
6. Be easy to understand and facilitate by teachers, without requiring creative expertise or extensive preparation.
   Time Resources & Tools
7. Support reflection on the creative process.
   Bandura (1977, 1995) Creative Confidence loop

Supporting principles (nice-to-haves)

These principles remain relevant for the design experience and impact of the intervention. They will be integrated where possible but when not applicable they are not deal breakers

8. Provide accessible, non-prescriptive sources of inspiration.
   Inspiration
9. Allow switching between individual and collaborative modes.
   Bandura (1977, 1995) Guidance & Collaboration
10. Incorporate light physical movement or embodied interaction.
    Energy
11. Facilitate constructive and supportive peer feedback.
    Stubbs (2019) Guidance & Collaboration
12. Minimize distractions during the creative task where possible.
    Focus & Concentration
13. help students enter a calm, low-pressure mindset before starting.
    Mental state

KEY INSIGHTS OF THE DESIGN VISION PHASE

The Design Vision phase transitioned the project from understanding the problem to defining the strict parameters of the solution.

It established that to foster creative self-efficacy, the intervention must shift away from high-stakes evaluation toward low-threshold, safe-to-fail exploration.

By validating the initial research through the co-creation session, the focus was sharply directed toward dismantling the most pressing structural barriers first: a lack of autonomy, time, and accessible resources.

The resulting tiered design requirements now establish a clear and prioritized framework. These requirements define the boundaries of the design space.

Moving into the upcoming Ideation phase, they ensure that every generated concept can be evaluated on its feasibility and its ability to create achievable mastery experiences.

Ultimately, these criteria will serve as the benchmark to design an intervention that effectively pulls teenagers over the Activation Threshold and into the self-reinforcing Creative Confidence Loop.



FIG 44: Photo of Co-Creation session

Ideation

With The insights from the Explore phase and a clear design direction from the Design vision phase, the Ideation phase shifted the focus from understanding the problem to actively exploring the solution space eventually leading to the final design.

INVESTIGATING THE DESIGN SPACE

To ensure that the final design would not be a superficial fix, it was essential to examine the full horizon of design possibilities.

Using structured ideation methos such as the HKJ framework, brain drawing, and the input from the co-creation session a wide variety of ideas was generated. The ideas targeted different stakeholders and integration levels within schools.

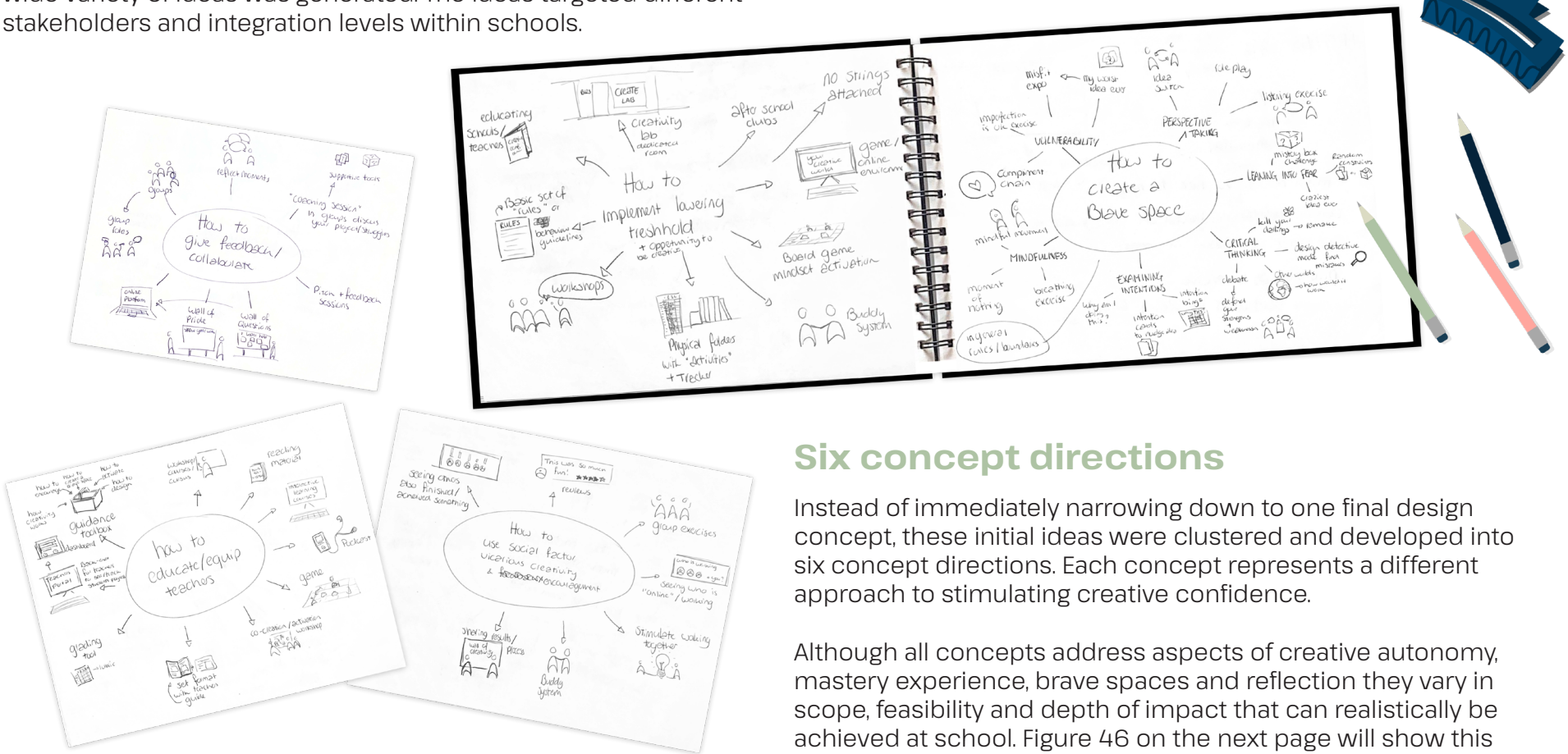


FIG 45: Visual of Ideation

Six concept directions

Instead of immediately narrowing down to one final design concept, these initial ideas were clustered and developed into six concept directions. Each concept represents a different approach to stimulating creative confidence.

Although all concepts address aspects of creative autonomy, mastery experience, brave spaces and reflection they vary in scope, feasibility and depth of impact that can realistically be achieved at school. Figure 46 on the next page will show this process. After that each concept will be shown in more detail.

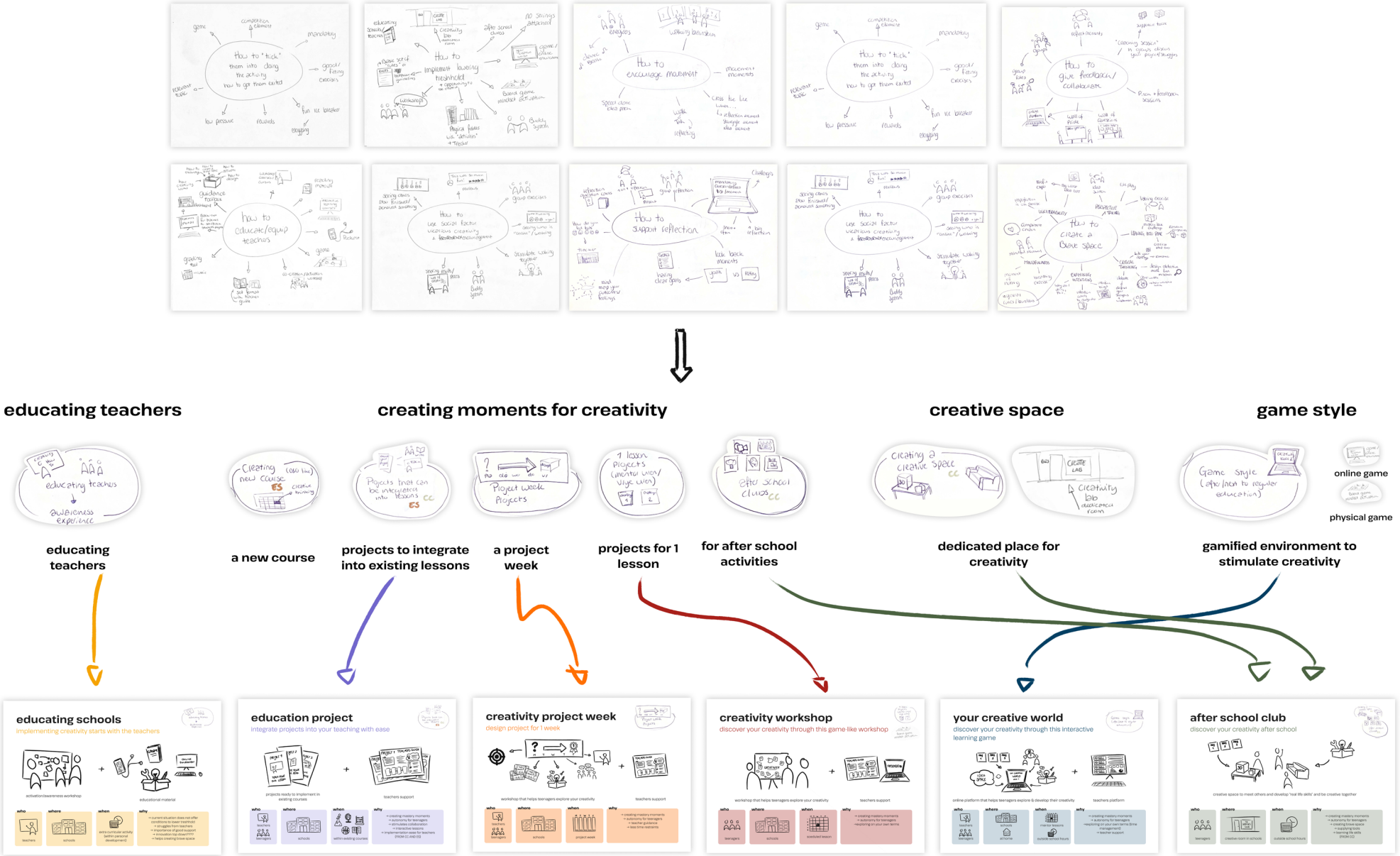
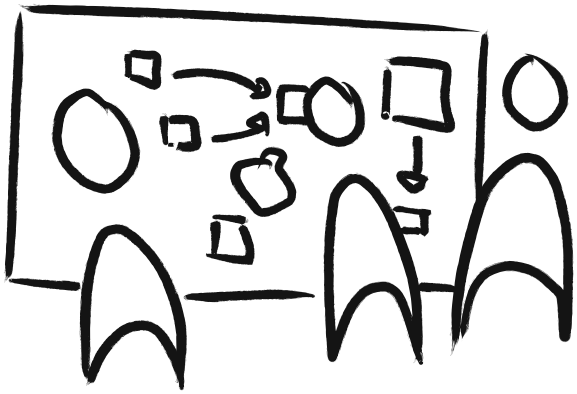


FIG 46: From Ideas to 6 Concepts

educating schools

implementing creativity starts with the teachers



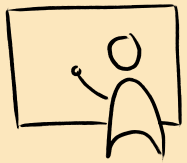
activation/awareness workshop

+



educational material

who



teachers

where



schools

when



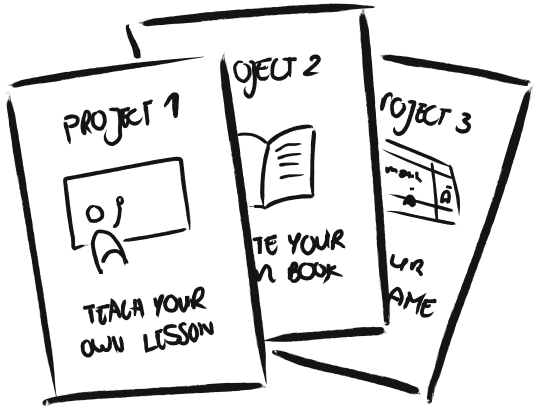
extra curricular activity (within personal development)

why

→ current situation does not offer conditions to lower treshhold
→ struggles from teachers
→ importance of good support
→ innovation top down
→ helps creating brave space

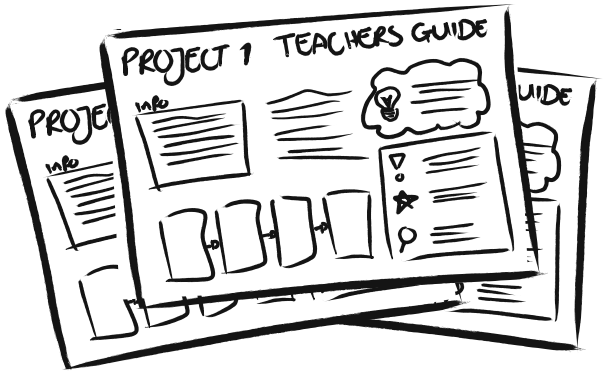
education project

integrate projects into your teaching with ease



projects ready to implement in existing courses

+



teachers support

who



teachers



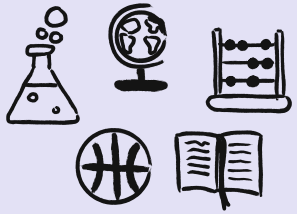
teenagers

where



schools

when



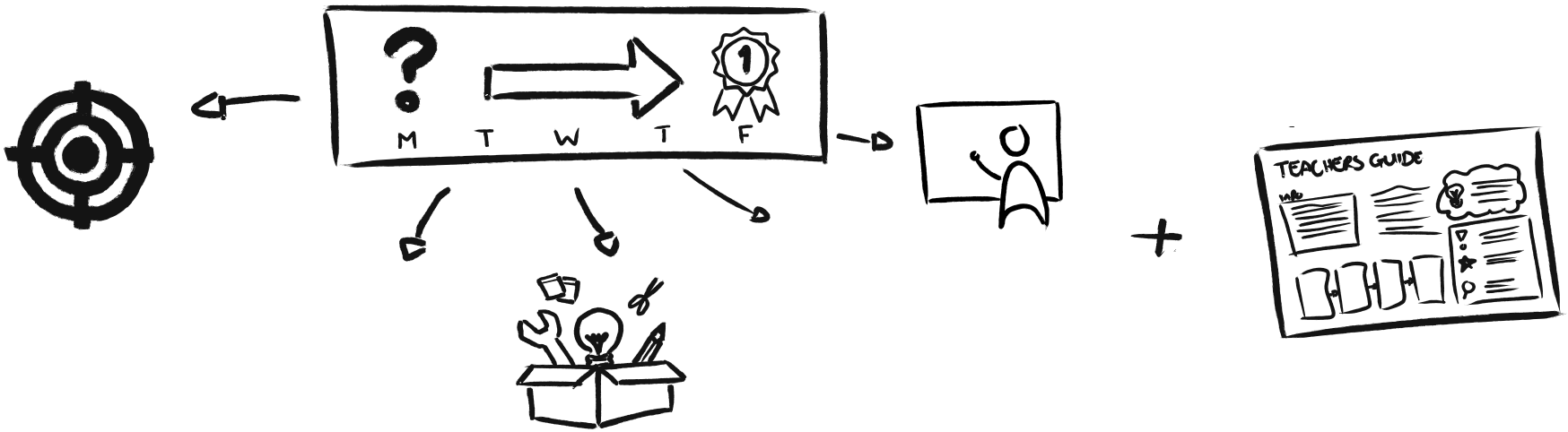
within existing courses

why

→ creating mastery moments
→ autonomy for teenagers
→ stimulates collaboration
→ interactive lessons
→ implementation ease for teachers

creativity project week

design project for 1 week



workshop that helps teenagers explore your creativity

teachers support

who

teachers

teenagers

where

schools

when

M T W T F

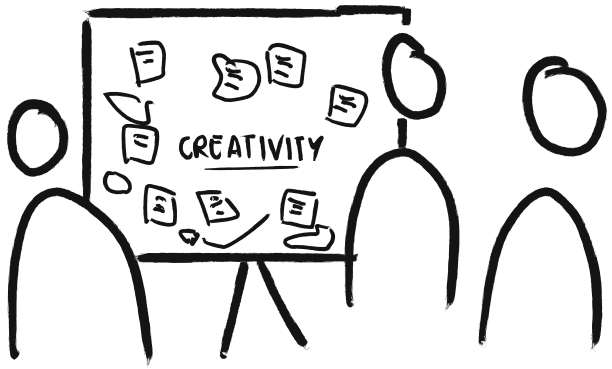
project week

why

→ creating mastery moments
→ autonomy for teenagers
→ teacher guidance
→ less time restraints

creativity workshop

discover your creativity through this game-like workshop



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workshop that helps teenagers explore your creativity

teachers support

who



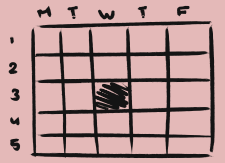
teenagers

where



schools

when



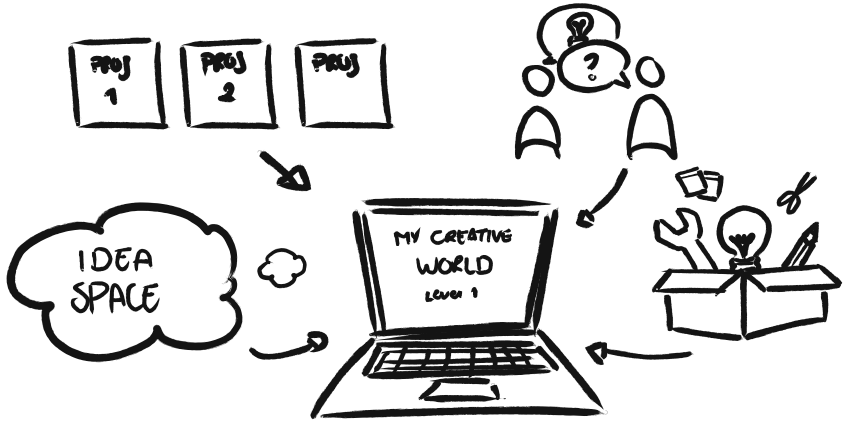
sceduled lesson

why

→ creating mastery moments
→ autonomy for teenagers
→exploring on your own terms

your creative world

discover your creativity through an interactive game



+



online platform that helps teenagers explore & develop their creativity

teachers platform

who

teachers

teenagers

where

schools

at home

when

mentor lessons

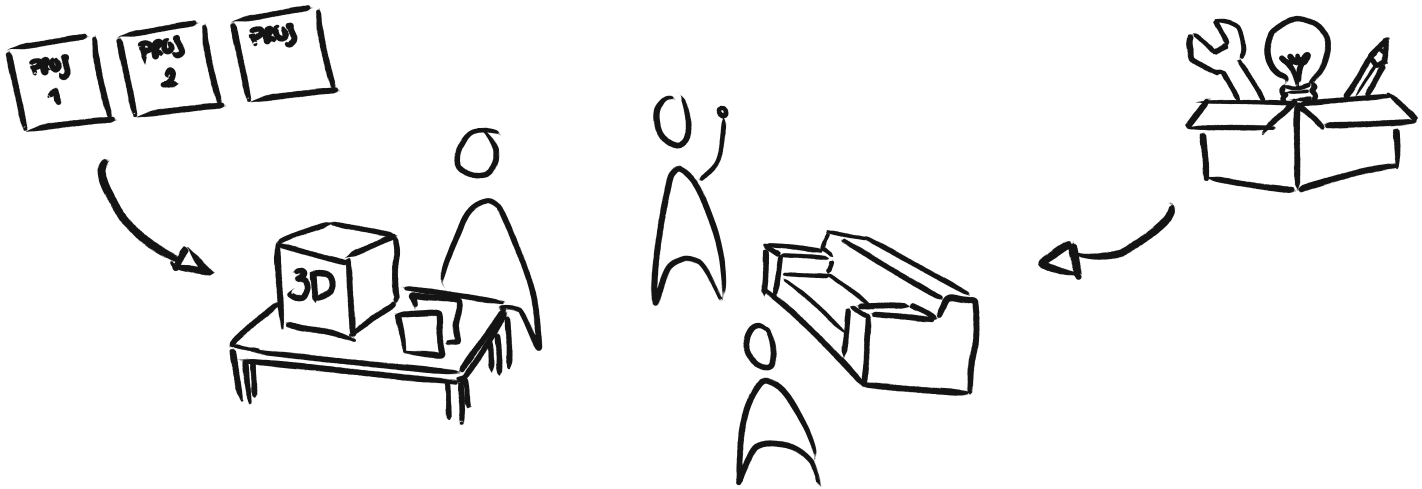
outside school hours

why

→ creating mastery moments
→ autonomy for teenagers
→exploring on your own terms (time management)
→ teacher support

after school club

discover your creativity after school



creative space to meet others and develop “real life skills” and be creative together

who



teenagers

where



creative room in schools

when



outside school hours

why

→ creating mastery moments
→ autonomy for teenagers
→ creating brave space
→ supplying tools
→ learning life skills

Expert review

Before positioning the concepts in a structured evaluation framework, they were discussed with a pedagogical expert Elise den Hartog to assess their viability in a real-school context.

The expert review provided critical insights and established several points of interest to make the intervention fit the reality of education:

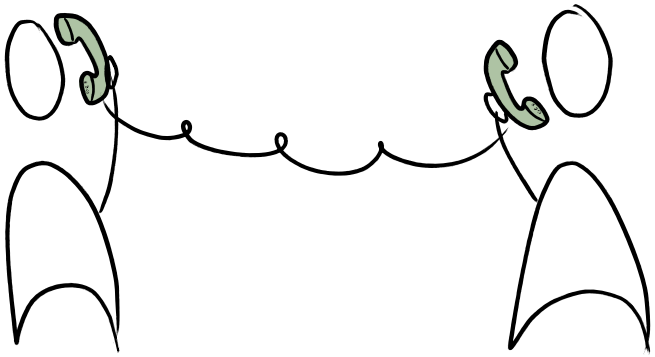


FIG 47: Visual Expert Call

MINIMIZING EXTRA WORKLOAD FOR TEACHERS

To successfully utilize the teacher as a facilitator, the intervention must should not bury the teacher with lots of extra preparation time. It should be offered as a ready-to-use package with clear themes.

MANDATORY INTEGRATION OVER VOLUNTARY PARTICIPATION

Interventions that are extra-curricular or voluntary will only attract students who are already intrinsically motivated, missing the insecure target group completely.

GRADING THE PROCESS, NOT THE PRODUCT

To foster a safe environment for experimentation, assessment should focus on the creative process and the student's creative thinking, explicitly avoiding judging the aesthetics or "looks" of the final product.

STRUCTURED CREATIVE FREEDOM

Students cannot handle complete freedom right away, they need clarity and structure. The intervention should start with clear steps, gradually offering more creative freedom as the projects progress.

DIFFERENTIATION IN CHALLENGES

To prevent every student from creating the exact same thing, the intervention could offer options or "levels," allowing students to find a challenge that fits their individual capabilities.

EMPOWERING THE TEACHER WITH THE 'WHY'

The material should clearly explain to the teacher why these creative interventions are important, empowering them to confidently and willingly guide the students.

Evaluating the concepts

The earlier phases identified that any successful intervention must solve a duel challenge: lowering the Activation threshold to make participation and entering the creative confidence loop possible while simultaneously offering a deep enough experience to trigger genuine master and reinforce the creative confidence loop.

Given the ambition to design an intervention that is not only theoretically inspiring but also practically viable, a structured decision-making process was required.

To evaluate the six concept a C-box was utilized as a qualitative decision making tool. The concepts were plotted against two axes, which come from the design requirements from the Design vision phase.

A C-box is a framework that allows the concepts to be positioned relative to each other along two key criteria. This method is often used in evaluating and comparing concepts

To ensure the practical validity of these theoretical requirements, they were cross-referenced with the insights from the expert review.

TWO AXES

The C-box has two axes, these are feasibility within the school context (lowering the activation threshold) and the depth of creative confidence impact (triggering the creative confidence loop). The next section explain these axes in more detail.

FEASIBILITY WITHIN THE SCHOOL CONTEXT.

This evaluates how easily the concept integrates into existing school structures. Linking back to tier one of the design requirements (mainly DR 2).

It considers the ease of implementation, required resources and support but also takes in account the development process of the concept. As emphasized during the expert review, a crucial condition for feasibility is that it must cost teachers no extra time or preparation.

A high position means the structural barriers for both teachers and students are successfully minimized, a low position means that the concept needs a lot of preparation, development and effort to be realized.

THE DEPTH OF CREATIVE CONFIDENCE IMPACT

This evaluates the concept's potential to facilitate true mastery experiences in order to stimulate creative confidence.

This axis links back to the concept's ability to fulfill the Tier 2 Foundational Requirements and Tier 3 Supporting Principles.

A high position means the intervention goes beyond one-time superficial engagement and provides the possibility to create a lasting shift in students' creative confidence. A low position means the intervention will likely fail to create long-lasting shifts.

By mapping the concepts on these axes, the goal was to identify the optimal design direction, showing which concept has the highest feasibility without compromising the depth required to build creative confidence.

POSITIONING THE CONCEPTS.

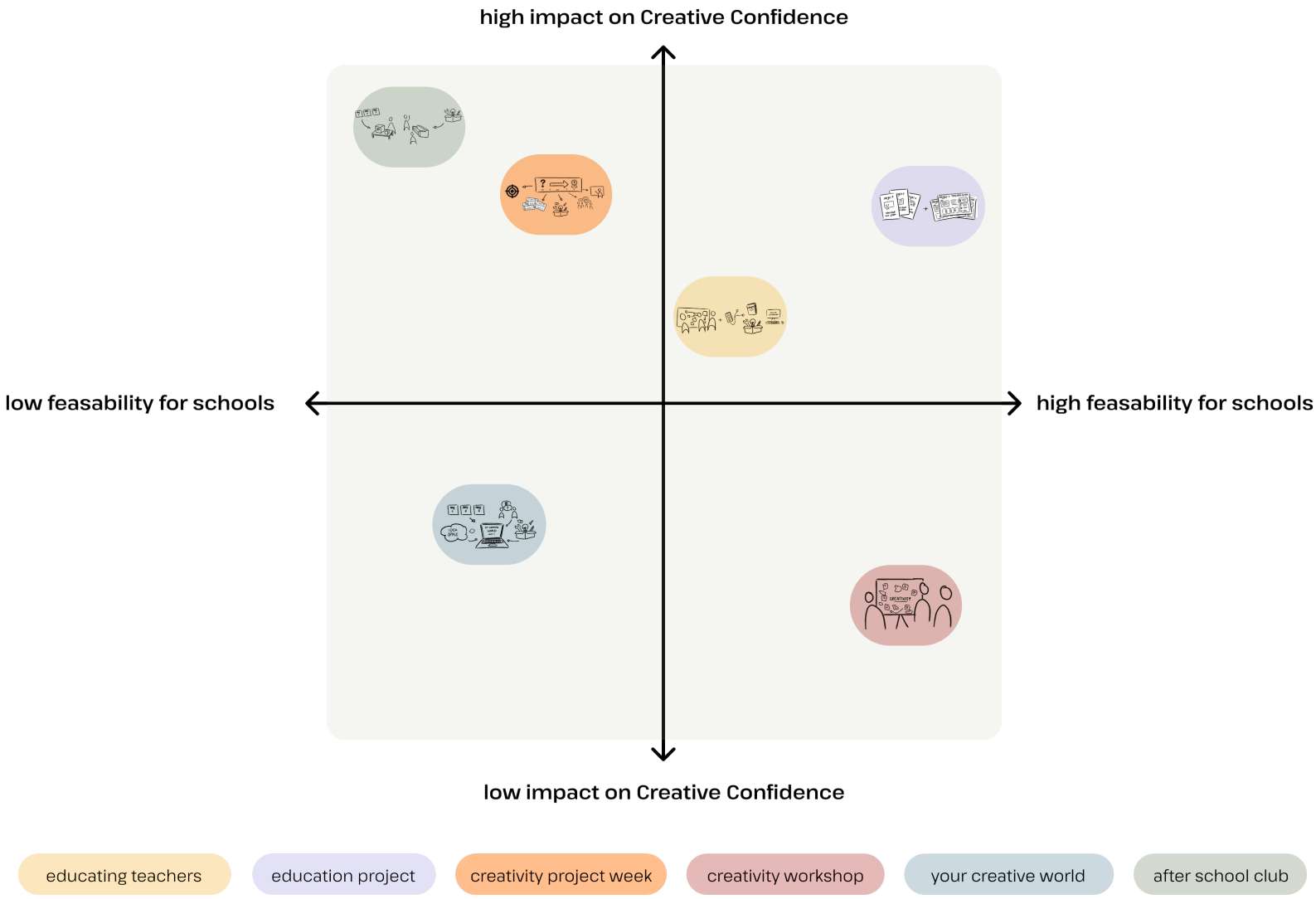


FIG 48: The 6 concepts positioned on a -Box (Feasibility vs impact on creative confidence)

EDUCATING TEACHERS

Feasibility (X-axis): Medium. Addressing the "creativity gap" among teachers aligns with professional development, but changing mindsets is an extremely complex and slow process.

Impact (Y-axis): medium high. This concept is low on direct impacts it is higher in indirect process and only influences the teenager's Activation Threshold in the very long term.

Overall Positioning: While systemically crucial, this concept serves more logically as a supporting condition rather than the primary, student-centered design solution.

EDUCATION PROJECT

Feasibility (X-axis): High. By embedding creative tasks within existing lessons, this concept aligns seamlessly with current curricula and teacher roles, requiring minimal systemic change.

Impact (Y-axis): High. It normalizes creative action and allows students to build confidence through repeated, low-threshold mastery experiences.

Overall Positioning: This is the strongest concept across both axes. It effectively lowers the structural Activation Threshold, though its success will depend heavily on well-designed guidance and structure for the teacher.

CREATIVITY PROJECT WEEK

Feasibility (X-axis): Very Low. Project weeks are logistically demanding, highly context-dependent, and difficult to integrate structurally across schools.

Impact (Y-axis): High. By disconnecting students from the standard grading system for an extended period, a powerful "brave space" is created with ample room for iteration and deep mastery experiences. However the nature of it being one-time makes the transfer of creative confidence to regular classroom practices and situations lower.

Overall Positioning: While the impact conditions are ideal, the lack of practical feasibility in daily educational practice makes this concept weaker as a primary solution.

CREATIVITY WORKSHOP:

Feasibility (X-axis): This concept easily fits within the boundaries of a single regular lesson and requires minimal preparation time or logistical adjustments from the school.

Impact (Y-axis): While a workshop can be inspiring, it only offers an isolated "success moment." It lacks the necessary repetition required to permanently activate the Creative Confidence Loop.

Overall Positioning: Highly suitable as an initial trigger or supporting intervention, but insufficient as a structural, long-term core solution.

YOUR CREATIVE WORLD

Feasibility (X-axis): Low. Despite initial flexibility, long-term development, technical maintenance, and privacy safeguards require resources that fall far outside the realistic scope of a teacher or school.

Impact (Y-axis): Medium to Low. While a digital platform offers space for reflection, it lacks the essential physical brave space and social persuasion that a physical classroom provides.

Overall Positioning: The fragile impact and unrealistic long-term requirements make this concept too weak to serve as the primary design direction.

AFTER-SCHOOL CLUB

Feasibility (X-axis): Low. Besides the need for extra resources, this concept faces a fundamental self-selection problem: due to its voluntary nature, it simply fails to reach the insecure students who need the intervention most.

Impact (Y-axis): High. It creates an ideal environment for creative identity development through voluntary participation, access to tools, and a strong sense of community.

Overall Positioning: Because the concept fails the core mission of lowering structural barriers for all students, it is rejected as a main solution.

Synthesis and concept choice

The C-box revealed that no single concept fully satisfies both high feasibility and high impact on creative confidence. While the Education Project offers the strongest and most sustainable core, relying solely on isolated projects is not enough to change a student's mindset or the school's culture.

To strengthen the Education project concept, successful elements from other concepts and the didactic principles from the expert review are integrated into the final design direction:

- Spreading projects over multiple lessons (from project week concept) Taking the immersive principles and "brave space" mentality from the Project Week concept and applying them to a longer-term, structural format within existing classes.
- Making progress and creative process visible (From online platform concept) Taking the focus on process evaluation from the Online Platform concept.

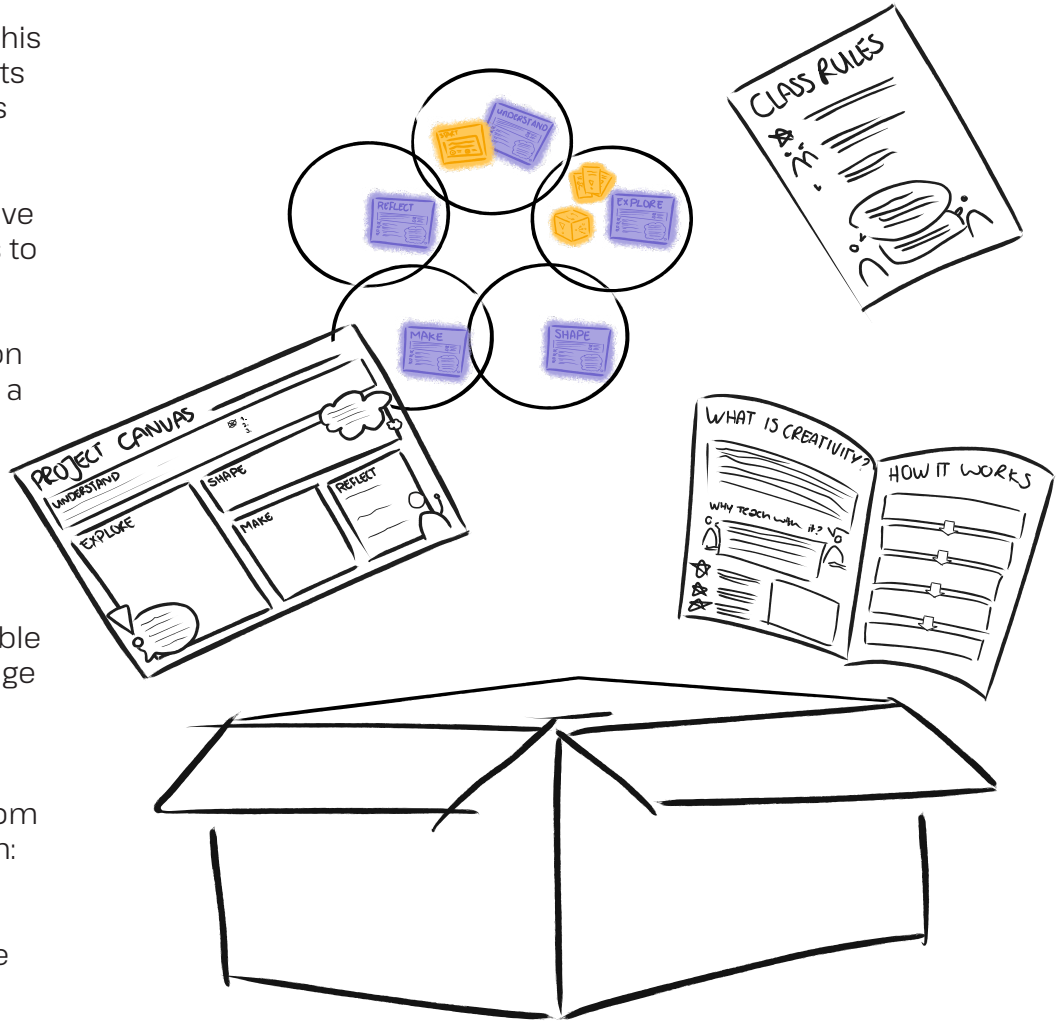


FIG 49: Final design concept

FINAL DESIGN CONCEPT

A modular creative toolkit for secondary education that helps teachers to have students engage with creativity in a low-threshold, structured way.

The intervention focuses on enabling small, achievable creative actions that build creative confidence through experience, rather than teaching creativity as a skill

The toolkit can be used for short “quick spark” lessons or longer multi-lesson projects, and is designed to fit within existing subjects, time constraints, and classroom realities

The concept guides the teenagers through 5 phases. Teachers can choose to do a quick spark 10-20 minutes or integrate it into a project that takes place over multiple lessons.

Each phase also has it’s own tools, there are tools for the teachers theat help them facilitate the avticities and for the students. This is all summarised in figure 50 below.

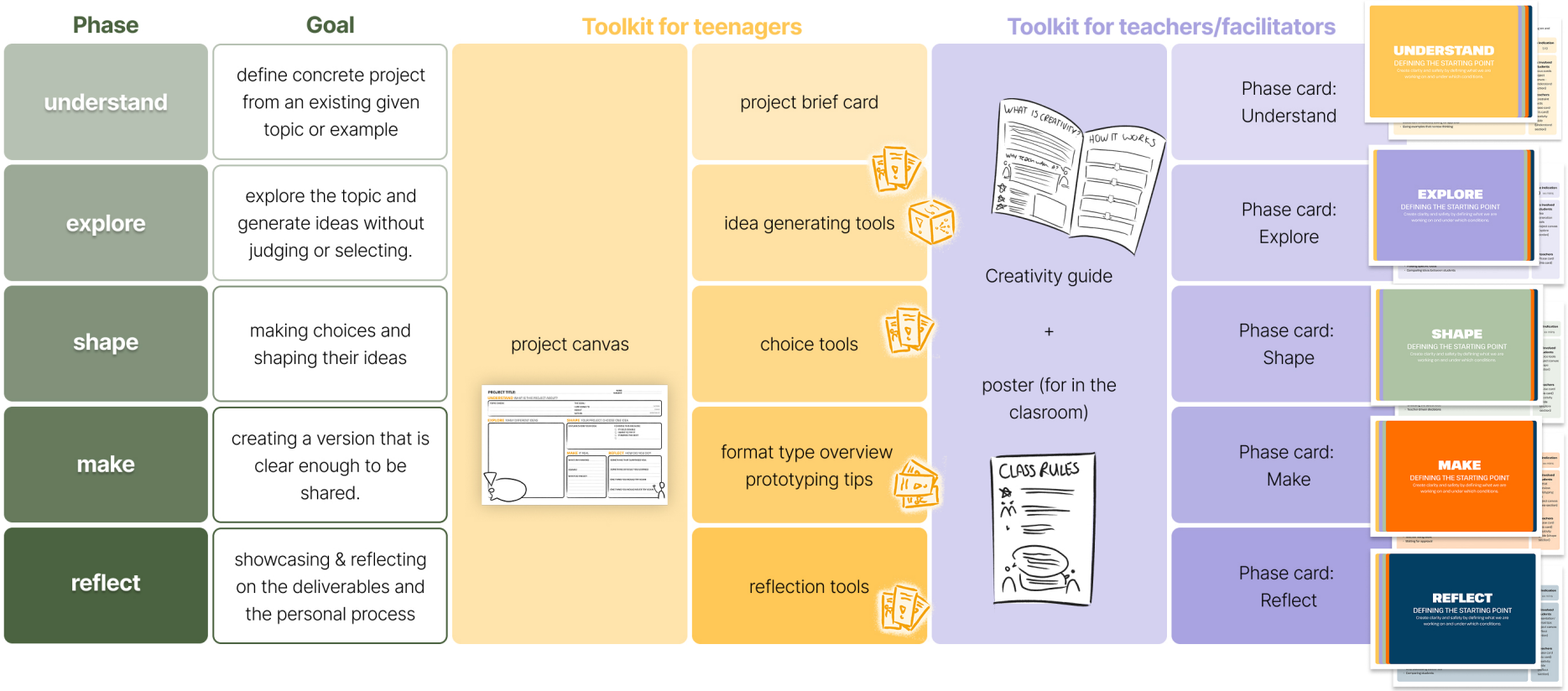


FIG 50: Overview of the final design concept

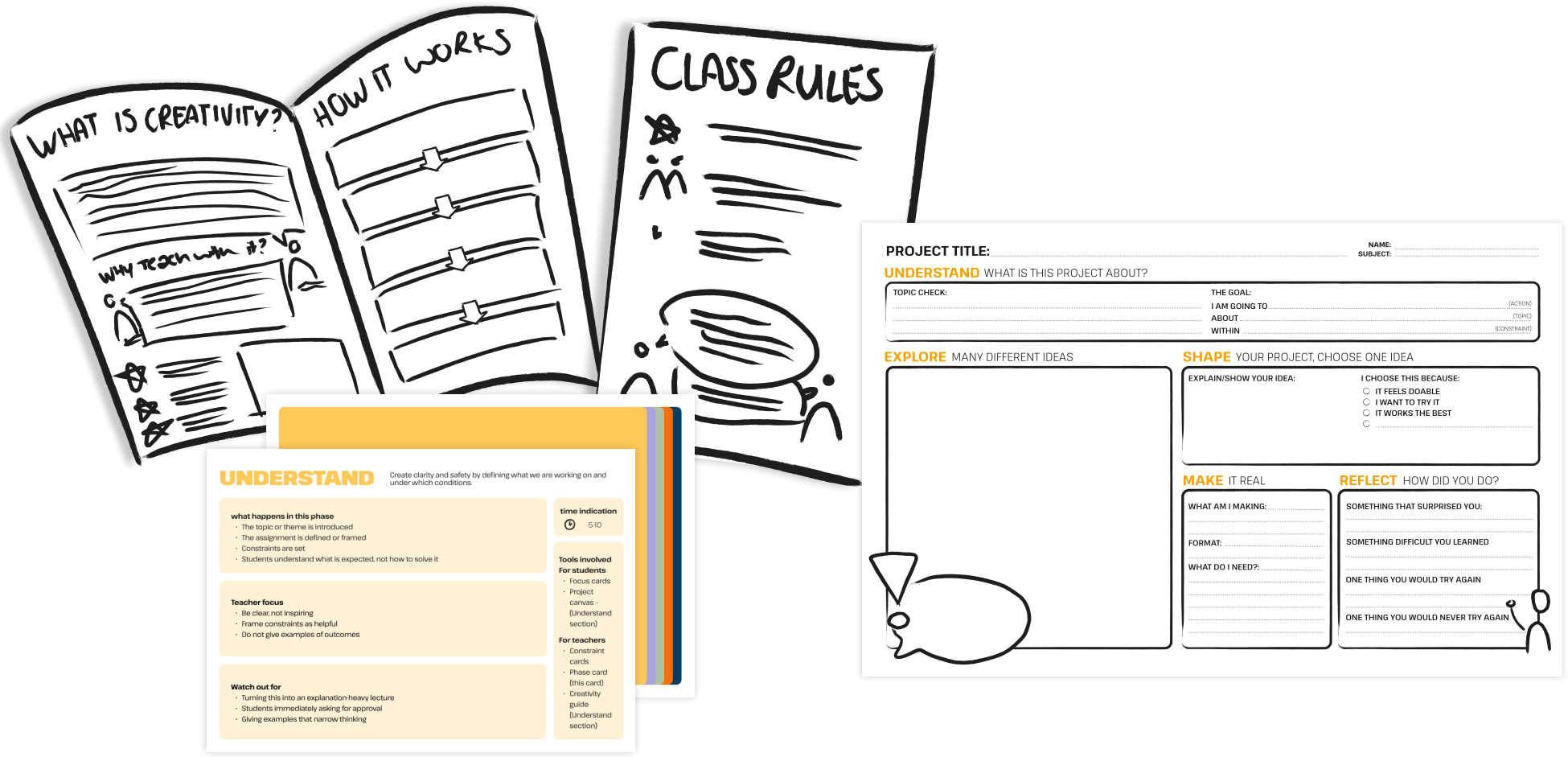


FIG 51: Visualisation of the teacher and student materials of the final design concept

TEACHER TOOLS

A comprehensive but practical guide for teachers/facilitators which contains principles of creativity and creative confidence & its importance, explanation how this system works and practical formats like feedback language and observation guides

STUDENT TOOLS

A one-page worksheet for students that summarizes and guides the entire creative process. It provides structure, encourages ownership and autonomy while making the process visible. It connects all phases and can be used in quick sparks and projects

Validating the final design concept

To ensure the initial concept truly aligned with the core goal of stimulating creative confidence, it was critically evaluated before moving into prototyping.

This validation consisted of a check against the earlier established Design Vision, combined with feedback sessions with academic supervisors.

By conducting a cognitive walkthrough (trying to evaluating the concept from both the teacher's and the student's point of view) several risks and misalignments were identified:

TEACHING DESIGN THINKING

The concept had evolved into a heavy, educational project about design thinking. It risked feeling like just another theoretical lesson rather than of facilitating opportunities for creativity.

The initial goal was to let students experience that they can be creative, not strictly teach them the theory behind it.

FEASIBILITY AND TEACHER OVERLOAD

The 5-phase structure was too complex to implement seamlessly in everyday teaching. It relies heavily on the teacher's intrinsic motivation to understand and facilitate the process.

This directly violated the core requirement of requiring 'no extra workload' and seems unrealistic for teachers who are already under time pressure.

LACK OF FOCUS

By trying to be a comprehensive solution for all types of courses, teachers, and students simultaneously, the concept became too broad. It missed the targeted, low-threshold moments needed to actually trigger the creative confidence loop. Without focus it also misses relevance for teachers to start working with it.

The pivot: From a single tool to a systemic framework

The identified risks triggered a fundamental redesign. It became clear that a single intervention, no matter how well-designed, is not enough to structurally build creative confidence. I

t might provide a temporary spark of creativity, but it also creates a huge workload for teachers and fails to deliver the systemic change needed to truly provide a creative confidence loop.

Fostering creative confidence is a multi-layered challenge that cannot be solved with a single touchpoint. It requires structural change and continuous support across multiple levels of the school ecosystem.

Therefore, the concept of a single, overarching educational project was abandoned. Instead, the final design evolved into a strategic framework: a multi-level ecosystem of different, interventions that can be scaled, adapted, and seamlessly integrated into existing classes.

This architecture ensures that creativity is not taught as a heavy subject, but experienced as a natural part of the learning environment.

It provides schools with a solid systemic foundation to support this, all without adding too much to the teacher's workload. How this strategic framework is structured and applied in practice will be introduced in the next chapter as Ignite.

Final Design

With the creative directions explored and narrowed down during the Ideation phase, it was time to build something real. This chapter introduces the final Ignite framework shifting the focus from rough concepts to a fully tangible platform, ready to be put to the ultimate test in the classroom.

IGNITE

The Explore and Design Vision phases revealed a critical misalignment in secondary education: creative confidence grows through taking action and experiencing small successes called mastery moments, a mechanism defined as the Creative Confidence Loop.

However, the traditional school system often stacks the deck with structural blockers such as performance pressure, rigid schedules, and a lack of autonomy. These external factors together with internal and social factors create an Activation Threshold that is simply too high for hesitant teenagers to cross.

We must stop teaching creativity as a high-stakes, evaluative skill. Instead, we should lower the Activation Threshold by making the first step into a creative activity feel safe, effortless, and playful, allowing students to naturally step into the Creative Confidence Loop.

To be able to accomplish this, we have seen that the final design cannot be a single, isolated lesson or a standalone educational tool. Stimulating creative confidence is a multi-layered challenge that requires continuous, structural support.

Throughout the whole project I have already seen small sparks of creativity and enthousiasm from teenagers. If one Exploring Creativity session can already so much, imagine what a complete set of activities can do!

Ignite, is a strategic, multi-level framework designed to help integrate creativity into the existing Dutch high school context. Aiming to Ignite the fire of creativity!

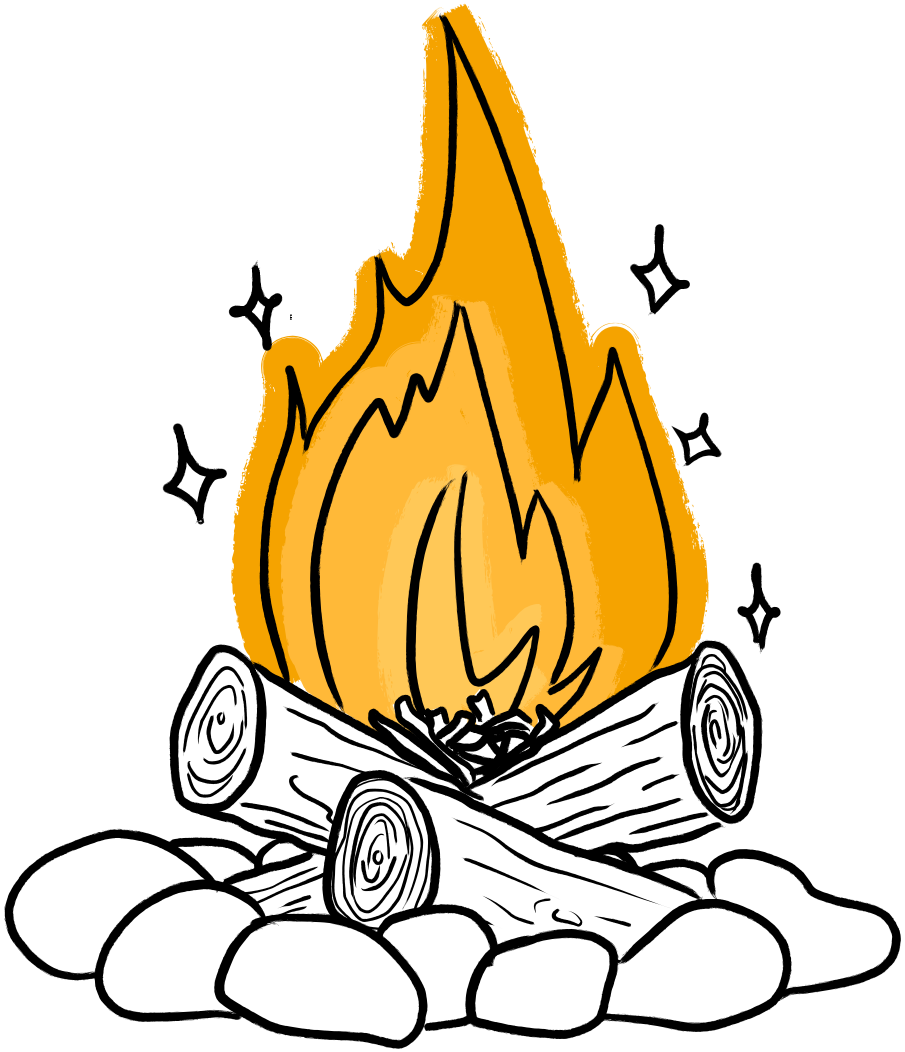


FIG 52: The Ignite Metaphor

A TWO LAYERED FRAMEWORK

Ignite operates as a system that consists of two connected layers: **The systemic foundation** and **the student experience layer.** Because initiatives in the classroom can fade away if they rely purely on the motivation of individual teachers, it is necessary to have this dual approach.

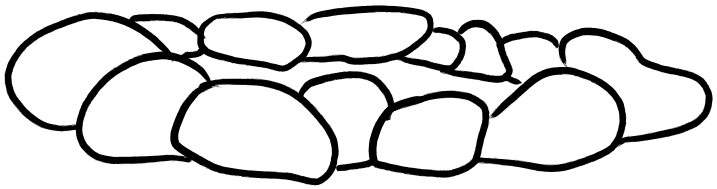
Stimulating creative confidence and growth is only possible if the educational environment actively facilitates and fosters it.

The systemic foundation

The systemic foundation, conceptualized as The Fire Pit, is the foundation of the framework. Creative interventions cannot survive without a shared vision, dedicated time, and support from school leadership.

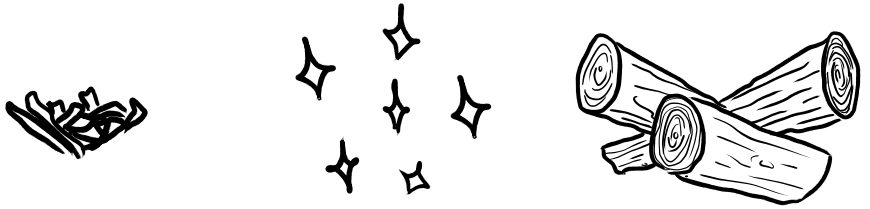
The system itself must adapt to make creativity the "new normal" in school culture, ensuring a student's creative confidence is not built in one class only to be undermined in another.

The systemic foundation gives school boards and teachers the tools to focus on creating a "Creative mindset" within the school where a brave space is maintained across different subjects and years.



THE FIRE PIT

FIG 53: The Systemic Foundation



KICKSTART **CREATIVE SPARKS** **FUEL THE FIRE**

FIG 54: The Student Exprience

The student experience

Built upon this systemic foundation is the student experience layer, which contains the tangible elements directly experienced by the teenagers and facilitated by the teachers.

Because creative confidence is built gradually, these elements do not function as a strict linear process, but rather as a continuous learning line throughout the student's school career.

This layer consists of three key elements that start the process and continuously feed the student's Creative Confidence Loop:

- The Kickstart (Entering the Creative confidence loop)
  A targeted intervention to redefine creativity and reset limiting assumptions before actual creative development begins.
- The Creative Sparks (Feeding the Creative confidence loop)
  Short, re-occurring, micro-mastery moments seamlessly integrated into regular subjects.
- Fuel The Fire (Feeding the Creative confidence loop)
  A dedicated, periodic project week where students are given the autonomy to take ownership of a larger creative process.

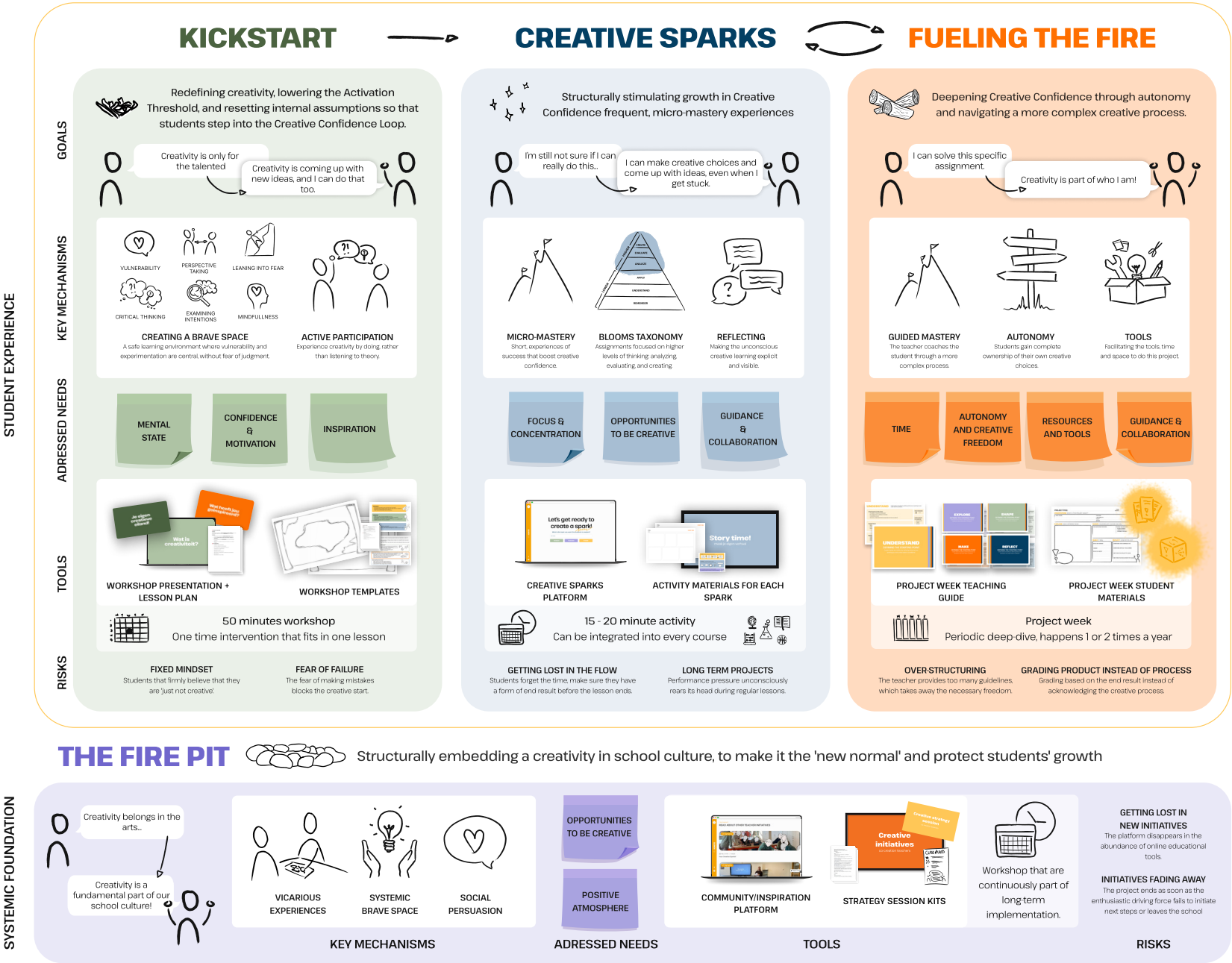


FIG 55: The Ignite Framework

The following sections will provide a deep dive into each of these elements, explaining how their specific design works to lower the Activation Threshold and stimulate creative confidence for both the student and the teacher.

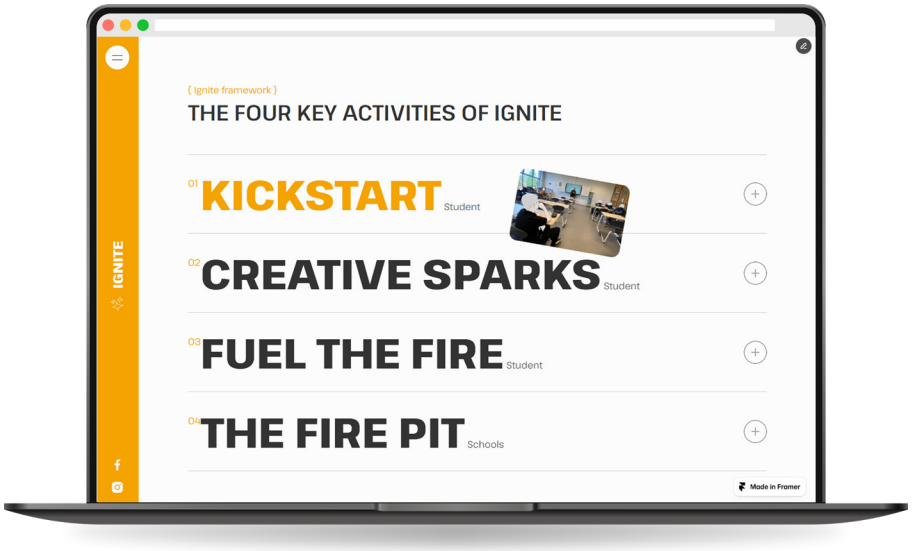
THE IGNITE PLATFORM

To make this systemic framework accessible and actionable, Ignite is realized as a central digital platform.
Rather than being just a repository of documents, the website serves as the educational hub for both school boards and teachers.

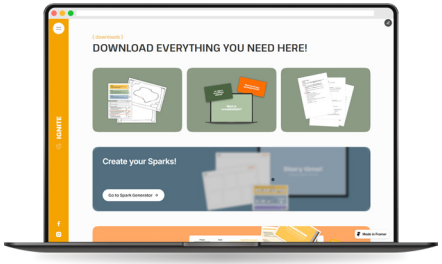
It provides the theoretical foundation on what creative confidence is and why it matters in education, explains the different layers of the framework, and most importantly, serves as the central access point to download all the necessary tools and materials for each specific phase.



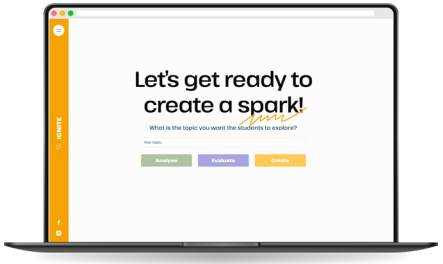
FIG 56: Visual overview of the Ignite website and QR Code



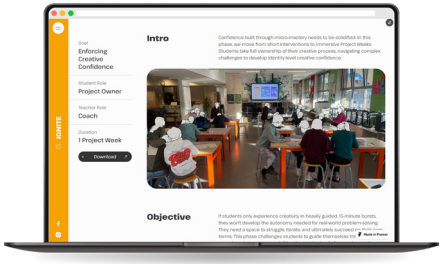
IGNITE EXPLAINED



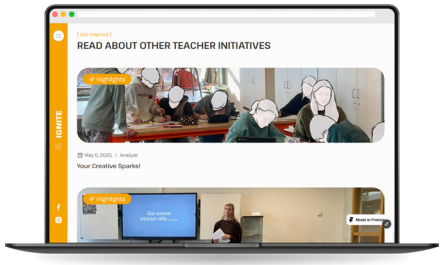
QUICK ACCES TO TOOLS



CREATING SPARKS



THE PHASES EXPLAINED



COMMUNITY PAGE

The Kickstart

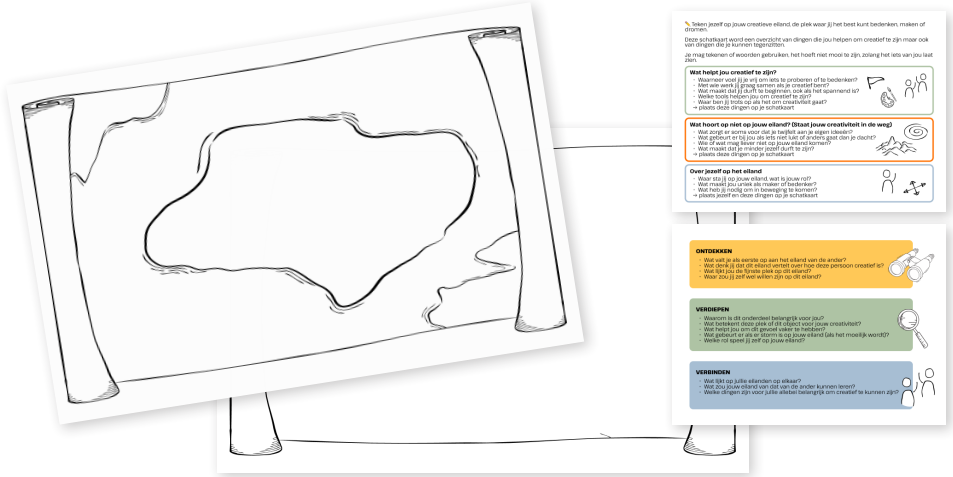
The first element within the student layer is designed to uncover the initial psychological barriers teenagers face regarding their own capabilities and creativity. As the Explore phase revealed, teenagers can have a fixed mindset about their creativity, and often associate it with artistic talents. This misconception raises their Activation threshold. To counter this, The Kickstart provides teachers with a ready-to-use interactive workshop (that does not require any training) to actively reframe the concept of creativity within the classroom.

This workshop is based on the Exploring Creativity workshop from the explore phase. The design of this workshop is based on the 'Exploring Creativity' sessions conducted during the Explore phase. Because these sessions were received very positively with students expressing that they experienced moments of insight, pride, and a renewed awareness of their own creativity. This positive reception strongly suggests that the workshop format effectively opens teenagers up to new perspectives.

The Kickstart workshop draws on the principles of creating a 'Brave Space' the workshop shifts the focus from "making art" to "generating unique and useful ideas".

By openly discussing what enables and blocks their creative flow, students reset their assumptions. For the student, this lowers the barrier to try, allowing them to realize that creativity also applies to them.

For the teacher, it establishes a shared vocabulary and a safe classroom dynamic, which is crucial for the creative activities that will follow with the Creative sparks and Project week.



WORKSHOP TEMPLATES



WORKSHOP PRESENTATION + FACILITATION GUIDE

FIG 57: The kickstart

The Creative Sparks

Creative Sparks form the continuous engine of the Ignite framework. Building on Bandura's (1977, 1995) theory that self-efficacy is primarily strengthened by mastery experiences, these "Sparks" are short, 15-to-20-minute creative activities integrated directly into regular subject lessons.

Creative Sparks are designed to be cross-curricular, seamlessly integrating into any existing subject, from mathematics to history. By embedding creative activities into everyday lessons, creativity is reframed from an isolated artistic talent into a universal problem-solving way of thinking.

Creative Sparks is also designed to solve a dual challenge in secondary education by bridging the "Creativity Gap" for teachers. Teachers often lack the time and personal confidence to invent creative exercises from scratch.

The Ignite platform functions as a filter, providing plug-and-play activities that minimize preparation time and provide clear facilitation structures.

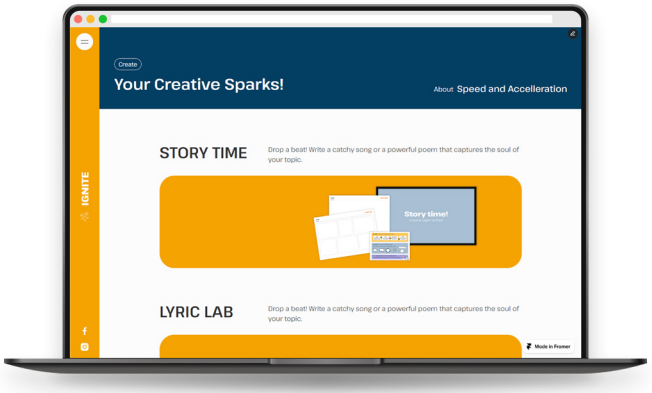


FIG 58: Creative sparks on the Ignite website

To make sure that the Creative spark activities also hold didactic value and remain relevant to the curriculum, the activities are categorized using the top three tiers of Bloom's Taxonomy (Krathwohl, 2002):

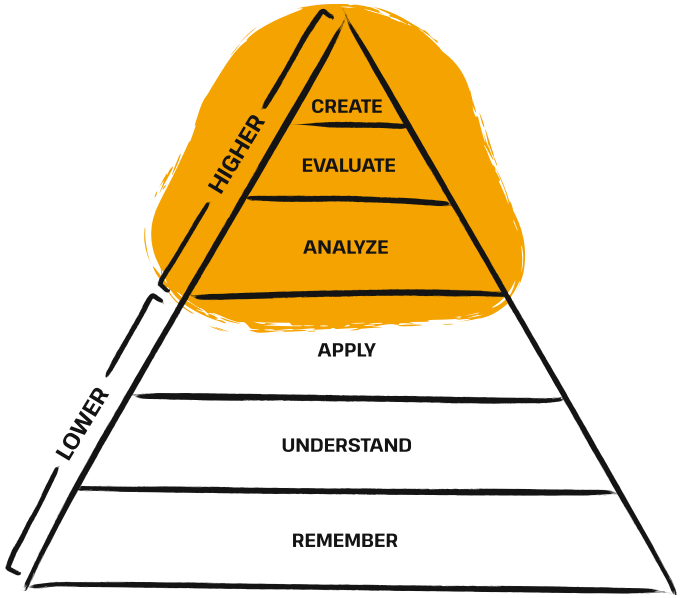


FIG 59: Blooms Taxonomy (Krathwohl, 2002)

- Analyzing: Breaking down curriculum content into component parts to explore relationships.
- Evaluating: Making judgments based on criteria and standards through creative critique.
- Creating: Reorganizing elements into a new pattern or structure

By providing Creative Sparks in these three categories, the tool ensures that students aren't just "playing," but are deepening their understanding of the lesson material. They also allow teachers to match the activities to the student's confidence levels and the context and goal of the lesson.

HOW IT WORKS

A Creative Spark consists of three phases, designed to minimize teacher workload while maximizing student impact

1. PREPARATION

While preparing their lesson, teachers use the platform to select one of the categories Analyze, Evaluate or Create that fits their lesson context.

The platform suggests just three “Sparks” to prevent choice overload. It immediately provides all supporting materials, such as ready-to-use presentations, templates, and facilitation guides.

2. THE CREATIVE SPARK

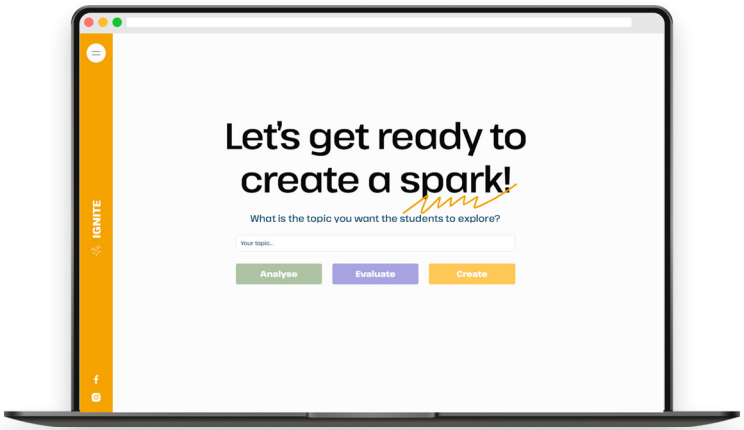
The teacher introduces the activity and student get to work, exploring creativity within the boundaries of the subject matter.

3. REFLECTION

Mastery experiences only build confidence when students consciously recognize their own success. Each Spark concludes with a short reflection question.

Asking students what worked, what surprised them, or how they overcame getting stuck makes the implicit process explicit, actively reinforcing their Creative Confidence Loop.

For the student, these recurring creative moments provide low-stakes opportunities to take creative risks without the fear of grades or failure. By regularly experiencing small successes and reflecting on their process, students gradually build creative self-efficacy, transforming the intimidating concept of ‘being creative’ into an accessible, everyday habit.



CREATIVE SPARKS PLATFORM



MATERIALS FOR THE STORYTIME SPARK

FIG 60: The Creative sparks

Fueling the Fire

While Creative Sparks successfully initiate the belief that students can tackle creative tasks, developing a deep-rooted, identity-level creative self-concept requires sustained autonomy and the ability to navigate complex challenges. Fueling the Fire is a periodic Project Week designed to facilitate this deep dive.

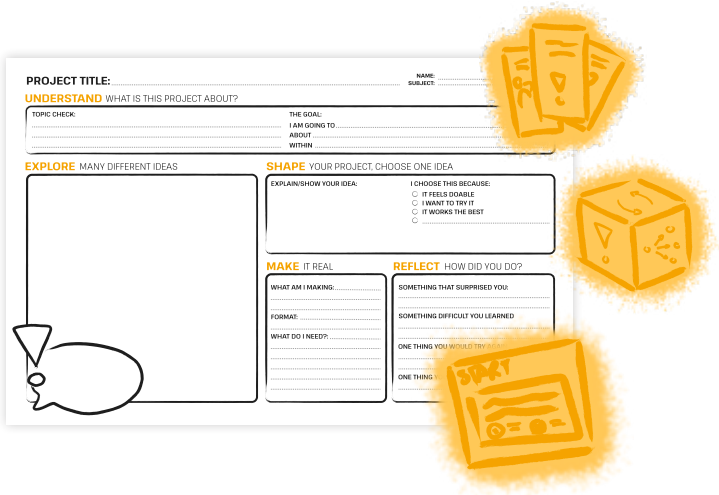
During this week, the traditional educational dynamic shifts: the rigid grading system is temporarily suspended, and the teacher transitions from an instructor to a guiding coach. Students are guided through a structured five-phase design process (Understand, Explore, Shape, Make, Reflect) which provides enough psychological safety to prevent them from becoming overwhelmed, while offering complete autonomy over their creative choices.

This extended period of guided mastery allows students to fully own a project from ideation to realization, providing the substantial mastery experiences needed to solidify their creative confidence. The platform outlines the structure for teachers to facilitate and guide this project week and also allows for building in an overarching project week theme.

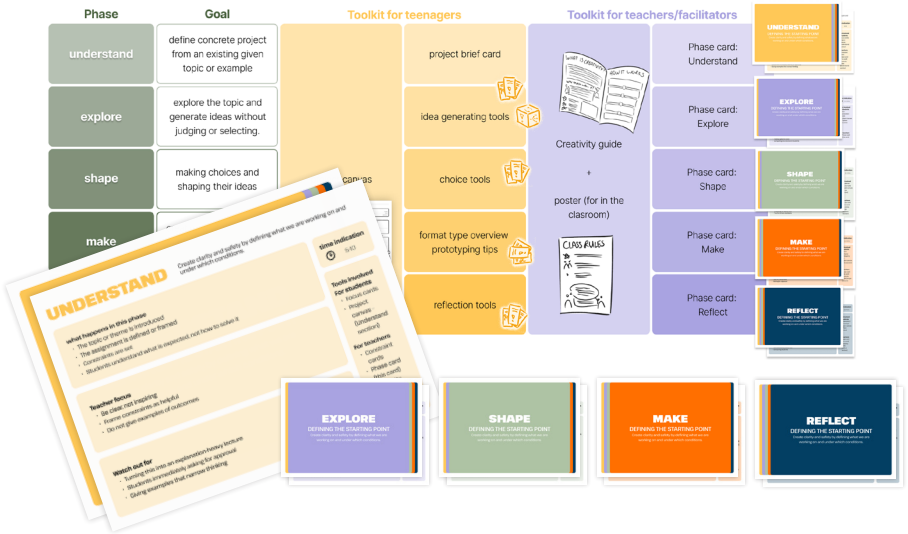
Fueling the fire originates from the initial, final design concept generated during the ideation phase.

While its five-phase pedagogical structure is grounded in research findings, fully detailing all the materials and conducting a full-scale practical validation falls beyond the scope of this graduation project.

This is why Fueling the fire is presented as a conceptual direction for future development.



STUDENT MATERIALS



PROJECT WEEK TEACHING GUIDE

FIG 61: The Creative sparks

The Fire Pit

Ultimately, a student's fragile creative confidence will fade if it is undermined by conflicting approaches in other classes, or if initiatives disappear when an enthusiastic teacher leaves. The Fire Pit addresses the systemic foundation needed to maintain a "Creative mindset" across the entire school.

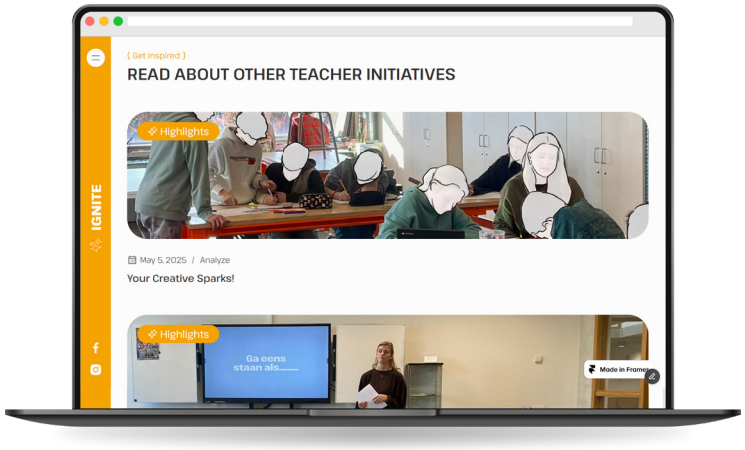
Instead of dictating rigid protocols, this phase offers strategic tools for school leaders and teaching teams through the Ignite platform. This includes workshop materials that enable teachers to come up with new creative initiatives, but also educational 'tips and tricks' to train teachers themselves in confidently facilitating creativity.

To encourage a sustainable learning community, The Fire Pit also proposes a 'community' space on the platform where schools and teachers can share successful ideas and best practices with each other.

Finally, it includes facilitation materials for co-creation sessions to help teaching teams evaluate how creativity is structurally incorporated and maintained in the evolving curriculum.

The development of all of the materials needs time and resources that go beyond the scope of a single graduation project, therefore The Fire Pit is presented as a strategic vision and conceptual direction.

The proposed ideas and materials are not fully developed or tested. They purely illustrate the initiatives needed for schools to ensure that creativity transforms from an single activity into a fundamental pillar of school culture.



COMMUNITY/INSPIRATION PLATFORM



STRATEGY SESSION KITS

FIG 62: The Fire Pit

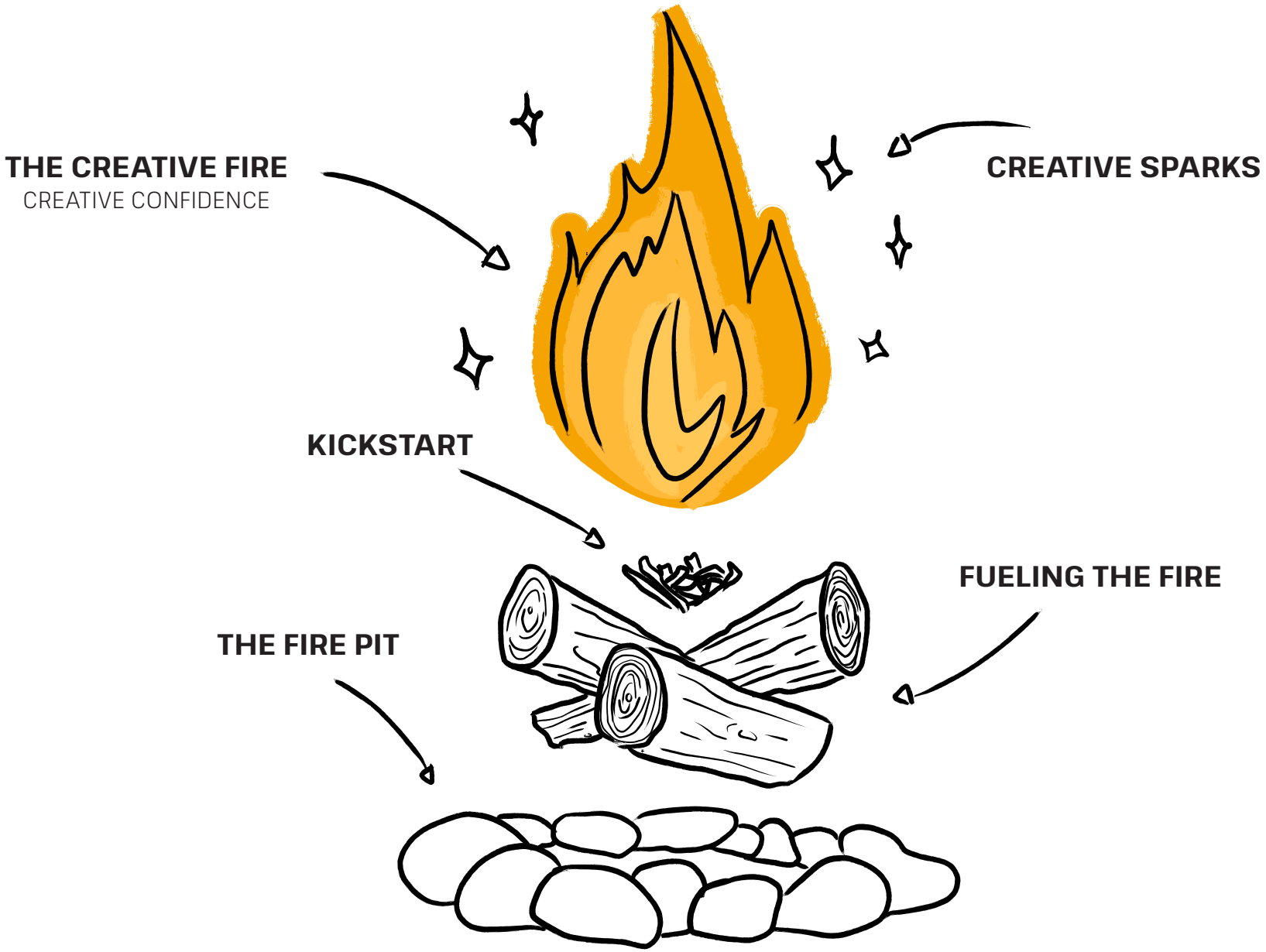


FIG 63: The Ignite metaphor detailled

Validation

With the Ignite framework fully developed in the Final Design phase, the Validation phase shifts the focus from building the solution to testing its actual impact. It was time to take the design into the classroom, answering the most important question: does it work in the real world?

THE VALIDATION SESSIONS

Aim of the session

The goal of this validation was to evaluate the part of the Ignite framework, the Creative Sparks, in a real-life school setting and evaluated with teachers.

This Creative Sparks activity was chosen as the only focus of the validation session because it functions as the continuous engine of the entire framework. Testing whether these short, cross-curricular micro-interventions can successfully lower the Activation Threshold during regular 50-minute lessons.

The validation was done with students from two high school classes and evaluated with their teachers. To check if the Creative Sparks activity met the design requirements for the student experience, and to evaluate the practical feasibility and facilitation needs with the teachers.
The design requirements were translated into the following concrete validation questions:

1. **Does the Creative Spark effectively support student autonomy, making them feel in charge of their own creative choices?**
2. **Is the Creative Spark practically feasible within typical school constraints, such as strict 50-minute lesson limits and minimal resources?**
3. **Does the Creative Spark enable quick, achievable creative actions that create small mastery experiences for the students?**
4. **Is the Creative Spark intuitive and non-threatening enough to immediately lower the barrier to start without hesitation?**
5. **Does the Creative Spark succeed in creating a temporary 'brave space' where experimentation feels safe and the pressure of grading is removed?**
6. **Is the Creative Spark easy to understand and "plug-and-play" for teachers, without requiring extensive preparation time or personal creative expertise?**
7. **Does the Creative Spark support reflection on the creative process?**

Method

PARTICIPANTS

The validation sessions were conducted with two groups of teenagers from two different Dutch secondary schools, the Driestar and The CLD. A total of 42 students, aged 12 to 14, participated in the sessions.

These students have previously participated in the Exploring Creativity session. This ensures a baseline understanding of creativity and recreated a real life implementation of the Ignite framework.

CONTEXT LOCATION AND TIMING

To accurately test the feasibility of the Creative Sparks within standard educational constraints (VQ5), the sessions were

embedded directly into regular scheduled lessons. This meant two different timelines in collaboration with the teachers.

For the session with the CLD we had a total of 50 minutes and the Creative Spark was embedded into Onderzoek&Ontwerpen (Research&Design course).

At the Driestar the Creative Spark was tested in a physics course, for this session we had a total of 80 minutes of which 40 were dedicated to testing the spark.

Both of these session plannings are shown in figure 64 below.

FACILITATION

During these validation sessions, the I acted as the primary facilitator of the Creative Spark. Because the tool was still in a prototype phase, this researcher-led approach ensured the activity was delivered as intended, while allowing the regular classroom teachers to take on the role of active observers. Enabling them to closely monitor their students' engagement and reactions without the cognitive load of facilitating a new method. Immediately following the sessions, the practical feasibility, "plug-and-play" nature, and future facilitation needs (VQ6) were evaluated through semi-structured discussions with these observing teachers.

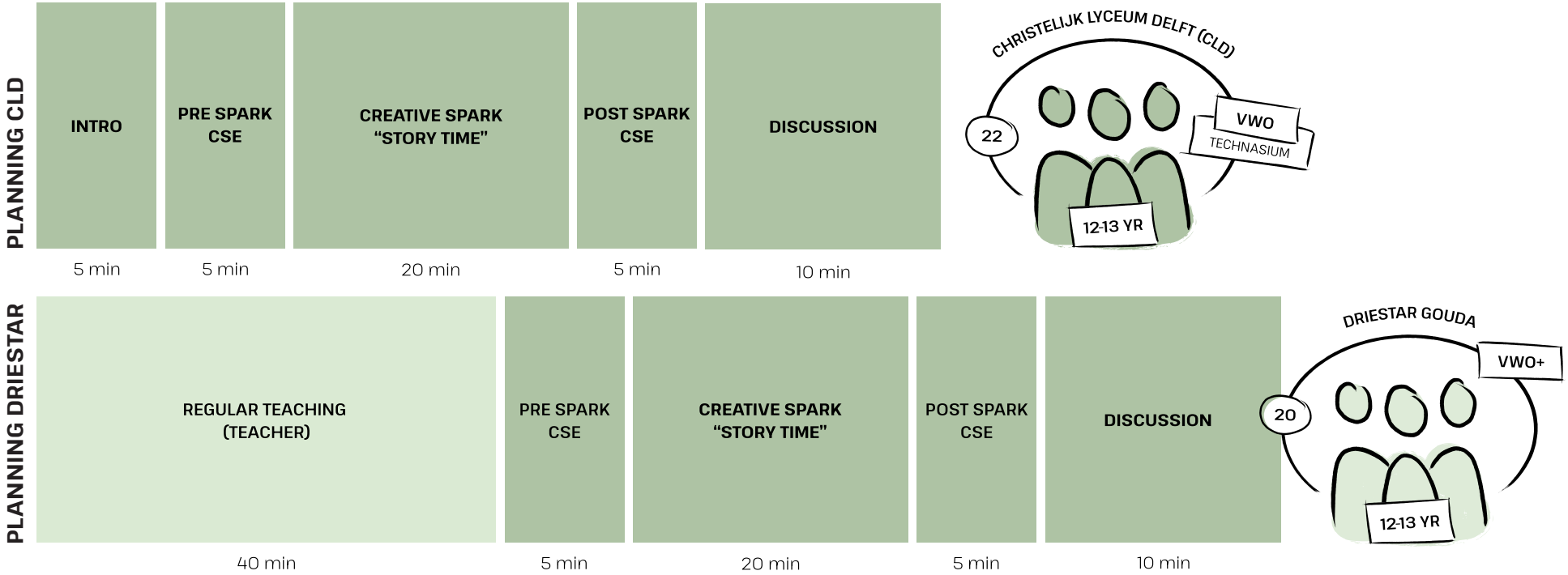


FIG 64: Schedule Validation session

SESSION SET-UP

Within the validation session there were 4 core activities. Like the previous session this session also started with a brief introduction and explanation of this lesson and the ground rules to create a brave space.

PRE-SPARK CSE QUESTIONNAIRE

Students filled in the 5-item CSE questionaire to establish their baseline creative confidence before the activity. This questionnaire was an iterated, shortened version of the one used during the Explore phase. It was refined based on previous feedback to just five core questions to fit the tight schedule of a regular lesson.

These questions measured the students' perceived confidence in their ideation fluency, flexibility, autonomy, persistence, and their overall creative self-image. Full CSE form can be found in appendix H

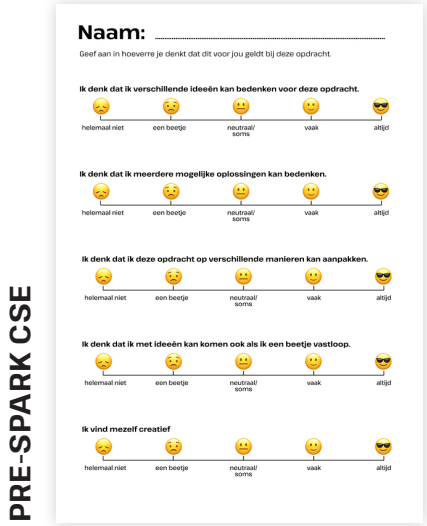


FIG 65: pre-spark CSE questionnaire

THE CREATIVE SPARK "STORY TIME"

Students worked on the "Story Time" comic assignment. In this activity, students were tasked with creating a comic strip about the theoretical topic they were currently studying.

For the CLD this was: Make a comic about how you are going to discover the truth about the use of organic waste bins among residents of Delft city center.

And for the Physics class at the Driestar this meant: Make a comic that explains the concept of speed.

To support autonomy (VQ3), students could choose to use provided templates or draw completely freehand, and were given a toolkit with tips and tricks.

The Creative Spark ended with a reflection question:
What surprised you most during this assignment?

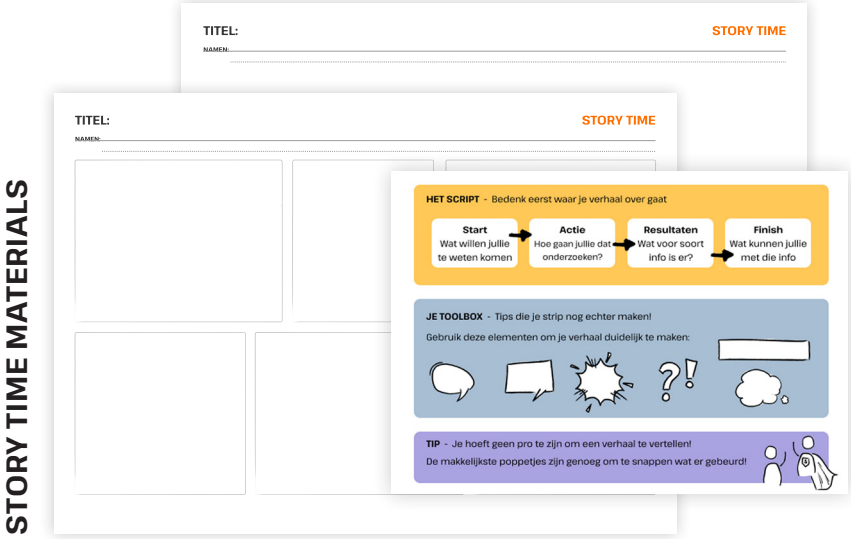


FIG 66: Story time materials

POST-SPARK CSE QUESTIONNAIRE

Students completed the post-activity checklist. This form contained the exact same five CSE questions formulated in the past tense to measure immediate shifts in confidence. Additionally, it included a few open-ended questions about how they experienced the activity to gather qualitative insights.

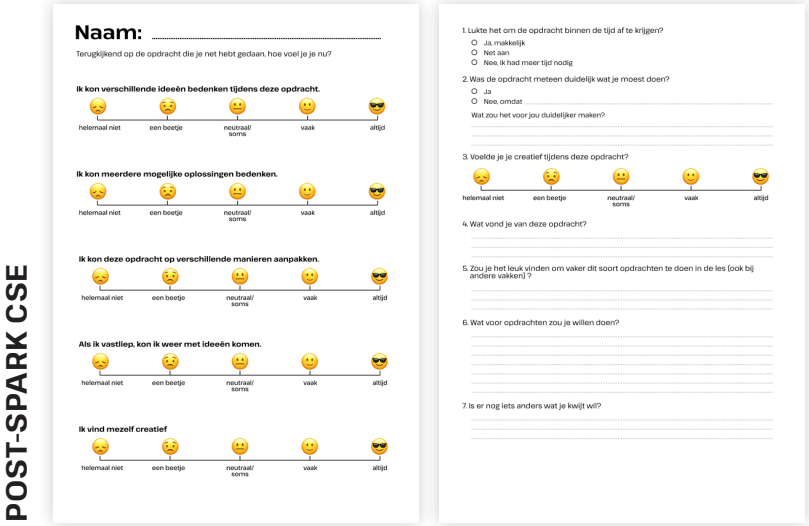


FIG 67: Post-spark CSE questionnaire

PLENARY REFLECTION

The session concluded with a plenary group discussion to reflect on the creative process, what worked, and what other activities they would like to do in the future.

DATA COLLECTION

The following data was collected:

- Pre- and post-activity CSE questionnaire scores (quantitative)
- Open-ended student responses from the post-activity forms (qualitative)
- Photographs of Story time comics
- Post-its from the reflection question in the Storytime activity
- Observational notes from the plenary reflections (qualitative)
- Field notes from informal, unstructured teacher interviews (qualitative)
- Photographs from the session

All outputs were anonymized before analysis.

DATA ANALYSIS

To evaluate the Creative Sparks activity against the validation questions (VQ1-VQ6), the collected data was analyzed using a mixed-methods approach, combining both statistical and thematic analysis.

QUANTITATIVE ANALYSIS

The numerical data gathered from the pre- and post-activity CSE questionnaires (N=42) was analyzed using inferential statistics. A Paired Samples T-Test was conducted to determine the statistical significance of changes in the students' overall creative self-efficacy and specific resilience metrics before and after the Creative Spark.
Additionally, a frequency analysis was performed to visualize shifts in confidence distributions

To verify the tool's scalability and consistency across different educational contexts, an Independent Samples T-Test was used to compare the post-activity mean scores between the two participating schools.

QUALITATIVE ANALYSIS

The qualitative data, consisting of the open-ended student responses, observational notes from the plenary reflections, and insights from the semi-structured teacher interviews, was analyzed using a thematic clustering approach.

The raw responses were reviewed, coded, and grouped into recurring themes (such as perceived time constraints, experienced autonomy, and barriers to teacher facilitation). These emerging themes were then cross-referenced with the validation questions to provide a nuanced understanding of how and why the design met (or missed) the design requirements.

Results

OVERALL IMPACT ON CREATIVE CONFIDENCE

The statistical analysis of the pre- and post- spark CSE questionnaires confirmed that the Creative Sparks intervention had a measurable and positive impact on the students.

A Paired Samples T-Test showed a statistically significant increase in the students' overall creative self-beliefs, with the mean score rising from a **pre-activity average of 3.69** out of 5 (SD=0.47) to a **post-activity average of 3.92** (SD=0.52) (p=.009).

Standard Deviation, SD indicates the average spread of scores around the mean. And if you are wondering what a significance (p) of less than 0.05 means? It's a statistical „believability score." It means there is less than a 5% chance our results are just a random coincidence. It gives us the green light to say that the Creative Sparks caused a real shift in the students' mindset.

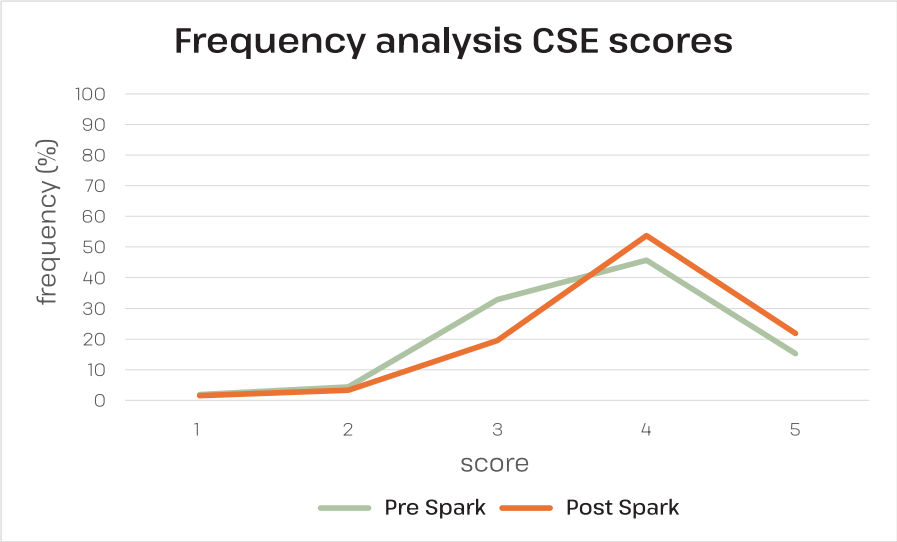


FIG 68: Frequency analysis of CSE scores pre- and post-spark

A frequency analysis revealed that the intervention was effective in shifting the students from a more neutral position towards a more confident self-assessment.

The percentage of students scoring in the "high confidence" range (scores 4 and 5) increased from 60.9% to 75.7% while the "neutral" range (score 3) has a decrease of 12.4%.
This suggests that the design was successful in stimulating creative confidence in students that were still undecided about their creative abilities.

SCHOOL COMPARISON

The Creative Sparks was tested at two schools in different course settings. An independent t-test revealed no significant difference between the two groups (p=0.749). This suggests that the design is effective across different educational contexts.



FIG 69: Some Results of the comics created in the Creative Spark

A NUANCED SHIFT IN CREATIVE SELF-BELIEFS

As shown in figure 70, breaking down the overall Creative Self-Efficacy score into its sub-dimensions reveals a overview of the intervention's impact.

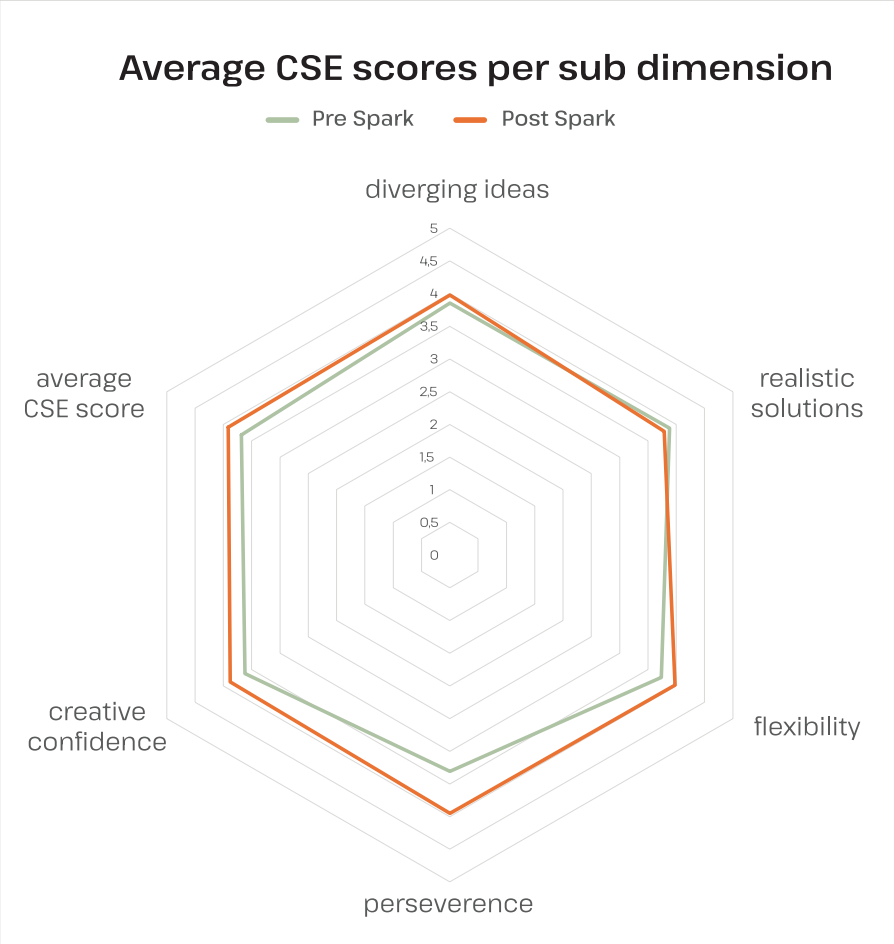


FIG 70: Analysis of average CSE scores per sub dimention

General Creative Confidence saw a solid increase on the 5 point Likert scale moving from 3.62 to 3.88 (+0.26, p=0.006).

Being flexible and having diverging ideas also raised by 0.12 and 0.23 respectively.

The score for the ability to create "realistic solutions" saw a slight, non-significant decrease from 3.89 to 3.79 (-0.10, p>0.05).

The question "I think I can come up with ideas even when I get a little stuck." had an average score of 3,31 pre-activity and was raised to an average score of 3,91 out of 5 (+0,60) with a significance of p=0.0001 when analysed with a paired samples T-test.

This validates that the activity effectively taught the students that creative blocks can be overcome.

When a statistical analysis has a significance (p) of less than 0.05 it is already valid, having a significance of 0.0001 is really cool, that shows the teenagers really learned something from the Creative Spark!

STUDENT APPETITE FOR CROSS-CURRICULAR CREATIVITY

The quantitative results showed a strong demand for cross-curricular integration. When asked if they would like to do activities like this in other (theory-based) courses, the response was a resounding yes. Quotes such as "I like doing things rather than studying and doing assignments from the book" and "It provides variety and allows you to process the course material in an enjoyable way" were common. Students even generated their own ideas for future Sparks, suggesting activities involving physical movement, making music, 3D printing, puzzles, and creating optical illusions in mathematics.



FIG 71: Photo of the Validation Session

EVALUATING THE VALIDATION QUESTIONS

To determine if the Creative Spark successfully meets the design requirements, the results were evaluated against the seven validation questions.

VQ1 DOES THE CREATIVE SPARK EFFECTIVELY SUPPORT STUDENT AUTONOMY, MAKING THEM FEEL IN CHARGE OF THEIR OWN CREATIVE CHOICES?

Yes. The students highly appreciated the freedom that emerged from the absence of traditional grading frameworks. Students explicitly stated: *„I like that there are no rules“* and expressed that they enjoyed hsving to do an activity that was not for a grade.

However this autonomy might come at a cost, the sudden freedom can feel a bit complex. As one student noted: *„Not everything was clear because the assignment can become quite complex if you think too deeply about it.“*



FIG 72: Photo of the Validation Session


FIG 73: Photo of the Validation Session

VQ2 IS THE CREATIVE SPARK PRACTICALLY FEASIBLE WITHIN TYPICAL SCHOOL CONSTRAINTS, SUCH AS STRICT 50-MINUTE LESSON LIMITS AND MINIMAL RESOURCES?

Partially. While it was feasible for teachers to schedule and execute, a paradox emerged for the students. Many students indicated they lacked the time to finish their comics, noting that *„time flew by“*.

This strongly suggests that students entered a state of ‘flow’ and high engagement.

However, it also emphasizes that future Sparks require an even tighter scoping, ensuring students can experience the satisfaction of a ‘completed’ result within the hard boundary of the school bell.

VQ3 DOES THE CREATIVE SPARK ENABLE QUICK, ACHIEVABLE CREATIVE ACTIONS THAT CREATE SMALL MASTERY EXPERIENCES FOR THE STUDENTS?

Yes. The most striking increase in the quantitative data was seen in the students' creative resilience. The metric measuring the belief "I think I can come up with ideas even when I get a little stuck" saw the largest individual growth (+0.60, $p<0.001$). Students surprised themselves, making statements such as *„I didn't know I could draw this well"* and *„I am proud of the result".*

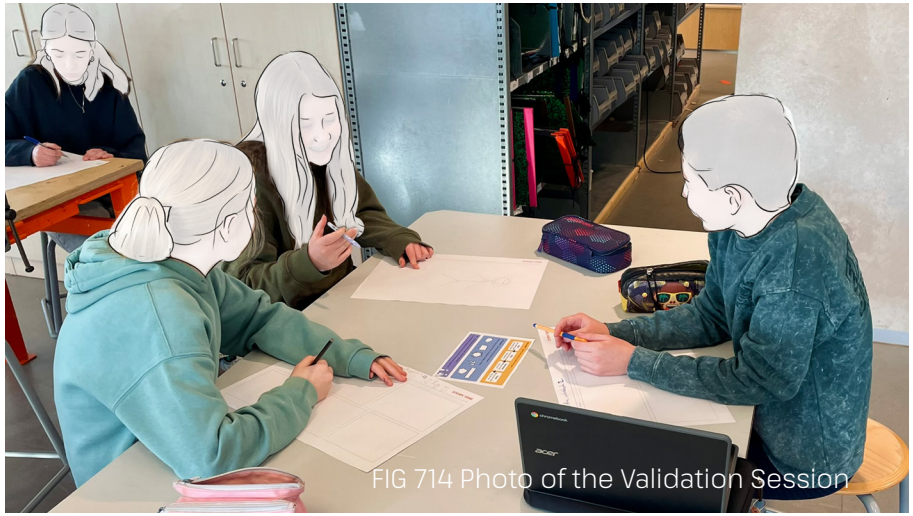


FIG 714 Photo of the Validation Session

VQ4 IS THE CREATIVE SPARK INTUITIVE AND NON-THREATENING ENOUGH TO IMMEDIATELY LOWER THE BARRIER TO START WITHOUT HESITATION?

Yes, for the majority. The threshold proved low enough for most of the class to start exploring ideas without hesitation. However, a few students indicated that *„clearer steps would help,"* suggesting a desire for concrete examples or steps to guide their process.



FIG 75: Photo of the Validation Session

VQ5 DOES THE CREATIVE SPARK SUCCEED IN CREATING A TEMPORARY 'BRAVE SPACE' WHERE EXPERIMENTATION FEELS SAFE AND THE PRESSURE OF GRADING IS REMOVED?

Yes. The intervention transformed the learning environment from passive consumption to active creation. Teachers observed a noticeable shift in classroom dynamics.

They noted that students who typically struggle to keep up in mainstream, theory-heavy education suddenly flourished when the pressure of 'right or wrong' was removed.

One of the teacher mentioned that some of the results, almost brought tears to his eyes. He mentioned some students just find it difficult to keep up, but when you let them do something like this, you see that they have so much more to offer.

VQ6 IS THE CREATIVE SPARK EASY TO UNDERSTAND AND "PLUG-AND-PLAY" FOR TEACHERS, WITHOUT REQUIRING EXTENSIVE PREPARATION TIME OR PERSONAL CREATIVE EXPERTISE?

Yes, during the evaluations, teachers emphasized that a lack of time, often having only 20 minutes of preparation per class, forces them to fall back on old materials. They mentioned feeling overwhelmed by the online search for educational materials.

They also mentioned that the Ignite platform could solve this because it can act as a filter. Both teachers mentioned that it is very nice to have only a few activities recommended. That way, they don't drown in the amout of activities to choose from. The ready-to-use, plug-and-play materials were also perceived as a nice benefit to reduce the preparation time.



FIG 76: Photo of the Validation Session

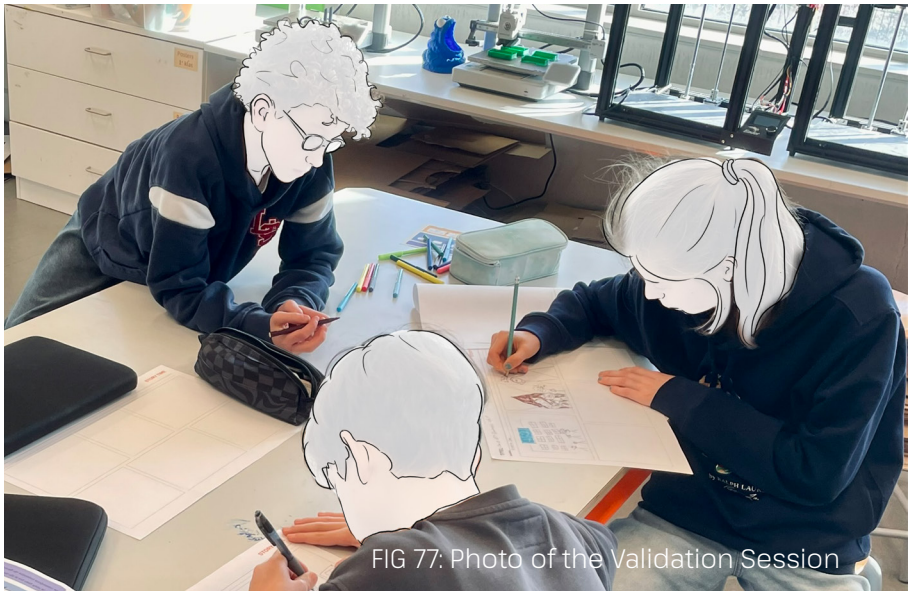


FIG 77: Photo of the Validation Session

VQ7 DOES THE CREATIVE SPARK SUPPORT REFLECTION ON THE CREATIVE PROCESS.

Yes. The built-in reflection question at the end of the Creative Spark prompted students to briefly pause and consider what worked well or what surprised them during the activity.

Answering this short, targeted question made their unconscious 'flow' and implicit mastery experiences explicit, which is a meccesary step in building creative confidence.

Seeing a teacher moved to tears by flourishing students made me realize that the Spark supports reflection not through traditional evaluations, but by triggering an immediate, mindset-shifting moment of self-surprise where students discover their own creative potential.

KEY INSIGHTS OF THE VALIDATION SESSIONS

Looking at the results from the Creative Sparks validation, several bigger insights emerged that go beyond just checking off the design requirements. These insights prove that the core idea behind Ignite works and show us what needs to happen next to make it a lasting success in schools.

Solving the dual challenge

The most important takeaway is that Ignite successfully solves a problem on both sides of the classroom. As the feedback confirmed once again: teachers want to offer creativity but lack the time to prepare it, while students have the creativity but lack a safe invitation to show it.

The Creative Sparks solved both sides of this equation at the same time. By giving teachers curated, plug-and-play materials, it removed the barrier of preparation time. For the students, taking away the pressure of grading, this gave them the autonomy and safety they needed to actively participate and flourish without the fear of failing.

Freedom vs the risk of fixation

While the students liked the freedom is also comes with a challengs. Complete freedom can also feel quite complex and overwhelming. Some students asked for clear examples to help them get started.
However, giving examples in creative education is a tricky balance because of the risk of design fixation. Design fixation is when students simply copy the example instead of exploring their own unique ideas. For future Sparks, the challenge is to provide just enough structural guidance to help them start, without dictating what they should make.

Getting into the flow

A similar tension popped up when looking at the time constraints. When students were given the freedom to create, they didn't just participate; they entered a flow state so deep that they lost track of time. The 50-minute school bell became their only enemy.

While it is amazing to see this level of enthusiasm and engagement, it also presents a design challenge. Future Sparks need a tighter scope, ensuring that students can actually experience the satisfaction of finishing their micro-mastery moment before the lesson ends.

The need for a central platform

The validation proved that students have a big appetite for cross-curricular creativity, actively suggesting ideas for using creativity in math and physics. However, the teachers gave a clear warning about the future of the platform. Because new educational tools constantly pop up, a new initiative can easily get lost in the overload of options online. Teachers explicitly mentioned that Ignite needs to become a well-promoted, "central" platform.

This validates the exact need for the Systemic Layer (The Fire Pit). To make a real impact, future steps shouldn't just be about creating more activities, but about strategically embedding this platform within the school system to protect these creative moments.

So, did we Ignite the Spark?

Looking at the significant statistical growth in creative resilience alongside the smiling faces in the classroom, the answer is a resounding yes: we ignited the creative spark.

When the fear and pressure of grading was removed and replaced it with autonomy, the students didn't just participate, they entered a flow state so deep that the bell became their only enemy.

We met the core requirements, the Creative Sparks activity proved to be more than just a fun break from the curriculum. It validated the core mission behind this graduation project: creative confidence is not a fixed talent reserved for the lucky few, but a dormant spark waiting for the right fuel.

Ignite provides that fuel. The validation sessions have proven that the fire is there; the next step is to integrate it systemically and allow it to spread and grow bigger.



FIG 78: Photo and quotes from Validation Session

To conclude

After exploring the problem, building the Ignite framework, and validating it in real classrooms, it is time to take a step back and look at the bigger picture. This final chapter wraps up the project by presenting the overarching conclusions, acknowledging the limitations of the research, suggesting actionable next steps for the future, and closing with a personal reflection on this design journey.

CONCLUSION

This graduation project addressed a critical challenge: It remains unclear how to effectively capture, integrate, and evaluate creativity within a standard school context. Despite adolescence being a crucial phase for developing creative confidence, autonomy, and identity.

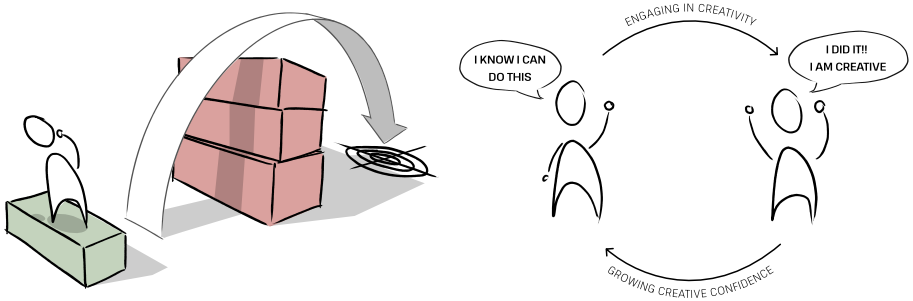
The main research question driving this project was:

How can we stimulate the development of creative confidence for Dutch teenagers (12-18) in high school?

Through a human-centered design approach insights from desk research and the Exploring Creativity session in the Explore phase led to a clear, actionable design goal in the Design VIsion phase:

Design an intervention that lowers the Activation Threshold, enabling Dutch high school students (12-18) to safely take the first step into the Creative Confidence Loop, thereby stimulating their creative confidence.

Looking back at the entire research and design process, this project leads to several core conclusions regarding stimulating creative confidence in education.



ACTIVATION THRESHOLD **CREATIVE CONFIDENCE LOOP**

FIG 79: The Activation Threshold & Creative Confidence Loop

Doing precedes believing

Literature research established that creative confidence is not a fixed talent, it is a dynamic belief that develops through positive experiences called mastery moments. This is not something that can be achieved through knowledge and theory alone. Instead, it requires action.

The Exploring Creativity sessions showed that students often face a Activation Threshold, a barrier of blockers that outweigh the enablers and prevents them from starting creative activities.

This project showed that to stimulate creative confidence, this threshold must be lowered. By gently pushing students into safe, low-barrier action, they can achieve micro-mastery moments.

This successfully triggers the Creative Confidence Loop: the action creates a small success, which builds confidence, which in turn leads to more action. Doing must precede believing.

Hacking the system

During the Exploring Creativity workshops, it became evident what causes this high Activation Threshold. The traditional school context, with its focus on grades, right-or-wrong answers, and strict rubrics, acts as a major blocker to creative freedom.

This insight was further validated during the Co-creation sessions with students and with conversatioins with teachers. It also became clear that completely overhauling the educational system is an unrealistic goal. Therefore, the design acts as a systemic loophole.

By introducing creativity through the Kickstart workshop, Creative Sparks and Project Weeks, all having their foundation through interventions that enforce systemic change Ignite creates a temporary, shielded 'Brave Space' without taaking away from standard tests and theory lessons, allowing experimentation without the fear of failure.

Bridging the "Creativity Gap"

During the research, it also became clear that to reach the students, the barriers of the teachers had to be addressed first.

Teachers recognize the value of creativity but struggle to implement it into their lessons because of problems like the "Creativity Gap" Makel (2009), lack of preparation time and an overload of online materials.

The intervention was specifically designed to solve this practical problem. By making the Creative Sparks entirely "plug-and-play" and acting as a centralized platform, it removes the preparation barrier for the teacher. Solving the teacher's lack of time is the fundamental step to guaranteeing the student's interactio with creativity.

Creativity as a vehicle for resilience

The validation of the Creative Sparks in a real school context proved that this approach works.

The most significant finding from the quantitative data was the growth (+0.60) in the belief: "I can come up with ideas even when I get a little stuck." This proves that introducing creativity in the classroom is not just about making "pretty things" it is a powerful vehicle for building a robust, flexible growth mindset. The intervention successfully taught students creative resilience.

The Ignite framework

Stimulating creative confidence requires both immediate action and long-term systemic support. However, a single spark of creativity is easily extinguished in a traditional school culture. The final design, the Ignite Framework, prevents this through its dual structure.

The Student interaction Layer (The kickstart, Creative Sparks and Fueling the fire) does this by providing micro-mastery experiences within regular classes.

The Systemic Layer (The Fire Pit) provides the necessary long-term foundation. It offers strategic tools, community sharing, and workshop materials for school boards and teachers to embed these creative habits permanently into the curriculum.

Together, these two layers ensure that creativity transitions from an isolated, extracurricular event into a foundational pillar of the school culture.

This project showed that creative confidence is a dormant spark waiting for the right fuel.

Ignite provides that fuel, but it is up to the schools to build the fire pit to sustain it.



FIG 80: Visual Ignite metaphor

LIMITATIONS

While this project provides valuable insights into the development of creative confidence in teenagers, several limitations should be acknowledged.

Selection bias

The exploratory sessions and validation primarily involved a relatively small and specific group of participants, with a lot of students from Technasium schools and those at a higher academic level (HAVO/VWO).

Because the Technasium curriculum already includes project-based courses like 'Research & Design' (O&O), these students are generally more accustomed to open-ended assignments and might already be more comfortable with creative challenges.

This limits the immediate generalizability of the findings to other educational tracks, such as VMBO or Praktijkonderwijs, where initial experiences with creativity and confidence may differ significantly.

Measuring Creative Confidence

The duration of the validation of the interventions was limited Creative Confidence is a lifelong mindset that develops over time, yet this project mainly captured short-term experiences and immediate reflections. As a result, long-term effects on students' creative self-concept could not be assessed.

The research also relied largely on self-reported data (questionnaires and reflective exercises). While these methods are valuable for capturing perceptions and experiences, they may be influenced by social desirability or momentary emotions.

Teacher dependency

While the Ignite platform tries to lower the practical preparation barrier through its "plug-and-play" nature, the fundamental effectiveness of the tool still relies heavily on the teachers' willingness to allocate time for it.

Teachers already mentioned the pressure to fit standard curriculum goals and test preparations into their schedules. If the systemic pressure of standardized testing becomes too high, even a preparation-free tool might be skipped in favor of traditional theory lessons.



FIG 81: Photo of Exploring Creativity Session

RECOMMENDATIONS (FOR FUTURE RESEARCH)

For future research and the further development of Ignite, the following is recommended:

Testing of the whole Ignite framework

Before scaling the intervention, it is essential to test the Ignite framework in its entirety. While this project successfully validated the Creative Sparks in isolated, researcher-facilitated sessions, future research should involve running full-scale pilot programs with a dedicated group of teachers.

This means giving teachers access to the platform, including all of the materials. These materials also need to be developed which could be a graduation project in its entirety for each element of the Ignite framework.

The goal of these pilots would be to observe how teachers independently use and facilitate the platform over a longer period, and to measure both the short-term engagement and the long-term effects on the students' creative confidence.

Broadening educational inclusivity

Future studies must explore how creative confidence develops across different educational tracks.

Implementing and validating the different elements of Ignite within VMBO and Praktijkonderwijs contexts is essential to gain a more inclusive understanding of teenagers' creative development.

This will help ensure that the platform's build-up, language, and activities are accessible, relevant, and effective for all types of students, not just those in theory-heavy or project-based tracks.

Impact of personal value in motivation to engage in creative activities

Future studies could investigate the role of perceived value in creative activities and its impact on teenagers' motivation to engage in creativity.

While this project focused primarily on lowering the activation threshold and stimulating creative confidence, the validation of the Creative Spark intervention suggested that teenagers were more engaged when they perceived the creative task as meaningful or valuable to them personally.

Future research could explore how different types of relevance (e.g., personal preferences, social recognition, or real-world application) influence creative motivation, persistence, and the willingness to take creative risks.

Platform development and onboarding

To prevent the tool from getting lost in the constant stream of new educational initiatives, future design and research efforts should focus on the strategic expansion of the Ignite platform.

Research should explore how to effectively onboard school boards and teachers, investigating what type of support or training they need.

By focusing on systemic integration, future researchers can ensure that Ignite transitions from a conceptual graduation project into a well-promoted, central hub that becomes a standard, everyday tool in Dutch high schools.

The influence of teachers' motivation and self-beliefs

While the Ignite platform lowers the practical barriers of time and preparation, its effectiveness still relies on the teacher facilitating the session.

Future research should investigate the role of the teachers' own motivation and creative self-beliefs in stimulating creative confidence in their students.

If a teacher struggles with their own creativity and lacks creative confidence, it may subtly influence how they present, guide, and react during the activities.

Exploring how a teacher's personal self-beliefs impact their classroom practices could offer valuable insights for broader teacher training.

Based on this, future developments could include targeted onboarding modules designed not just to explain the tool, but to actively help teachers build their own creative confidence, empowering them to facilitate these processes with genuine enthusiasm.

PERSONAL REFLECTION

In the preface of this report, I wrote about my „Pippi Longstocking" mindset:

„I've never done it before, so I think I can do it."

Now that I am at the end of this intensive graduation project, I can safely say that this mindset both helped me enormously and challenged me quite a bit.

It helped me step into schools without hesitation. I grabbed the opportunities to work with teenagers and host workshops with both hands. That was perhaps the most beautiful part of this project.

The energy I got from the sessions, the classroom dynamics, and the direct and funny reactions from the students were fantastic. At some moments I was so deeply invested in those sessions that I completely forgot the practical side of being a researcher. For instance, after the final, incredibly valuable validation session, it wasn't until I was walking to the train that I realized I hadn't taken a single photo in all my enthusiasm!
A classic case of living completely in the moment, haha.

Fortunately, the best memories are in my head. One moment that will always stay with me is a student who

came up to me after this session and said:

„Thank you so much, miss, I really loved being able to participate twice and learn so much about about my creativity. I really enjoyed it!"

To me, that is the absolute core of design: letting people discover what they are capable of themselves.

However, that open-minded approach also had a downside. The choice to turn Ignite from just a concept into a fully functioning website was ambitious.
During the process, I occasionally realized that this drive to prove myself and taking on completely new challenges like learning to build a website in a new software 3 weeks before my deadline added extra pressure.

And if I am completely honest, documenting this project was a massive challenge too. Writing just isn't 100% my thing. I am a designer, a do-er. Academically justifying and writing down every single step was a task I really had to force myself to do. Still, I am incredibly proud now that I managed to get my vision and all that hard work down on paper.

This graduation project brought a few other reality checks with it, too. The biggest one was perhaps working 'alone'.

Although I am lucky to have fantastic friends and family who always wanted to listen to my stories, struggles and brainstorm with me, I often missed the creative dynamics of a team. I found out that I really love building a project together with others.

Another confrontation was the slowness of real-world processes. As a student, you are used to moving fast, but collaborating with schools meant I sometimes had to schedule a test months in advance for a design that didn't even exist yet.

Looking back at the past months and looking forward to my future as a designer, there is one overarching insight: I get a massive amount of energy from designing for and with a people.

Working directly with the teenagers, listening to their input, and facilitating their creative moments was amazing to do.

I am convinced that the most beautiful and impactful designs emerge when you don't just study the target audience, but actively make them part of the solution!

I hope you liked reading this report and if you want to get in touch feel free to reach out!

Love Roos-Anne

References & use of AI

Every design journey is built on the work of others and backed by raw, messy data. This final section provides exactly that: the academic References that formed the theoretical backbone of Ignite, and the Appendix containing the hard evidence, extra tools, and protocols used along the way.

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ACKNOWLEDGEMENT USE OF AI

AI was used as a writing tool during this project.

ChatGPT and Gemini were used to:

- → check and improve readability, spelling and grammar.
- → translate Dutch texts into English.
- → provide critical feedback on clarity, structure, and academic tone of draft texts.

AI was not used to generate original research findings, design concepts, or final conclusions. All research activities, design decisions, analyses, and interpretations were carried out independently by me.

Appendix

Every design journey is built on the work of others and backed by raw, messy data. This final section provides exactly that: the academic References that formed the theoretical backbone of Ignite, and the Appendix containing the hard evidence, extra tools, and protocols used along the way.

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A. GRADUATION PROJECT BRIEF

TU Delft

IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

Family name	Klok
Initials	A.C.B.
Given name	Roos-Anne
Student number	5344433

IDE master(s) IPD ☐ DfI ✓ SPD ☐

2nd non-IDE master

Individual programme *(date of approval)*

Medisign ☐

HPM ☐

SUPERVISORY TEAM

Fill in he required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	Jan Willem Hoftijzer	dept./section	HCD, Human Factors
mentor	Milene Gonçalves	dept./section	DOS, Creative Processes section
2nd mentor			
client:			
city:		country:	
optional comments			

! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.

! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.

! 2nd mentor only applies when a client is involved.

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in **by the Chair** of the supervisory team

Sign for approval (Chair)

Name J.W. Hoftijzer Date 15-10-'25 Signature

CHECK ON STUDY PROGRESS

To be filled in **by SSC E&SA** (Shared Service Centre, Education & Student Affairs), after approval of the project brief by the chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total _____ EC

Of which, taking conditional requirements into account, can be part of the exam programme _____ EC

★	**YES**	all 1st year master courses passed
	NO	missing 1st year courses

Comments:

Sign for approval (SSC E&SA)

Name _____ Date _____ Signature _____

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE's Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES		Supervisory Team approved
NO		Supervisory Team not approved

Comments:

Based on study progress, students is ...

	ALLOWED to start the graduation project
	NOT allowed to start the graduation project

Comments:

Sign for approval (BoEx)

Name _____ Date _____ Signature _____

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Name student Roos-Anne Klok **Student number** 5,344,433

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

Project title Encouraging creative confidence in teenagers in Dutch high schools

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)

Adolescence is a key stage in life marked by rapid cognitive, emotional, and social changes. In this period, teenagers are developing their identity, exploring personal skills, and rebuilding a sense of self as part of forming positive relationships with themselves, others, and their future aspirations (Espinosa, 2010)

Creativity plays an essential role in this stage. Creativity can be defined as the generation of novel and valuable ideas (Hennessey & Amabile, 2009), or as the ability to create something new and adapted to its context (Lubart, 2015). Creativity is increasingly recognized as a critical (21st century) skill for children and adolescents to respond to future changes and challenges (Cropley, 2022). However, creativity only flourishes when basic psychological needs are met (Maslow, 1987). This study emphasizes safety, belonging, and self-esteem.

According to Bandura (1997, 2007), self-efficacy, the belief in one's ability to achieve results, is fostered by mastery experiences, role models, encouragement, and positive emotions. Especially during adolescence, when self-confidence can fluctuate, having successful, meaningful creative experiences can increase motivation and confidence. Educational environments can play an important role in offering these experiences, especially when creativity is embedded in education through real-world, design based challenges.

Schools, often lack the time and structure to offer students these creative experiences (Jefferson & Anderson, 2017; Sidorova, 2022). Creativity is mostly incorporated through music and the arts. However, creativity extends beyond that. Research shows that design-based learning and maker activities can enhance creative confidence and problem-solving skills. These skills can be applied across almost all school subjects. It suggests that meaningful creative experiences can have a lasting impact on how young people see themselves (e.g., as makers or problem-solvers), but it remains unclear how to capture and evaluate these outcomes in a school context.

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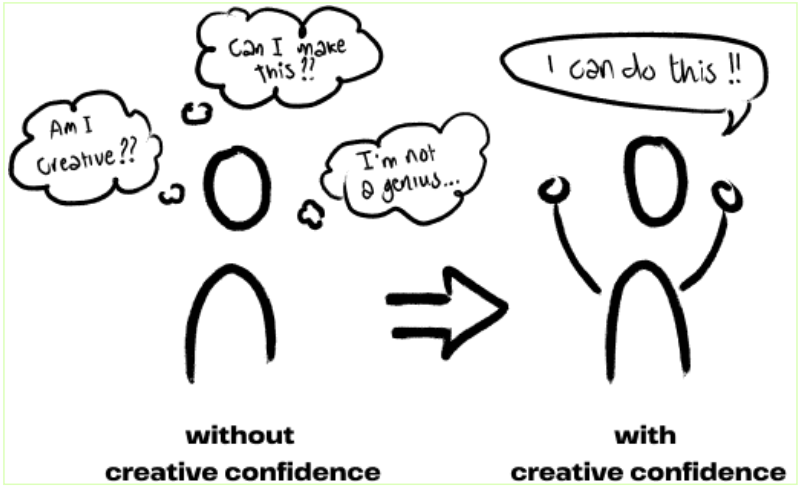

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DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

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)

Many teenagers (12–18 yrs old) do not see themselves as confident creatives or capable of designing, even though adolescence is a crucial phase for developing confidence and autonomy (Espinoza, 2010; Puozzo & Audrin, 2021). While schools emphasize 21st-century skills like creativity and creative thinking, they often lack meaningful, hands-on experiences for developing creative confidence. (Jefferson & Anderson, 2017; Sidorova, 2022).

Design-based learning and DIY/maker based experiences could fill this gap by fostering creative confidence, self-efficacy, and autonomy (Ladachart et al., 2024; Somanath et al., 2016), yet their integration into everyday school practice remains limited.

Research Question:

How can an intervention be designed to support the development of creative confidence for teenagers in Dutch high schools?

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 support the development of creative confidence, self-efficacy and a sense of autonomy for teenagers in Dutch high schools

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)

The project will follow a double diamond approach, drawing on methods from human-centered design and co-creation to actively involve teenagers and teachers in shaping the intervention. This approach ensures that the design leverages their experiences, perspectives, and creative potential. By involving youth as an active participants, they are given the agency and ownership that can potentially trigger creative confidence in itself. Insights gathered will be translated into a clear design vision and concrete requirements .

The project will unfold in three phases:
Explore Phase: Through interviews, generative sessions, literature review, and other context analysis methods, the current opportunities for creative engagement in schools will be explored from both student and teacher perspectives.
Design Vision Phase: Identified opportunities and insights will be translated into a design goal, an design interaction vision and actionable list of requirements.
Ideate & Implementation Phase: Brainstorming, prototyping, creative sessions will be used to develop and test tangible intervention concepts, while engaging stakeholders to ensure relevance, feasibility, and meaningful impact in school context

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	8 sept 2025
Mid-term evaluation	13 nov 2025
Green light meeting	15 jan 2026
Graduation ceremony	5 mrt 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)

I'm excited to start this project because it brings together things I deeply care about: helping people grow, designing for real impact, and showing teenagers that they're more creative and capable than they might think. I love seeing that moment when someone realizes, "Wait... I can actually do this." I want to encourage that feeling not by telling them what to do, but by designing an experience that helps them discover it for themselves.During this project, I hope to strengthen my ability to facilitate creative processes, especially when working with a specific user group like teenagers. I'm also excited (and a little nervous) to work more independently without a team to fall back on, and to take full ownership of the design process. One of my personal goals is to improve how I translate insights into strong, clear storytelling.Finally, I hope to collaborate with schools or teachers to make sure the project is rooted in their reality, not just mine. I want the design to feel honest, useful, and empowering, both for the users, and for me as a designer.

B. FINAL DESIGN





ABOUT IGNITE

Ignite is a **strategic framework** designed to **stimulate creative confidence** in teenagers (aged 12-18) in Dutch Secondary schools.
The framework consists of two layers:

The Student Experience

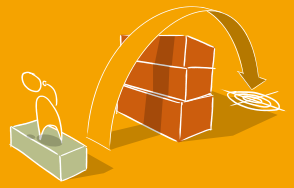
The visible student journey starts with a one-time **Kickstart** to break assumptions about 'talent'. This is followed by a continuous rhythm:

→ **Creative Sparks**: Frequent, short micro-success experiences during regular lessons.
→ **Fueling the Fire**: Periodic deep-dives giving students complete autonomy.

Together, these phases drive the **Creative Confidence Loop**

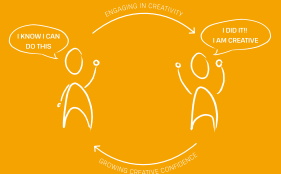
The Systemic Foundation

Without a safe, structural foundation, classroom initiatives quickly fade. **The Fire Pit** anchors creativity in the school culture. Teachers and school leaders work together as drivers: they share successes in an active community and normalize a Brave Space across all subjects. They provide the place needed to make creativity the new normal, rather than a one-off project.



The Activation Threshold

In order to even want to start a creative assignment, the stimulating factors (enablers) must outweigh the obstacles (blockers).
In today's education system, performance pressure, grades, and lack of time often make this threshold too high.



The Creative Confidence Loop

Self-confidence grows exclusively through doing. Every small action that succeeds provides a success experience (a mastery experience). This moment of "I can do this!" strengthens self-confidence, lowering the threshold for taking on the next, bigger creative challenge.

GET ME TO THE IGNITE WEBSITE!

THE IGNITE FRAMEWORK

STUDENT EXPERIENCE

	KICKSTART	CREATIVE SPARKS	FUELING THE FIRE
GOALS	Redefining creativity, lowering the Activation Threshold, and resetting internal assumptions so that students step into the Creative Confidence Loop.	Structurally stimulating growth in Creative Confidence frequent, micro-mastery experiences	Deepening Creative Confidence through autonomy and navigating a more complex creative process.
	Creativity is only for the talented → Creativity is coming up with new ideas, and I can do that too.	I'm still not sure if I can really do this... → I can make creative choices and come up with ideas, even when I get stuck.	I can solve this specific assignment. → Creativity is part of who I am!
KEY MECHANISMS	VULNERABILITY, PERSPECTIVE TAKING, LEANING INTO FEAR, CRITICAL THINKING, EXAMINING INTENTIONS, MINDFULLNESS **CREATING A BRAVE SPACE** A safe learning environment where vulnerability and experimentation are central, without fear of judgment. **ACTIVE PARTICIPATION** Experience creativity by doing, rather than listening to theory.	**MICRO-MASTERY** Short, experiences of success that boost creative confidence. **BLOOMS TAXONOMY** Assignments focused on higher levels of thinking: analyzing, evaluating, and creating. **REFLECTING** Making the unconscious creative learning explicit and visible.	**GUIDED MASTERY** The teacher coaches the student through a more complex process. **AUTONOMY** Students gain complete ownership of their own creative choices. **TOOLS** Facilitating the tools, time and space to do this project.
ADRESSED NEEDS	MENTAL STATE CONFIDENCE & MOTIVATION INSPIRATION	FOCUS & CONCENTRATION OPPORTUNITIES TO BE CREATIVE GUIDANCE & COLLABORATION	TIME AUTONOMY AND CREATIVE FREEDOM RESOURCES AND TOOLS GUIDANCE & COLLABORATION
TOOLS	WORKSHOP PRESENTATION + LESSON PLAN WORKSHOP TEMPLATES 50 minutes workshop One time intervention that fits in one lesson	CREATIVE SPARKS PLATFORM ACTIVITY MATERIALS FOR EACH SPARK 15 - 20 minute activity Can be integrated into every course	PROJECT WEEK TEACHING GUIDE PROJECT WEEK STUDENT MATERIALS Project week Periodic deep-dive, happens 1 or 2 times a year
RISKS	**FIXED MINDSET** Students that firmly believe that they are 'just not creative'. **FEAR OF FAILURE** The fear of making mistakes blocks the creative start.	**GETTING LOST IN THE FLOW** Students forget the time, make sure they have a form of end result before the lesson ends. **LONG TERM PROJECTS** Performance pressure unconsciously rears its head during regular lessons.	**OVER-STRUCTURING** The teacher provides too many guidelines, which takes away the necessary freedom. **GRADING PRODUCT INSTEAD OF PROCESS** Grading based on the end result instead of acknowledging the creative process.

THE FIRE PIT

Structurally embedding a creativity in school culture, to make it the 'new normal' and protect students' growth

SYSTEMIC FOUNDATION

	KEY MECHANISMS	ADRESSED NEEDS	TOOLS	RISKS
Creativity belongs in the arts... → Creativity is a fundamental part of our school culture!	VICARIOUS EXPERIENCES SYSTEMIC BRAVE SPACE SOCIAL PERSUASION	OPPORTUNITIES TO BE CREATIVE POSITIVE ATMOSPHERE	COMMUNITY/INSPIRATION PLATFORM STRATEGY SESSION KITS Workshop that are continuously part of long-term implementation.	**GETTING LOST IN NEW INITIATIVES** The platform disappears in the abundance of online educational tools. **INITIATIVES FADING AWAY** The project ends as soon as the enthusiastic driving force fails to initiate next steps or leaves the school

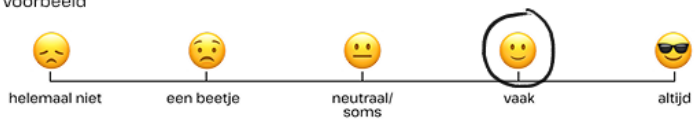
C. DESK RESEARCH SCHOOL INITIATIVES CREATIVITY

Category	Advantages	Opportunities	Challenges
Design & project education (Technasium, O&O) https://www.technasium.nl/wat-is-technasium/	• Increases motivation and ownership: students work on real-world issues with visible results. • Promotes collaboration, communication, and creative problem solving. • Aligns well with 21st-century skills and professional practice.	• Can be expanded to include more school subjects (not just science). • Offers opportunities for collaboration with companies and social organizations.	• Requires a lot of time, guidance, and organization (teacher workload). • Teachers sometimes lack sufficient didactic training for open, design-oriented assignments. • Exam pressure leaves little room for project time. • Students must choose this type of education themselves (before they start secondary education).
Interdisciplinary project education / thematic learning https://www.vo-raad.nl/artikelen/ambitieuze-doeners-zelfstandiger-door-vakoverstijgend-onderwijs https://www.slo.nl/%4012119/handboek	• Students learn to make connections between disciplines. • Encourages holistic and systems-oriented thinking. • Suitable for complex social issues (climate, technology, society).	• Can contribute to future-oriented education in which knowledge and skills are integrated. • Makes learning more meaningful for students.	• Difficult to organize within existing subject structures. (Assessability) • Requires close cooperation between teachers from different backgrounds. • Assessment often does not align with this approach. • Often has to be organized by teachers on their own initiative.
Teacher professionalization (training courses in creative thinking/creative ability) https://www.ru.nl/opleidingen/onderwijs-voor-professionals/overzicht/creatief-denken-en-handelen-in-het-vo https://www.creatiefvermogenutrecht.nl/ https://schoolteamtraining.nl/lesgeven-in-creatief-denken	• Raise teachers' awareness of creative teaching methods. • Ensure support within teams.	• Professional learning communities can strengthen creative culture within schools. • More knowledge among teachers → easier to put into practice	• Limited time and budget for training. • Dependent on teachers' own interest. • Difficult to achieve lasting behavioral change in school culture.
After school programs: Makerspaces / design workshops / Techlabs https://techlab.nl/ https://montaignelyceum.nl/montaigne-onderwijs/m-specials/#MC https://www.kareleykmanschool.nl/werkwijze/naschoolse-workshops/	• Practical, tangible learning experiences boost self-confidence ("I can make something"). • Encourages experimentation, failure, and perseverance.	• Promotes interest in technology and innovation. • Safe place to grow independently • Potential for collaboration with vocational colleges, companies, and local technology labs.	• High costs for materials, maintenance, and supervision. • Risk that it will remain limited to occasional workshops rather than becoming a structured learning program. • Students must be self-motivated.
Art and culture education (Culture Profile Schools, workshops by external organisations) https://www.cultuurprofielscholen.nl/ https://www.kleinkunstig.nl/	• Develops imagination, expression, and reflective ability. • Contributes to personal development, self-confidence, and empathy. • Accessible to various types of learners (not only those who are strong in theory).	• Greater integration of art and other disciplines (crossovers). • Can help students see creativity as a general skill, not just 'art'.	• Often dependent on subsidies or individual projects. • Limited time budget in the timetable. • Creative subjects are vulnerable to budget cuts.

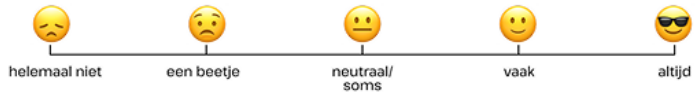
D. EXPLORING CREATIVITY SESSION MATERIALS

Naam: .....

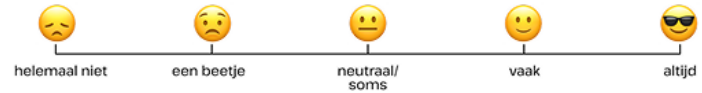
Kies het antwoord wat past bij hoe jij je voelt bij de stellingen, net zoals in het voorbeeld



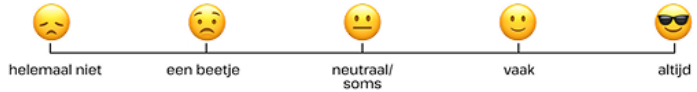
1. Ik kan veel mogelijke oplossingen voor problemen bedenken.



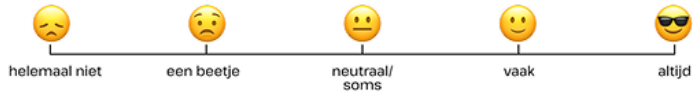
2. Ik kan veel antwoorden bedenken voor een moeilijk probleem.



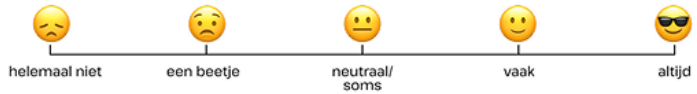
3. Ik kan problemen op verschillende manieren aanpakken.



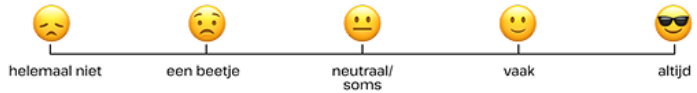
4. Als ik over een probleem nadenk kan ik veel verschillende ideeën bedenken



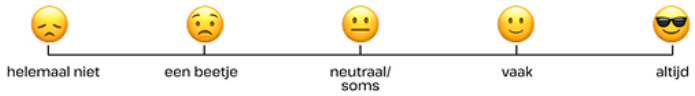
5. Ik kan met mijn vrienden praten over gekke ideeën en ze geloofwaardig laten klinken.



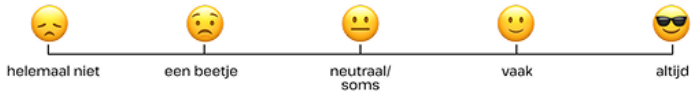
6. Ik kan verhalen vertellen gebaseerd op dromen die ik heb gehad, zelfs als ik stukjes van het verhaal moet invullen.



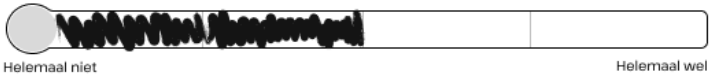
7. Ik kan snel met originele suggesties komen.



8. Ik kan gloednieuwe ideeën bedenken.



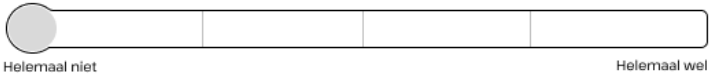
Vul de thermometer in met hoe erg je het met de stelling eens bent zoals in dit voorbeeld:



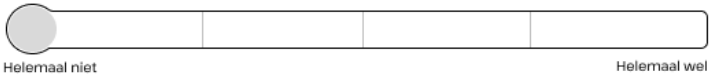
1. Ik denk dat ik niet veel kan doen om mijn creativiteit te vergroten.



2. Mijn creativiteit is niet iets aan mij dat ik (veel) kan veranderen.

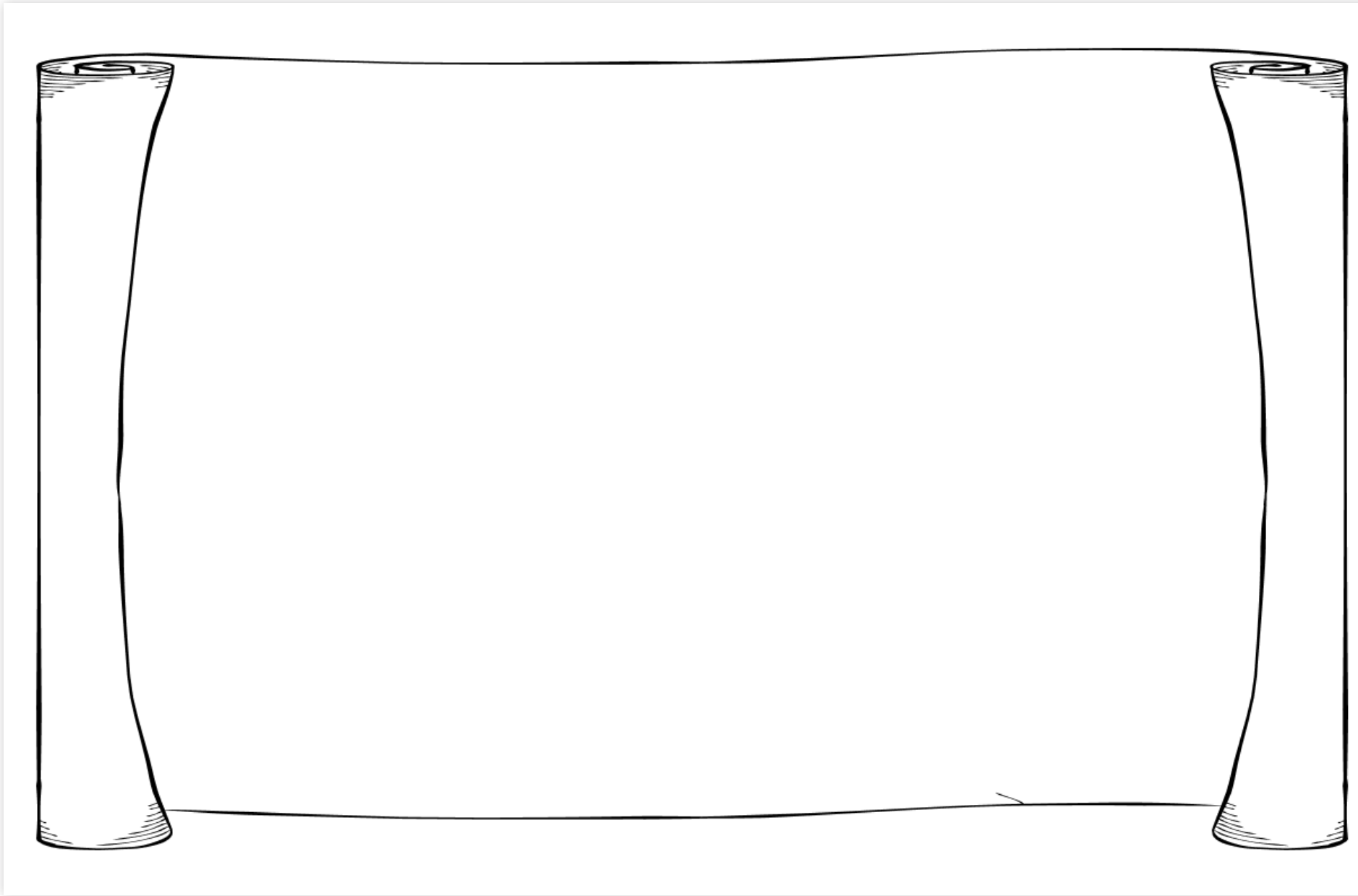


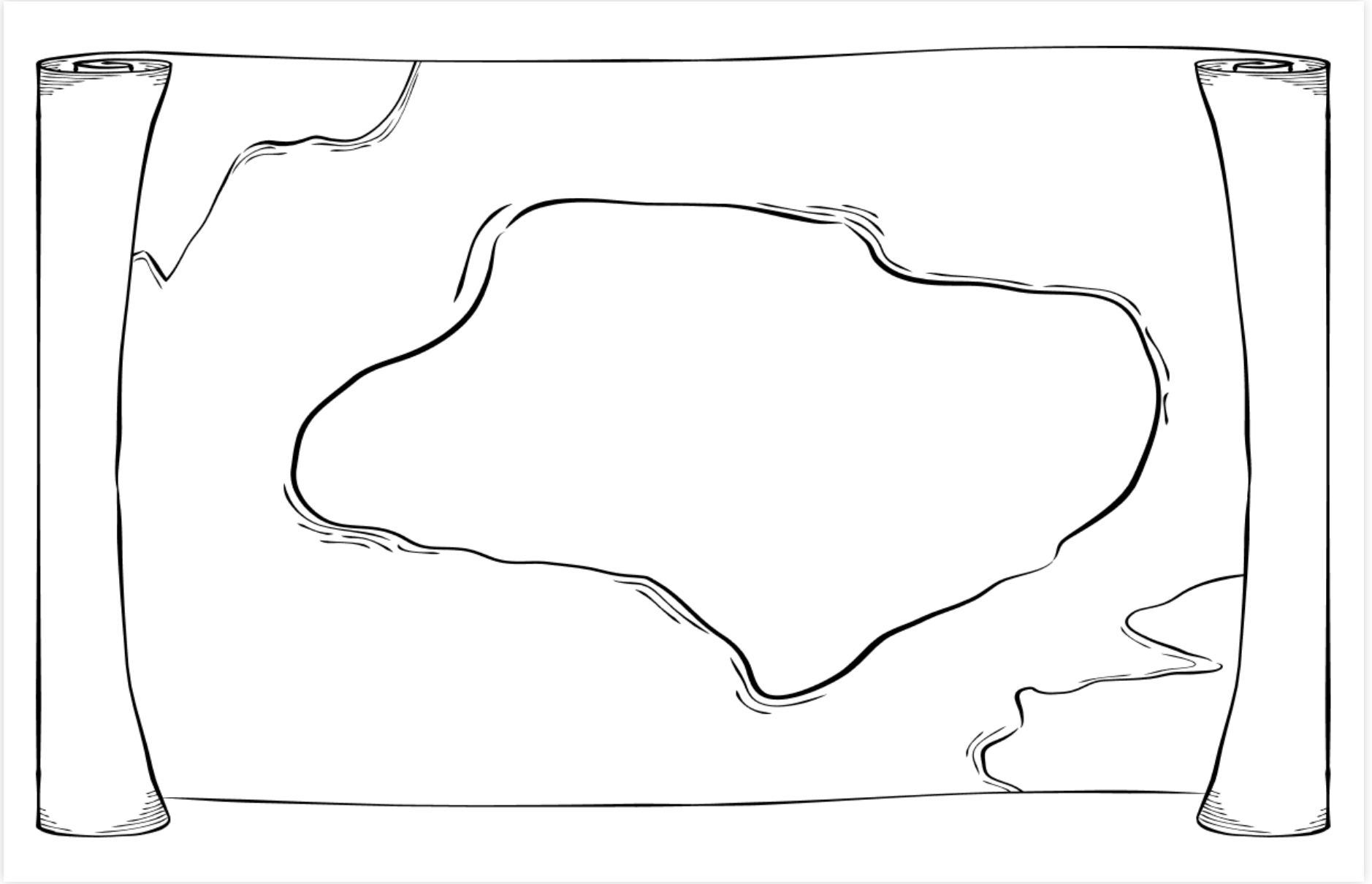
3. Om eerlijk te zijn denk ik niet dat ik echt kan veranderen hoe creatief ik ben.



4. Ik kan nieuwe dingen leren, maar ik heb niet de skills om mijn basis creativiteit te veranderen.







✏️ Teken jezelf op jouw creatieve eiland, de plek waar jij het best kunt bedenken, maken of dromen.

Deze schatkaart word een overzicht van dingen die jou helpen om creatief te zijn maar ook van dingen die je kunnen tegenzitten.

Je mag tekenen of woorden gebruiken, het hoeft niet mooi te zijn, zolang het iets van jou laat zien.

Wat helpt jou creatief te zijn?

- Waarneer voel jij je vrij om iets te proberen of te bedenken?
- Met wie werk jij graag samen als je creatief bent?
- Wat maakt dat jij durft te beginnen, ook als het spannend is?
- Welke tools helpen jou om creatief te zijn?
- Waar ben jij trots op als het om creativiteit gaat?

→ plaats deze dingen op je schatkaart



Wat hoort op niet op jouw eiland? (Staat jouw creativiteit in de weg)

- Wat zorgt er soms voor dat je twijfelt aan je eigen ideeën?
- Wat gebeurt er bij jou als iets niet lukt of anders gaat dan je dacht?
- Wie of wat mag liever niet op jouw eiland komen?
- Wat maakt dat je minder jezelf durft te zijn?

→ plaats deze dingen op je schatkaart



Over jezelf op het eiland

- Waar sta jij op jouw eiland, wat is jouw rol?
- Wat maakt jou uniek als maker of bedenker?
- Wat heb jij nodig om in beweging te komen?

→ plaats jezelf en deze dingen op je schatkaart



ONTDEKKEN

- Wat valt je als eerste op aan het eiland van de ander?
- Wat denk jij dat dit eiland vertelt over hoe deze persoon creatief is?
- Wat lijkt jou de fijnste plek op dit eiland?
- Waar zou jij zelf wel willen zijn op dit eiland?



VERDIEPEN

- Waarom is dit onderdeel belangrijk voor jou?
- Wat betekent deze plek of dit object voor jouw creativiteit?
- Wat helpt jou om dit gevoel vaker te hebben?
- Wat gebeurt er als er storm is op jouw eiland (als het moeilijk wordt)?
- Welke rol speel jij zelf op jouw eiland?



VERBINDEN

- Wat lijkt op jullie eilanden op elkaar?
- Wat zou jouw eiland van dat van de ander kunnen leren?
- Welke dingen zijn voor jullie allebei belangrijk om creatief te kunnen zijn?



E. EXPLORING CREATIVITY SESSION RESULTS

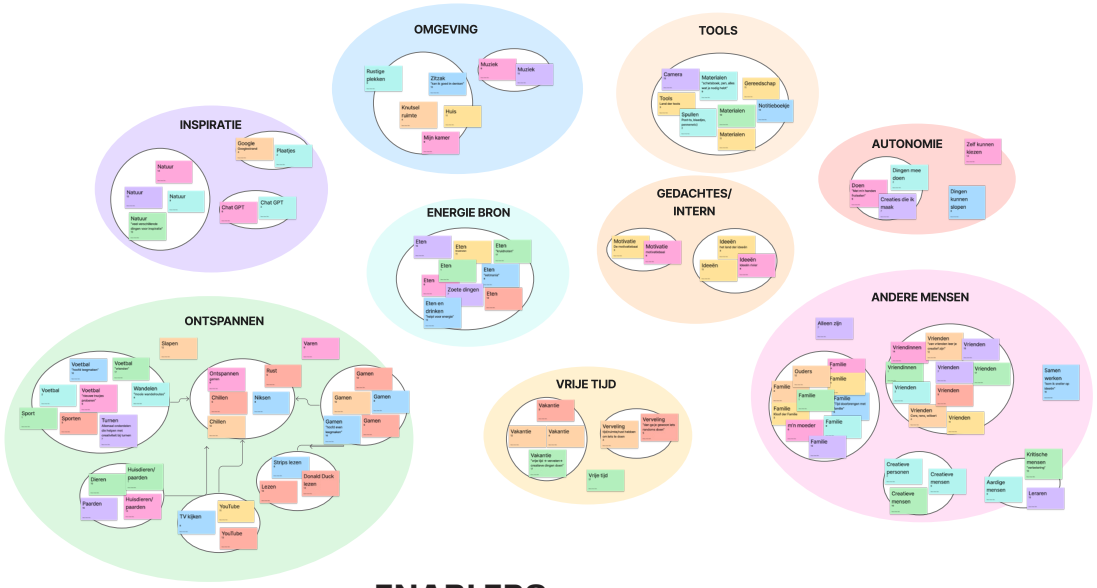
RESULTS “WHAT IS CREATIVITY”BRAINDUMP



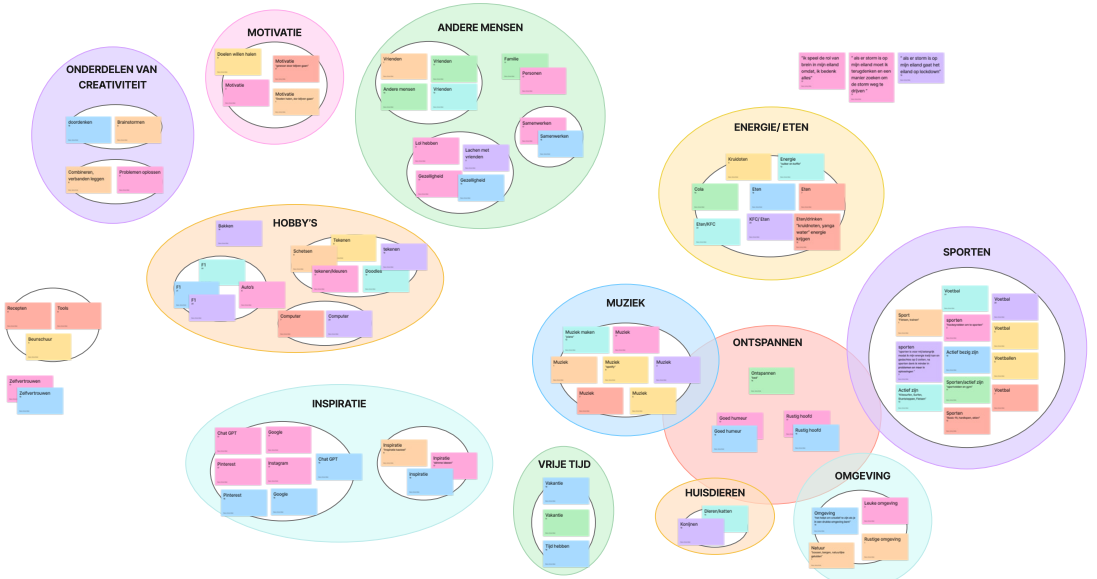


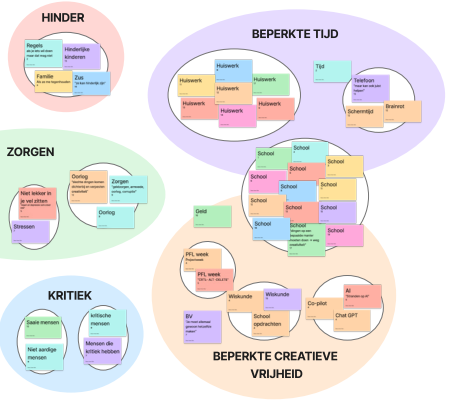


RESULTS CREATIVE ISLANDS

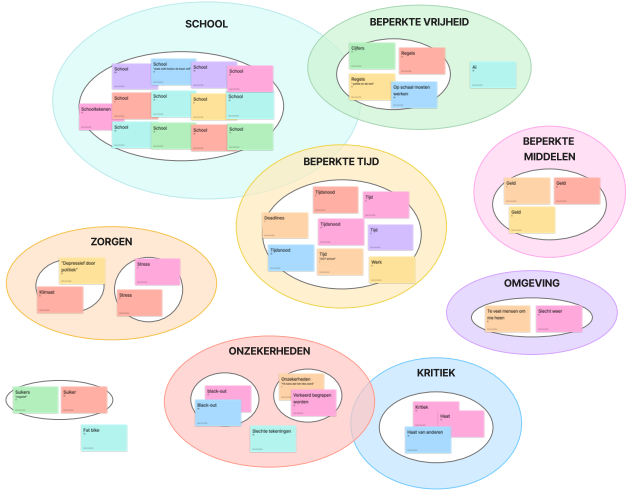


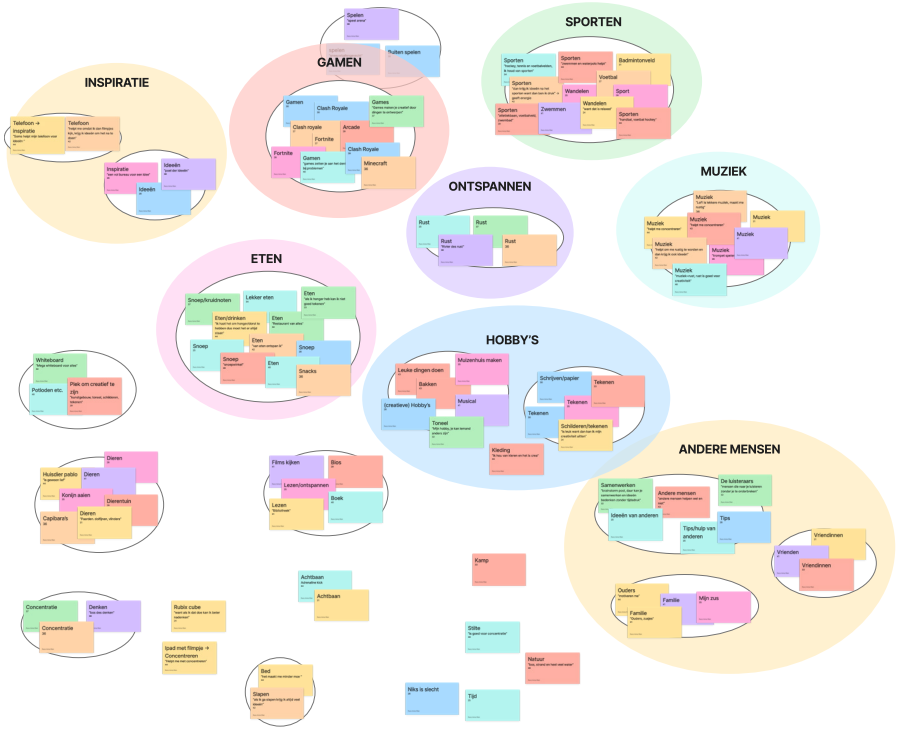
ENABLERS



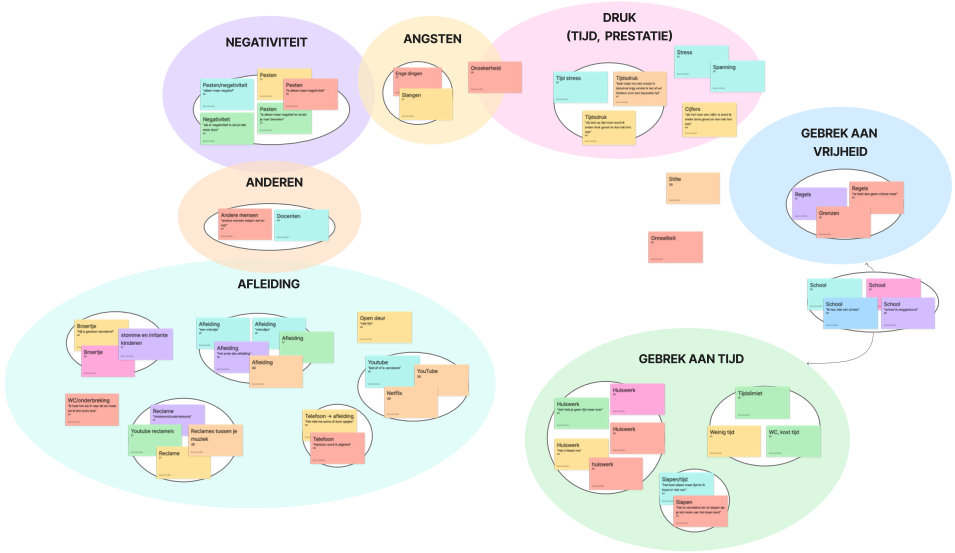


BLOCKERS





ENABLERS



BLOCKERS

RESULTS CSE FORMS

	1	2	3	4	5
Ik kan veel mogelijke oplossingen vor problemen bedenken	4	4	3	3	4
Ik kan veel antwoorden bedenken voor een moeilijk probleem	4	4	2	2	3
Ik kan problemen op verschillende manieren aanpakken	4	4	4	4	3
Als ik over een probleem nadenk kan ik veel veel verschillende ideeën bedenken	3	3	2	4	3
Ik kan met mijn vrienden praten over gekke ideeën en ze geloofwaardig laten klinken	5	5	3	3	4
Ik kan verhalen vertellen gebaseerd op dromen die ik heb gehad zelfs als ik stukjes van het verhaal moet	5	5	4	4	4
Ik kan snel met originele suggesties komen	3	3	2	4	3
Ik kan gloednieuwe ideeën bedenken	4	4	3	4	4
Score	4	4	2,875	3,5	3,5
Ik denk dat ik niet veel kan doen om mijn creativiteit te vergroten	3	3	1	3	1
Mijn creativiteit is iets aan mij wat ik niet veel kan veranderen	3	3	1	1	1
Om eerlijk te zijn denk ik niet dat ik echt kan veranderen hoe creatief ik ben	2	2	1	1	1
Ik kan nieuwe dingen leren maar ik heb niet de skills om mijn basis creativiteit te veranderen	2	2	1	4	1
Score	2,5	2,5	1	2,25	1
Reversed score to get positive mindset	2,5	2,5	4	2,75	4

6	7	8	9	10	11	12	13	14	15	16	17	18	19
4	4	3	3	4	4	3	3	3	4	3	5	3	4
3	3	3	4	3	4	2	3	3	3	3	4	2	3
3	4	4	2	3	3	3	2	3	4	4	5	4	4
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5	5	3	4	3	4	3	3	4	5	5	5	5	2
4	4	4	4	2	4	2	2	4	5	4	5	5	1
5	4	3	2	3	3	3	4	2	4	3	4	3	4
4	4	4	2	4	4	2	3	1	5	4	4	5	3
4	4	3,375	3	3,125	3,75	2,625	3	2,875	4,25	3,75	4,5	4	3,125
0	0	3	2	1	2	2	1	1	0	0	1	1	0
1	1	2	3	3	2	2	2	2	1	1	1	0	3
1	1	2	1	1	1	2	0	1	0	0	2	4	0
1	0	2	2	1	0	2	3	2	2,5	0,5	1	3	0
0,75	0,5	2,25	2	1,5	1,25	2	1,5	1,5	0,875	0,375	1,25	2	0,75
4,25	4,5	2,75	3	3,5	3,75	3	3,5	3,5	4,125	4,625	3,75	3	4,25

20	1	2	3	4	5	6	7	8	9	10	11	12	13
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2	1,5	4	3	3	2	3	2	2	1	1	1	0	3
2	0,5	1	3	3	3	1,5	1	2	2	2	1	1	3
2	1,875	2	2,75	2,75	2	2,125	1,5	2,25	2	1,75	1,25	0,75	2,75
3	3,125	3	2,25	2,25	3	2,875	3,5	2,75	3	3,25	3,75	4,25	2,25

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4,125	4,375	3,625	3,875	3,5	3,5	3,375	4,125	4,5	3,625	3,5	3	4	4,125
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2,5	2,5	2,75	3,125	1,5	2,75	2,5	3,75	3,5	1,5	2,75	1,375	2,25	1,75
2,5	2,5	2,25	1,875	3,5	2,25	2,5	1,25	1,5	3,5	2,25	3,625	2,75	3,25

28	29	30	31	32	33	34	35	36	37	38	39	40	41
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3,5	3,5	3,75	4,625	3,875	3,875	3,5	3,5	4,125	3,875	3,125	3,125	3,625	4,5
1,5	1	2	1	1	2	3	2	2	2	3,5	3	4	1,5
3	1	3	1,5	2	2	3	2	2	2	3	1	2	1
3,5	1	1	1	2	1	2	1	0	2	2	1	3	2
4	1	1	1	3	2,5	3	0,5	2	2	2	3	1	2
3	1	1,75	1,125	2	1,875	2,75	1,375	1,5	2	2,625	2	2,5	1,625
2	4	3,25	3,875	3	3,125	2,25	3,625	3,5	3	2,375	3	2,5	3,375

			GEMIDDEL
42	43	44	
3	4	4	**3,6875**
3	3	3	**3,34375**
4	3	3	**3,703125**
3	4	4	**3,6875**
5	4	5	**4,078125**
4	3	3	**3,6875**
3	4	3	**3,484375**
3	3	3	**3,5625**
3,5	3,5	3,5	**3,654297**
2,5	2	2	**1,945313**
2,5	1,5	1,5	**2,164063**
2	1	2	**1,6875**
2	1,5	2,5	**1,882813**
2,25	1,5	2	**1,919922**
2,75	3,5	3	**3,080078**

F. CO-CREATION SESSION MATERIALS

REALITY CHECK NEEDS

IK HEB HET GEVOEL NODIG DAT IK HET KAN ANDERS DURF IK NIET TE BEGINNEN

IK HEB ENERGIE NODIG OM CREATIEVE IDEEËN TE KRIJGEN

IK KAN PAS CREATIEF ZIJN ALS IK ME ONTSPANNEN EN RUSTIG VOEL

IK HEB VOORBEELDEN EN INSPIRATIE NODIG OM CREATIEF BEZIG TE ZIJN

IK HEB ANDEREN NODIG DIE ME HELPEN, TIPS GEVEN OF ME AANMOEDIGEN.

IK HEB EEN ONTSPANNEN EN FIJNE SFEER NODIG OM CREATIEF TE KUNNEN DENKEN.

IK HEB DE VRIJHEID NODIG OM ZELF KEUZES TE MAKEN TIJDENS CREATIEVE OPDRACHTEN.

IK HEB EEN RUSTIGE OMGEVING NODIG OM ME TE KUNNEN CONCENTREREN

IK HEB GENOEG TIJD NODIG OM IDEEËN TE VERKENNEN ZONDER HAAST.

IK HEB MATERIALEN EN HULPMIDDELEN NODIG OM MIJN IDEEËN ECHT UIT TE KUNNEN VOEREN.

NAAM :

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.

WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

01. MASTERY EXPERIENCES

CREATIEVE ACTIVITEITEN DIE PRECIES MOEILIJK GENOEG ZIJN MAAR WEL LUKKEN!

SUCCES ERVARINGEN OPDOEN



DOEN

02. EMBRACING RISKS

IETS NIEUWS MOGEN PROBEREN WAARVAN JE NIET WEET HOE HET UITPAKT.

ONZEKERHEID IS NORMAAL

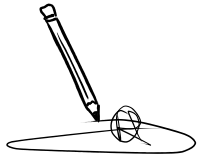


DOEN

03. ACCOUNTABILITY

VERANTWOORDELIJKHEID NEMEN VOOR WAT JE ZELF MAAKT.

NADENKEN OVER WAT JE BEDENKT



DOEN

04. VICARIOUS EXPERIENCES

ZIEN DAT IEMAND ZOALS JIJ HET OOK KAN.

LEREN DOOR TE ZIEN WAT ANDEREN DOEN



SOCIAAL

05. SOCIAL PERSUASION

AANMOEDIGING OF POSITIEVE WOORDEN VAN ANDEREN.

DE KRACHT VAN COMPLIMENTEN



SOCIAAL

06. LISTENING TO UNDERSTAND

MENSEN DIE ECHT LUISTEREN ZONDER TE OORDELEN OF TE ONDERBREKEN.

NAAR ELKAAR LUISTEREN



SOCIAAL

07. BRAVE SPACE

RUIMTE WAAR JE ZONDER SCHAAMTE MAG PROBEREN.

NIKS IS TE GEK



SOCIAAL

08. EMOTIONAL STATES

JE GEVOEL OP HET MOMENT: RUSTIG, BLIJ, GESPANNEN OF AFGELEID.

HOE JE JE VOELT HEEFT IMPACT OP JE CREATIVITEIT EN DAT IS OKE!



INTERN

09. VULNERABILITY

DURVEN LATEN ZIEN WAT NOG NIET AF IS.

HET HOEFT NIET IN ÉÉN KEER PERFECT TE ZIJN



INTERN

10. BEING PRESENT

ECHT MEEDOEN AAN DE OPDRACHTEN.

MET JE VOLLEDIGE AANDACHT ERBIJ ZIJN (FOCUS) ZORGT VOOR BETERE IDEEËN.



INTERN

11. CRITICAL THINKING

SAMEN KRITISCH DURVEN KIJKEN NAAR WAT WERKT EN WAT ANDERS KAN.

ECHTE FEEDBACK MAAKT JE IDEE ALLEEN MAAR STERKER



INTERN

12. TOOLS

TOEGANG TOT SPULLEN EN EEN FIJNE PLEK.

DINGEN IN JE OMGEVING DIE JOU HELPEN OM JE CREATIVITEIT TE UITEN



OMGEVING

13. AUTONOMY

VRIJHEID OM JE EIGEN KEUZES TE MAKEN.

GEEN REGELS, NIEMAND DIE BEPAALD WAT JIJ MOET DOEN



OMGEVING

14. EIGEN BOOSTER

.....

.....

.....

.....

.....

.....

G. CO-CREATION SESSION RESULTS

REATLITY CHECK NEEDS WITH VOTES

IK HEB ANDEREN NODIG DIE ME HELPEN, TIPS GEVEN OF ME AANMOEDIGEN.

IK HEB VOORBEELDEN EN INSPIRATIE NODIG OM CREATIEF BEZIG TE ZIJN

IK HEB EEN ONTSPANNEN EN FIJNE SFEER NODIG OM CREATIEF TE KUNNEN DENKEN.

IK HEB GENOEG TIJD NODIG OM IDEEËN TE VERKENNEN ZONDER HAAST.

IK HEB DE VRIJHEID NODIG OM ZELF KEUZES TE MAKEN TIJDENS CREATIEVE OPDRACHTEN.

IK HEB EEN RUSTIGE OMGEVING NODIG OM ME TE KUNNEN CONCENTREREN

IK HEB MATERIALEN EN HULPMIDDELEN NODIG OM MIJN IDEEËN ECHT UIT TE KUNNEN VOEREN.

IK KAN PAS CREATIEF ZIJN ALS IK ME ONTSPANNEN EN RUSTIG VOEL

IK HEB HET GEVOEL NODIG DAT IK HET KAN ANDERS DURF IK NIET TE BEGINNEN

CREATIVE CONFIDENCE BOOSTER RESULTS

02-9

NAAM :

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?
Omdat ik graag mijn eigen ideën uitvind, dat maken niet die van anderen en daar zijn verantwoordelijkheid voor nemen, dat leer ik van

WAAROM SPRAK DEZE KAART JOU AAN?
Omdat ik zo veel meer mogelijkheden heb in de manieren waarin mijn gedachtengang op kan gaan.

WAAROM SPRAK DEZE KAART JOU AAN?
Zodat er altijd uitleg ging is.

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
Als ik het anderen de guideline of de ideën voor een project moet uitdenken

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-7

NAAM :

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?
Ik kan het nodig om ideeen dat ik denken en dus ook ik kan ook ik kan ook ik kan ook ik kan

WAAROM SPRAK DEZE KAART JOU AAN?
Ik vind het erg om uit mezelf de eerste stap te maken, dus iemand anders dat zien doen geeft mij meer vertrouwen in mezelf

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-6

NAAM :

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-5

NAAM :

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?
het gaat me makkelijk om door de makkelijk meer ideeën

WAAROM SPRAK DEZE KAART JOU AAN?
Het heeft impact op hoeveel creativiteit ik heb en in hoe ver voor minder

WAAROM SPRAK DEZE KAART JOU AAN?
Bloggende creativiteit breder

WAAROM SPRAK DEZE KAART JOU AAN?

WAAROM SPRAK DEZE KAART JOU AAN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
bij mijn Stagedossier

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-1

NAAM: _____

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?
Omdat ik dan beter mijn creativiteit kan uiten. Dan ben ik vrijer in mijn creatieve proces.	Omdat je dan beter mijn creativiteit kan uiten. Dan ben ik vrijer in mijn creatieve proces.	Dan luisteren ze naar elkaar. Iedereen mag zijn verhaal doen. Dan ontstaat een goede sfeer.	Dan laat ik meer mensen mijn werk zien.	
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-3

NAAM: _____

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?
Want dan ben ik mijn eigen drijfveer daar.	Dan ben ik alleen af zonder schaamte te falen.	Ik heb de spullen redelijk overal waar ik dan ook ben te vinden	Dan kan ik fijn met veel in mijn	
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? gedronken, wanneer ik luisteren	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? in and range with ly een project	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? een with gelden, een veel gebied	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? fijn plezig gelden dij de tekenen	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?

02-2 3,5 2-6 3-2 2-3

NAAM: _____

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?
Omdat ik het leuk vind om mijn omgeving te kunnen beïnvloeden	Omdat ik het fijn vind om mijn werk te kunnen feedback laten ontvangen	Want dat helpt mij om mijn inspiratie. Wanneer ik 2e of 3e keer een opdracht krijg	Ik Spreek mezelf graag uit	Omdat ik het fijn vind om mijn plan... persoonlijk te maken.
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? Vorig jaar ongeveer ik film ging nodig	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? Iemand anders Eindpitch. Iemand	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? I. Toen ik stewardie voor TV1	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? mijn Je toonwerk	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? master prix, en diploma, 6 Vwo

02-4

NAAM: _____

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.



WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?	WAAROM SPRAK DEZE KAART JOU AAN?
				HET MOTIVEERT MIJ OM TE DENKEN "THAT I LOOK UP TO" DOET GEVOEL DAT MIJ OOK INSPIREERT
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?	WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN? Bij NEDERLANDS WISSELWERK, SELF-EXPRESSION

02-8

NAAM _____

KIES 5 KAARTEN DIE JOU HET MEEST HELPEN CREATIEF TE ZIJN EN SCHRIJF ERBIJ WAAROM.

06. LISTENING TO UNDERSTAND
MENSEN DIE ECHT LUISTEREN ZONDER TE OORDELEN OF TE ONDERBREKEN.
NAAR ELKAAR LUISTEREN



SOCIAAL

07. BRAVE SPACE
RUIMTE WAAR JE ZONDER SCHAAMTE MAG PROBEREN.
NIKS IS TE GEK



SOCIAAL

08. EMOTIONAL STATES
JE GEVOEL OP HET MOMENT: RUSTIG, BLIJ, GESPANNEN OF AFGELEID.
HOE JE JE VOELT HEEFT IMPACT OP JE CREATIVITEIT EN DAT IS OKE!



INTERN

09. TOOLS
TOEGANG TOT SPULLEN EN EEN FIJNE PLEK.
DINGEN IN JE OMGEVING DIE JOU HELPEN OM JE CREATIVITEIT TE UITEN



OMGEVING

10. AUTONOMY
VRIJHEID OM JE EIGEN KEUZES TE MAKEN.
GEEN REGELS, NIEMAND DIE BEPAALD WAT JIJ MOET DOEN



OMGEVING

WAAROM SPRAK DEZE KAART JOU AAN?
Omdat ik merk dat als je in een groep moet werken dat iedereen zijn eigen ideeën wil uiten maar dat is moeilijk

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
Donderdag met AAD

WAAROM SPRAK DEZE KAART JOU AAN?
Soms wil ik mijn ideeën of creaties niet laten zien en dat is wel een beetje vervelend

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
thuis een paar weken geleden

WAAROM SPRAK DEZE KAART JOU AAN?
Als ik gespannen ben of nervous dan kan ik niet zo goed nadenken en bij de andere emoties geeft dat mij juist een boost

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
Als ik boos ben dan gg ik vaak tekenen en dat helpt wel

WAAROM SPRAK DEZE KAART JOU AAN?
Als het te luidruchtig is of als er teveel mensen zijn kan ik niet goed concentreren

WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?
bij AAD ~~heb~~ krijg ik soms een beetje anxiety en dat is erg vervelend

WAAROM SPRAK DEZE KAART JOU AAN?
Het is niet fijn om een deadline te hebben en dat je niet hetzelfde moet doen

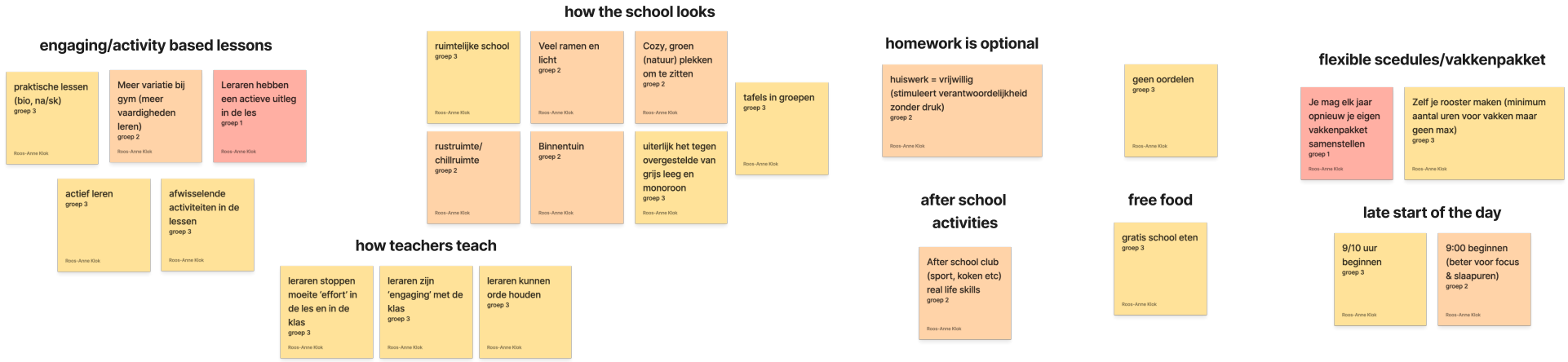
WANNEER HEB JE DIT VOOR HET LAATST NODIG GEHAD, OF HEB JE EEN VOORBEELD WAARBIJ DIT ZOU HELPEN?


10 uur - 9 uur
organise your time-table
with a minimum → flexible maximum
free school food menu
important
groups of tables
spacious
not everything the same
uiterlijk school
dag op school
practical lessons
actively learning
biology
physics
(physical)
opposite of
grey empty
repetive and
monotone
DE TOEKOMSTIGE
CREA-BEA SCHOOL
afwisselende activiteiten in de lessen
leraren
no judgement
effort into class and during class
is able to 'control' class
engaging with class


stimuleert
verantwoordel-
ijkheid
(zonder druk)
huiswerk=
vrijwillig
meer variatie
bij gym
(meer
vaardigheden
leren)
9.00
beginnen
beter voor
focus &
slaapuren
creative school
van de toekomst
rustruimte/
chillruimte
(boom?)
↳buiten
veel ramen/
licht
binnenruim
after school
club
(zelf kiezen/
oprichten)
↳sport/koken
cozy, groen/
natuur
↳plekjes om te
zitten


school van de
Creativiteit
uithoog actiever
eigen vakken pakket (elk jaar nieuw)

CREATIVE SCHOOL RESULTS



CO-CREATION RESULTS



H. VALIDATION SESSION MATERIALS

CSE FORMS VALIDATION

PRE-SPARK CSE

Naam: .....

Geef aan in hoeverre je denkt dat dit voor jou geldt bij deze opdracht.

Ik denk dat ik verschillende ideeën kan bedenken voor deze opdracht.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik denk dat ik meerdere mogelijke oplossingen kan bedenken.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik denk dat ik deze opdracht op verschillende manieren kan aanpakken.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik denk dat ik met ideeën kan komen ook als ik een beetje vastloop.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik vind mezelf creatief

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

POST-SPARK CSE

Naam: .....

Terugkijkend op de opdracht die je net hebt gedaan, hoe voel je je nu?

Ik kon verschillende ideeën bedenken tijdens deze opdracht.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik kon meerdere mogelijke oplossingen bedenken.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik kon deze opdracht op verschillende manieren aanpakken.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Als ik vastliep, kon ik weer met ideeën komen.

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

Ik vind mezelf creatief

helemaal niet | een beetje | neutraal/ soms | vaak | altijd

1. Lukte het om de opdracht binnen de tijd af te krijgen?

- ○ Ja, makkelijk
- ○ Net aan
- ○ Nee, ik had meer tijd nodig

2. Was de opdracht meteen duidelijk wat je moest doen?

- ○ Ja
- ○ Nee, omdat .....

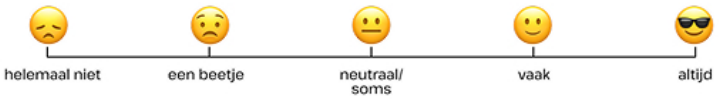
Wat zou het voor jou duidelijker maken?

.....

.....

.....

3. Voelde je je creatief tijdens deze opdracht?



4. Wat vond je van deze opdracht?

.....

.....

.....

5. Zou je het leuk vinden om vaker dit soort opdrachten te doen in de les (ook bij andere vakken) ?

.....

.....

.....

6. Wat voor opdrachten zou je willen doen?

.....

.....

.....

.....

.....

.....

.....

7. Is er nog iets anders wat je kwijt wil?

.....

.....

.....

STORY TIME SPARK MATERIALS

TITEL:

STORY TIME

NAMEN:

TITEL:

STORY TIME

NAMEN:

HET SCRIPT - Bedenk eerst waar je verhaal over gaat

Start	**Actie**	**Resultaten**	**Finish**
Wat willen jullie te weten komen	Hoe gaan jullie dat onderzoeken?	Wat voor soort info is er?	Wat kunnen jullie met die info

JE TOOLBOX - Tips die je strip nog echter maken!

Gebruik deze elementen om je verhaal duidelijk te maken:



TIP - Je hoeft geen pro te zijn om een verhaal te vertellen!

De makkelijkste poppetjes zijn genoeg om te snappen wat er gebeurd!



I. VALIDATION SESSION RESULTS

CSE FORMS VALIDATION + FINAL REFLECTION STUDENTS

VALIDATIE

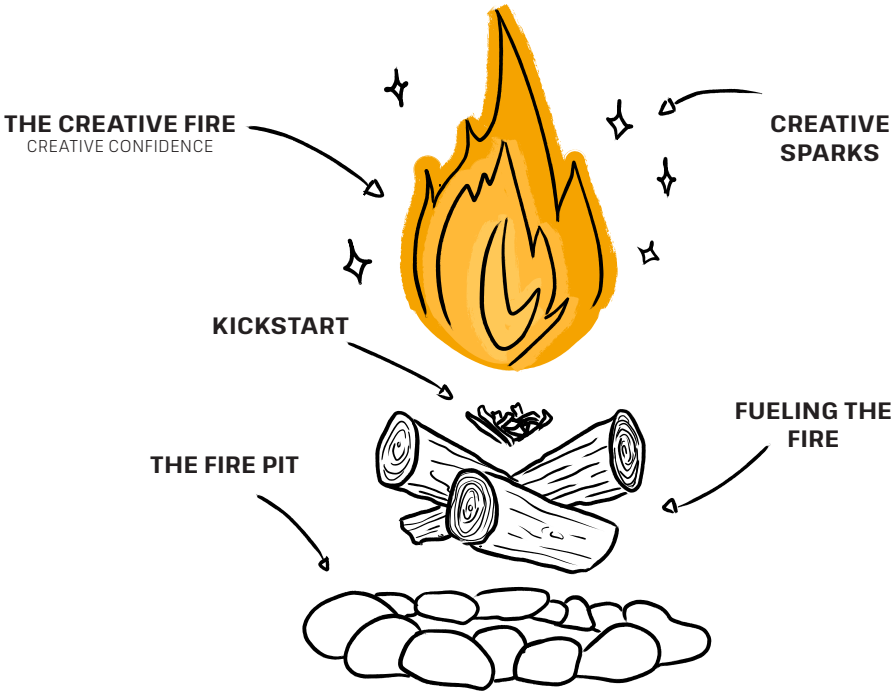
PRE CREATIVE ACTIVITY								
Ik denk dat ik verschillende ideeën kan bedenken voor deze opdracht	3	3	4	4	5	3	4	4
Ik denk dat ik meerdere mogelijke oplossingen kan bedenken	3	3,5	4	3	4	4	3	4
Ik denk dat ik deze opdracht op verschillende manieren kan aanpakken	4	3,5	4	4	5	5	4	3
Ik denk dat ik met ideeën kan komen ook als ik een beetje vastloop	4	3	3	3	4	3	3	3
Ik vind mezelf creatief	3,5	2	4	4	5	2	4	4
	3,5	3	3,8	3,6	4,6	3,4	3,6	3,6
POST CREATIVE ACTIVITY								
Ik kon verschillende ideeën kan bedenken tijdens deze opdracht	4	4	2	4	4	4	4	4
Ik kon meerdere mogelijke oplossingen bedenken	4	4	3	4	4	4	3	3
Ik kon deze opdracht op verschillende manieren aanpakken	5	4	3	5	5	4	4	4
Als ik vast liep, kon ik ook weer met ideeën komen	4	4	3	5	5	5	3	4
Ik vind mezelf creatief	4	3	3	5	5	3	4	4
	4,2	3,8	2,8	4,6	4,6	4	3,6	3,8
Lukte het om de opdracht af te krijgen?	nee ik had meer tijd nodig	nee ik had meer tijd nodig	nee ik had meer tijd nodig	nee ik had meer tijd nodig	nee ik had meer tijd nodig	nee ik had meer tijd nodig	net aan	nee ik had meer tijd nodig
Was de opdracht meteen duidelijk voor wat je moest doen?	ja	ja	ja	ja	ja	ja	ja	ja
Wat zou het nog duidelijker maken voor jou	ik vond het verhaal maken wel lastig			als we wat meer tijd kregen of de tijd duidelijk aangegeven word	niks, was goed duidelijk	uitleg van hoe werkt snelheid zodat je dat op kan schrijven		niks
Voelde je je creatief tijdens deze opdracht	5	3,5	3	5	5	4	4	4
Wat vond je van deze opdracht	leuk	best leuk	leuk ik houd wel van creatief bezig zijn	leuk	leuk	prima	grappig want je verzint gewoon iets	leuk
Zou je het leuk vinden om vaker dit soort opdrachten te doen in de les (ook bij andere vakken?	ja	noumisschien wel maar niet te veel	ja	ja	ja	ja	ja want het is heel praktisch om de opdracht en het thema door daar te hebben	ja
Wat voor opdrachten zou je dan willen doen	tekenen/creatief	?	ik vind veel creatiefs leuk , dit is niet wat u vroeg maar ik wist het niet	dingen moeten ontwerpen/maken	tekenen	voetballen	iets zoals dit	opdrachten zoals dit
Is er nog iets anders wat je kwijt wilt?	nope	nee	nee	nee	nope	nee	nee	nee
Wat heeft je verrast tijdens de opdracht?	de tijd vloog voorbij	dat het leuk was	de tijd	Dat je toch best wel veel tijd nodig hebt om een mooie strip te maken	hoe goed ik rofy en rufus kan tekenen	Dat je lang nodig hebt om een stripverhaal te maken	Dat het niet heel lastig is en heht ook niet heel mooi hoeft te worden	het was leuk dat je zelf het mocht ontwerpen en dat er geen regels waren

5	5	3	4	3	5	3	4	3	4
5	5	3	2	3	5	3	4	5	4
5	5	3	3	4	5	3	4	4	3
4	5	3	1	3	4	2	3	3	3
4	1	4	5	5	5	3	3	1	3
4,6	4,2	3,2	3	3,6	4,8	2,8	3,6	3,2	3,4
4	4	4	3	4	5	5	4	4	4
4	3	4	3	4	5	5	4	2	4
4	5	4	3	3	4	3	5	3	4
4	5	4	2	4	5	5	3	1	4
5	2	4	5	5	4	4	4	1	3
4,2	3,8	4	3,2	4	4,6	4,4	4	2,2	3,8
nee ik had meer tijd nodig	nee ik had meer tijd nodig	net aan	net aan	net aan	nee ik had meer tijd nodig	Nee ik had meer tijd nodig	nee ik had meer tijd nodig	Nee ik had meer tijd nodig	nee ik had meer tijd nodig
ja	ja	nee omdat de opdracht een beetje complex was "snelheid uitleggen"	nee omdat de opdracht behoorlijk complex kan worden als je te diep nadenkt	ja	ja	Ja	ja	ja	ja
	niks	een voorbeeld van een eerdere strip		meer tijd	niks	niks	niks, het was helemaal duidelijk	een voorbeeld	niks
5	3	5	4	5	5	5	4	1	4
te doen	leuk	best leuk	wel grappig	heel leuk	leuk	leuk	Fantastiscvh, je mocht heel veel fantasie gebruiken	wel grappig	leuk
ja	ja	ja af en toe	nee dan is het niet meer leuk op een keer	ja	ja zeker	ja	ja	Nee ik had meer tijd nodig	ja
3D printen	dit	op een creatieve manier met het onderwerp aan de slag gaan	gewoon normale	tekenen	creatieve opdrachten in plaats van saai uit het boek	creatieve opdrachten	strips	dingen zonder tekenen, meer verhalen shrijven bijv in andere talen	ik weet het niet
nee	nee	de tijd ging wel heel snel , iets meer zou fijn zijn	nope	nee	nee	nee dankje	nee	nee	nee
het duurde langer dan verwacht	hoe ver we zijn gekomen	Het is best moeilijk snelheid uit te leggen	Dat je over elk onderwerp een verhaal kan schrijven zonder dat je veel over het onderwerp weet	Dat we een strip gingen maken	de creativiteit	onze creativiteit	Het mocht van alles zijn, er waren geen regels behalve dat het over snelheid berekenen moet doen	hoe weinig tijd je had	Dat het leuk was
4	4	4	4	3	4	4	4	4	4
5	5	4	4	4	3	4	3	4	4
5	4	4	4	3	4	3	4	4	4
4	3	3	4	4	4	4	4	5	3
1	4	4	3	2	5	4	5	5	4
3,8	4	3,8	3,8	3,2	4	3,8	4	4,4	3,8
4	3	4	3	5	4	4	5	4	4
3	4	4	3	5	4	4	5	3	4
5	4	4	4	4	4	4	4	4	4
5	3,5	4	3	4	4	4	4	5	4
2	5	4	3	3	5	4	5	5	5
3,8	3,9	4	3,2	4,2	4,2	4	4,6	4,2	4,2
nee ik had meer tijd nodig	nee ik had meer tijd nodig	net aan	nee ik had meer tijd nodig	nee ik had meer tijd nodig	net aan	Ja makkelijk	net aan	ja makkelijk	net aan
ja	ja	Ja	ja	ja	ja	Ja	ja	ja	ja
	niks het was volledig duidelijk			stappenplan over wat van het onderzoek dat je moest tekenen			het was al duidelijk	meer uitleg	
4	4	4	3	3	5	5	5	5	5
leuk omdat het creatief was	leuk bedacht, jammer dat je weinig tijd voor hebt	leuk	moeilijk omdat we niet veel tijd hadden	anders dan verwacht, want ik dacht dat we een soort test moesten doen	leuk	Ik vond het leuk	wel leuk	duidelijk want nu weten we wat we gaan onderzoeken voor O&O	leuk, zo leerde ik mijn teamgenoten meer kennen
ja	zeker, dat zorgt voor afwisseling en je verwerkt de lesstof op een leuke manier	ja	ligt er aan wat voor opdrachten	ja	ja want je krijgt geen huiswerk	Jazeker	Jazeker	ja	ja
iets doen in plaats van leren en opdrachten uit het boek maken	soortgelijke opdrachten, ik vind alle opdrachten waarbij je creatief bezig bent erg leuk	leuke	een leuke poster maken of een flyer	opdrachten waarbij je kan bewegen	opdrachten waarbij je kan bewegeb	creatieve opdrachten	Meer creatieve opdrachten zoals deze		samenwerkopdrachten of tekenopdrachten
	nee	nee	nee	nee	nee	nee	nee	nee	nee
Dat het best mooi is geworden	De tijd ging eigenlijk veel sneller dan verwacht, nadat ik het verhaal had bedacht was de tijd al bijna over	Dat ik niet weet wat me verbaast	De snelheid dat je het moest maken	Dat de tijd veel sneller ging dan gedacht	Dat ik mooi kon tekenen	Er was niks verbazend	Dat nike ons sponsort	Dat we moesten tekenen	Dat er ruzie was tijdens het tekenen

5	4	4	4	4
4	4	4	4	3
3	4	3	3	4
4	3	4	3	3
5	4	4	2	4
4,2	3,8	3,8	3,2	3,6
4	4	4	3	4
5	5	3	2	4
5	5	4	3	4
4	5	3	4	4
5	5	4	1	4
4,6	4,8	3,6	2,6	4
Ja makkelijk	Net aan	nee ik had meer tijd nodig	net aan	nee, ik had meer tijd nodig
ja	ja	ja	ja	ja
Het was al heel duidelijk	Het was al best wel duidelijk	als ik een stappenplan er bij had		weet ik niet
5	5	3	1	4
Heel leuk ik kon lekker creatief zijn	heel leuk	leuk	leuk maar wel moeilijk	verrassend
		soms, want ik vind het leuker om iets te maken		
Jaaaaaa	Ja! Heel erg graag		ja	ja graag
Ik vind alles wel leuk maar ik hou van huizen ontwerpen	Ik vind veel leuk vooral er creatief bij kunnen zijn (en dat het geen huiswerk word)	meer tekenen met meer tijd	opdrachten waar ik creatiever van word	teken opdrachten, kleine optische illusies
niet persee	niet echt	nee	nee	nee
Dat ik best een beetje bazig ben	Ik vond het verrassend hoe makkelijk het eigenlijk ging	Dat tijd inschatten slecht gaat	dat het best moeilijk was	Dat we moesten tekenen

4	4	4	3	4
4	4	4	4	4
4	3	3	3	3
3	3	3	2	4
5	3	5	4	3
4	3,4	3,8	3,2	3,6
4	4	5	4	4
3	3	4	3	5
3	4	4	4	4
4	4	4	4	3
5	3	5	4	4
3,8	3,6	4,4	3,8	4
ja makkelijk	ja makkelijk	net aan	net aan	Ja makkelijk
ja	nee, er was niet veel uitgelegd	ja	ja	ja
	meer uitleg	als het letterlijk op het bord stond		
5	3	4	3	4
leuk	handig voor het onderzoek	ik vond het leuk	leuk	leuk
ai	ja, het maakt je planning duidelijker	ja	ja hoor	nee
		opdracht over hoe je goed kan samenwerken (mentorles)		
weet niet			nweet niet	posters maken
	nee	nee		neh
			Dat ik een mooie stickman kon tekenen	
?	Dat we een strip moesten tekenen	Het was best moeilijk		Dat ik beter kon tekenen dan verwacht

				Gemiddeld
4	3	4	3	3,857143
5	3	5	4	3,892857
4	3	3	4	3,75
3	2	3	4	3,309524
4	2	5	3	3,630952
4	2,6	4	3,6	3,688095
4	4	4	4	3,97619
5	4	4	3	3,785714
4	3	4	3	3,97619
4	4	5	4	3,964286
4	2	5	3	3,880952
4,2	3,4	4,4	3,4	3,916667
net aan	nee, ik had meer tijd nodig	ja makkelijk	ja makkelijk	
ja	ja	ja	ja	
niks het was goed genoeg		of je wel of niet moest samenwerken		
4	4	5	4	
leuk	leuk bedacht & creatief	grappig, omdat je mocht tekenen	leuk	
ja ik vind het wel leuk	jae, ik had meer tijd nodig	ja want dit is beter dan leren	ja	
ik vind muzikale opdrachten wel leuk, ik ben goed in zingen	hetzelfde	tekenen , knutselen, legoën	tekenen, knutselen	
nee het was leuk om te doen bedankt	nee	nee	nee	
Dat het met een opdracht van O&O te maken had	Dat we een strip moesten maken	Dat we heel veel stappen hebben	Dat we veel stappen hebben en dat ik niet goed kan tekenen	



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MSc Design for Interaction
Graduation project
Roos-Anne Klok