



STUDY BREAK TIME!

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Exploring Interactions, Cycles 1-3
Final Presentation
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Study Break Time - Design Process EI 2019-2020

Define the situation



Define the context and target user group



Cycle 1: Research through online questionnaire and generative session



What activities do you usually do when you see study breaks?

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Goals	Thinks
<ul style="list-style-type: none"> 1. I think that students should have more study breaks during the day. 2. I think that students should have more study breaks during the day. 3. I think that students should have more study breaks during the day. 4. I think that students should have more study breaks during the day. 5. I think that students should have more study breaks during the day. 6. I think that students should have more study breaks during the day. 7. I think that students should have more study breaks during the day. 8. I think that students should have more study breaks during the day. 9. I think that students should have more study breaks during the day. 10. I think that students should have more study breaks during the day. 	<ul style="list-style-type: none"> 1. I think that students should have more study breaks during the day. 2. I think that students should have more study breaks during the day. 3. I think that students should have more study breaks during the day. 4. I think that students should have more study breaks during the day. 5. I think that students should have more study breaks during the day. 6. I think that students should have more study breaks during the day. 7. I think that students should have more study breaks during the day. 8. I think that students should have more study breaks during the day. 9. I think that students should have more study breaks during the day. 10. I think that students should have more study breaks during the day.
Does	Feels
<ul style="list-style-type: none"> 1. I think that students should have more study breaks during the day. 2. I think that students should have more study breaks during the day. 3. I think that students should have more study breaks during the day. 4. I think that students should have more study breaks during the day. 5. I think that students should have more study breaks during the day. 6. I think that students should have more study breaks during the day. 7. I think that students should have more study breaks during the day. 8. I think that students should have more study breaks during the day. 9. I think that students should have more study breaks during the day. 10. I think that students should have more study breaks during the day. 	<ul style="list-style-type: none"> 1. I think that students should have more study breaks during the day. 2. I think that students should have more study breaks during the day. 3. I think that students should have more study breaks during the day. 4. I think that students should have more study breaks during the day. 5. I think that students should have more study breaks during the day. 6. I think that students should have more study breaks during the day. 7. I think that students should have more study breaks during the day. 8. I think that students should have more study breaks during the day. 9. I think that students should have more study breaks during the day. 10. I think that students should have more study breaks during the day.

Cycle 2: Analyze Generative Session

Final Design Goal and Interaction Vision

DESIGN GOAL:

I want to help teenage (14-18 year old) students at the Scholengemeente Delfland high school take better, healthier, and more meaningful study breaks.

INTERACTION VISION:

Interacting with my design should feel like you're on a road trip where you suddenly have to fill up your almost empty car gas tank.

Conduct Participatory Design Session



Build rough prototypes and test -- Evaluate the Ideas



Cycle 3: Create two final concepts and evaluate them



Analyze and take Feedback into consideration

What is your overall feedback on your work to be honest?

Did you accomplish everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

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How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

How long did it take you to complete everything on your team left to do and... YES / SOME OF NO

Present Final Design!

5 MAIN RESEARCH GOALS AND QUESTIONS FOR EI

- 1.) **Observe current interactions** between students and their study breaks
 - a.) How can we make a private activity (like a study break) become more public?
 - b.) How can we encourage students to get “out of their bubble”?

- 2.) Conduct proper **user research**
 - a.) Questionnaires, generative sessions, etc.
 - b.) From here, what is my final “design goal”? “Interaction Vision”?
 - c.) Let the users design a bit! Host a participatory design session

- 3.) **Analyze results** from user research

- 4.) Create and iterate upon **low-fidelity prototypes**
 - a.) Test and then iterate again!

- 5.) Build and evaluate my prototype/**final design!**
 - a.) Are there any future recommendations my users will come up with?

Two main problematic behaviors students exhibit when in a study session:

- 1.) They study for too many hours and **take NO study break**. Studies have shown that brain breaks can help them improve both attention and focus.
- 2.) If they do take a study break, it is **usually spent on their phone, computer, watching TV, playing video games**, etc. This leads to a study break that ends up lasting one hour... or even more.



Started working with uni students.... but.....



Why not work with **younger students**? Like... **high schoolers**? The younger we start having them **form better study** habits, the better, right?

Before entering college, they should have a good sense of being able to **manage their time wisely** and have basic **organizational skills** -- maybe I could make a product that could help guide them so that they can reach their goals!



DESIGN GOAL

I want to help teenage (14-18 year old) high school students that work at their home to take better, healthier, and more meaningful study breaks.

INTERACTION VISION

Interacting with my design should feel like you're on a road trip where you suddenly have to **fill up** your almost empty car gas tank.



Urgent



Energetic



Refreshed



Satisfied



FIRST ROUND OF RESEARCH QUESTIONS

01.

How can a student take **periodic** study breaks and essentially make it a part of their study routine?

02.

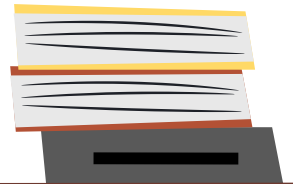
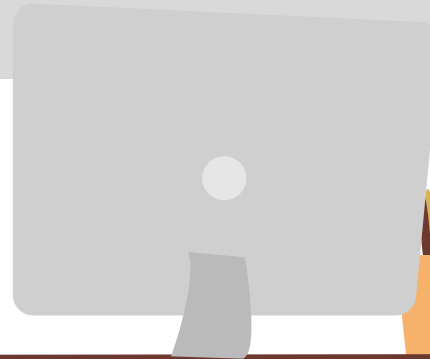
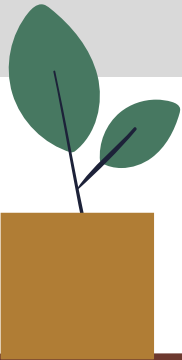
What are the most effective **activities** that will leave the student **energized** after they take part in it?

03.

What are the **effects** of using a **phone** and/or a **computer** during a study break?

04.

How do study breaks boost a student's **productivity level**?



TARGET USER GROUP: HIGH SCHOOLERS



- **Visited** and looked around the high school (3 floors) and came across 4 students
- **Informal interview**
 - “Everyone goes to study at home.”
- Left a **flyer** with a QR code so that high schoolers could fill in the online questionnaire

What activities do you usually do when you take study breaks?

39 responses

Browse Instagram

go in insta or snap

TV

Eat, watch Netflix.

I'm going to eat when I have a study break

Catch up on some reading material, watch some YouTube videos, or take naps

Eating, sleeping, playing video games, etc.

With dogs or using phone

Homework

Watch a quick video, music, or play a game

72%*

of high school students had **“social media/TV/Internet”** in their answer

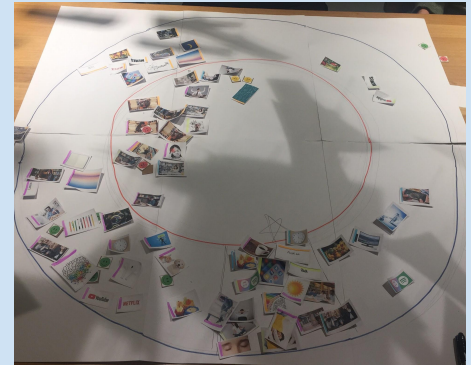
*glad I'll be working with this user group now!

GENERATIVE SESSION

WITH HIGH SCHOOL STUDENTS



1. **“Intro activity”**: to feel comfortable in the co-creating environment
2. **Mindmaps**: map out their studying/study breaks and activities that energized them.
3. **Collages**: a free form collage using “emotional toolkits”
4. **Storyline**: a study session timeline exercise
5. **Group activity**: represents their current (inner circle) and ideal study breaks (outer circle).



ANALYSIS FROM GENERATIVE SESSION

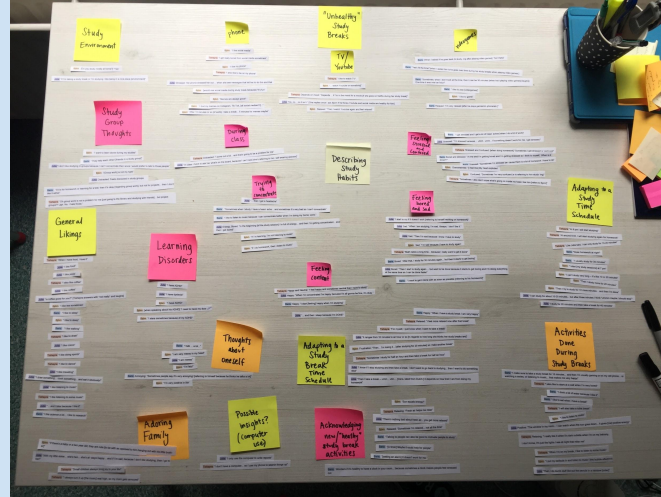
Empathy Map

Says	Thinks
<ol style="list-style-type: none"> 1.) "I talk ... a lot..." 2.) "I like to play [videogames]" 3.) "I like to sleep" 4.) "Sometimes when I study I have a headache... and sometimes it's very bad so I can't concentrate" 5.) "I usually study for 30 minutes" 6.) "I want to get it done with as soon as possible [referring to his homework]" 7.) "I get stressed and I get a lot of headaches [when I do a lot of work]" 8.) "I like walking" 9.) "If it's for homework or learning for a test, then it's okay [regarding group work], but not for projects... then I don't like it either" 10.) "They help each other! [friends in a study group]" 	<ol style="list-style-type: none"> 1.) "I like to listen to music because I can concentrate better when I'm doing my homework" 2.) "Setting an alarm! It doesn't work for me" 3.) "[A timer] Maybe it could help for people" 4.) "Talking to people can also be good to motivate people to study" 5.) Wonders if it's healthy to have a clock in your room... because sometimes a clock makes people feel stressed out
Does	Feels
<ol style="list-style-type: none"> 1.) "I like to eat when I have a break" 2.) "I like science a lot... I like to research" 3.) "I drink a lot of water because I like it" 4.) "Does homework at night" 5.) "I make sure to take a study break for 15 minutes... and then I'm usually gaming or on my cell phone... or watching a series, or listening to music... that makes me very happy" 6.) "Yes! All the time!" [when I asked him is he goes over time during his study breaks when playing video games.] 7.) "Sometimes, when I don't look at the time, then it can be 30 minutes [when he's playing video games] [laughs]. One time it was over an hour!" 8.) [When I asked if he goes back to studying after playing video games]: "No! Haha" 	<ol style="list-style-type: none"> 1.) Annoying: "Sometimes people say it's very annoying! [referring to himself because he thinks he talks a lot]" 2.) Stressed: "Sometimes I'm stressed because there is a lot of homework I have to do" 3.) Relaxed: "I'm very relaxed [after he plays games/on phone/etc.]" 4.) Bored: "After that, I study for 30 minutes again... but then it starts to get boring" 5.) Happy: "I start [feeling] happy when I'm studying" 6.) Happy: "When I have a study break I am very happy" 7.) Happy: "When I have a study break I'm very happy" 8.) Bored and stressed: "At the end I'm getting bored and I'm getting stressed so I think to myself: 'When is it done!'"

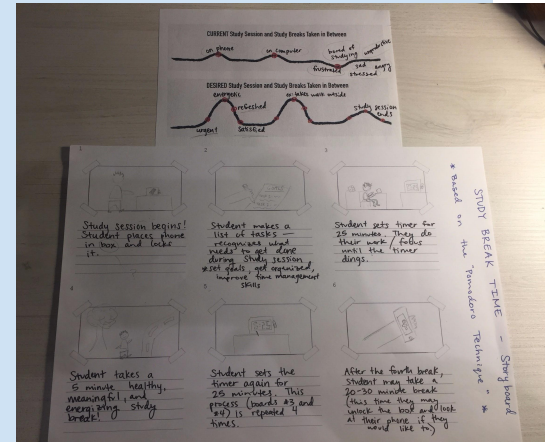


Baris

Affinity Diagram



Storyboarding



SECOND ROUND OF RESEARCH QUESTIONS

01.

What are the most effective **activities** that will leave the student feeling **energized**?

02.

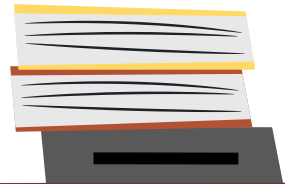
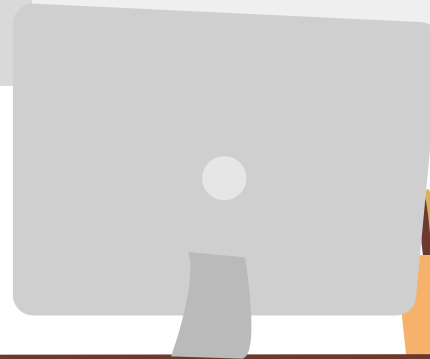
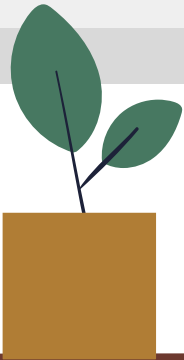
What sort of **interactive elements** can I make use of in the low-fidelity prototypes?

03.

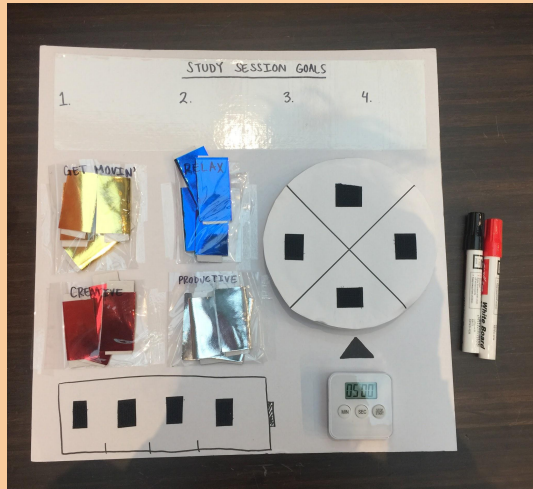
How can students learn to better apply **self-control/self-discipline**?

04.

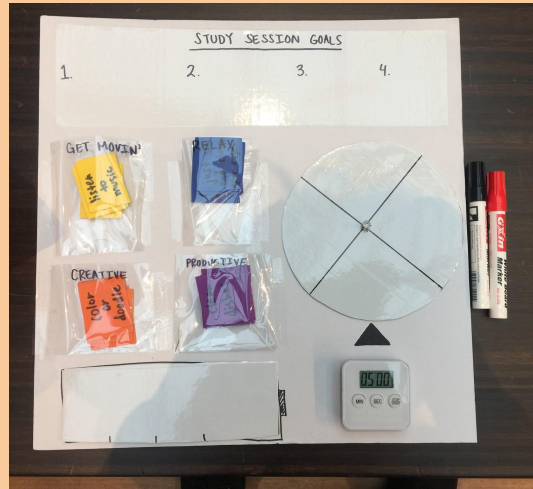
How can I promote the "**Pomodoro Technique**" through my low-fidelity prototype?"



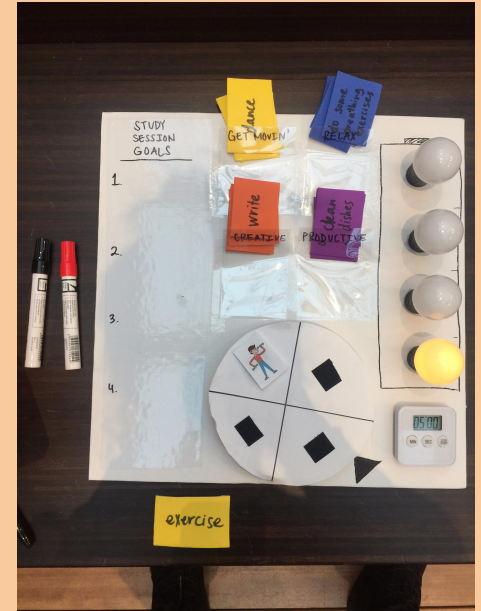
SOME FINAL LOW-FIDELITY PROTOTYPE CONCEPTS



PROTOTYPE 3



PROTOTYPE 4



PROTOTYPE 5



"OH WOW!"



THIRD ROUND OF RESEARCH QUESTIONS

01.

What is more popular amongst high school students? A **customizable** or **random** element to the prototype?

02.

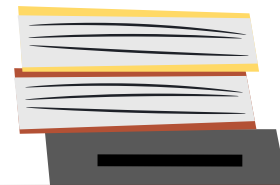
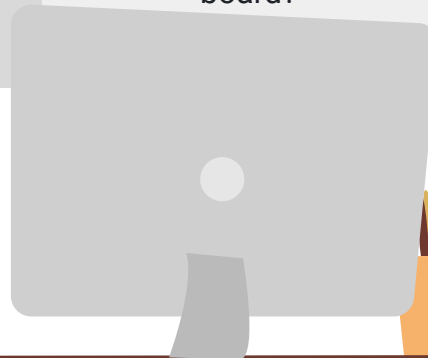
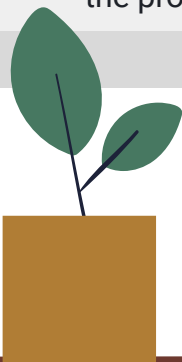
How can I **foster the interactions** with my board and connect them to my **IV**?

03.

How will **working with/testing with a new high schooler** affect the overall usefulness of the board?

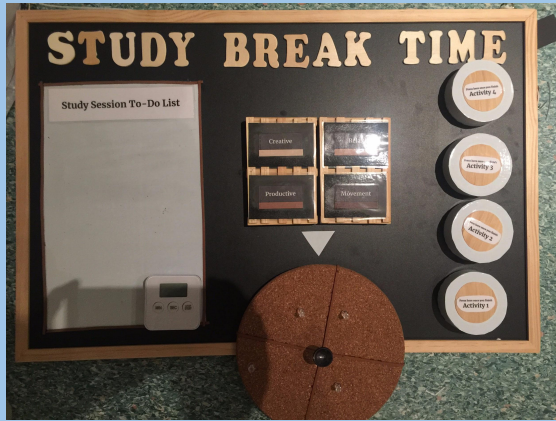
04.

Will **one week of user testing** be enough to form some sort of study break habit?

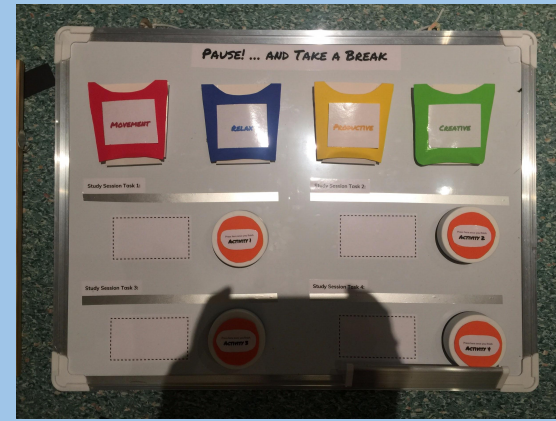


BUILDING TWO FINAL CONCEPTS

With these two concept ideas, I hope to test this extra research question I have:



CONCEPT 1: "BLACKBOARD"

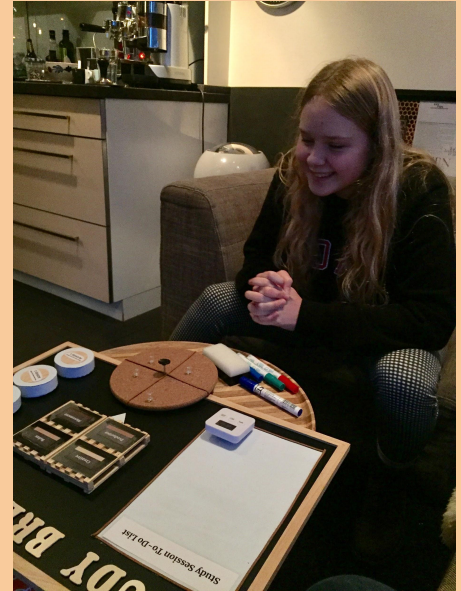


CONCEPT 2: "WHITEBOARD"

Do students like to have a “random” (see concept 1’s spinning wheel) or “customizable” (see concept 2’s magnetic dotted box) element to the design of the board?

UNMODERATED USABILITY TESTING

- 5 users = 4 original high schoolers + 1 new high schooler
- The schedule was as follows:
 - Week 1 = Dec. 13th - Dec. 21st (Julia BB, Björn WB)
 - Week 2 = Dec. 21st - Dec. 28th (Julia WB, Björn BB)
 - Week 3 = Dec. 28th - Jan. 4th (Julia WB again, Björn BB again)
 - I was sick during that week so I had them continue to use their week 2 boards
 - Week 4 = Jan. 5th - Jan 11th (Tishayra BB, Baris WB)
 - Week 5 = Jan. 12th - Jan 18th (Final Concept with Kaitlyn, BB)



SELF-EVALUATION JOURNALS



Today's Date: _____

Did you use the board today? Circle one: YES // NO

If no, why not?: _____

If yes, what were some of the "Study Session To-Do List" tasks that you wrote down on the whiteboard?: _____

Can you please take a picture of the board and send it to Milla via WhatsApp?

Which break activities did you pick to do today?: _____

Did you accomplish **everything** on your task list? Circle one: YES // SOME // NO

How long did it take you to accomplish everything on your task list?: _____

How long did your study breaks last?: _____

Did you go **back to studying** after your study breaks? Circle one: YES // SOMETIMES // NO

Did you use your **phone** anytime during your study session time or study break? Circle one: YES // A LITTLE // NO

Did you use your **computer/play video games/watch TV** anytime during your study session time or study break? Circle one: YES // A LITTLE // NO

Fill in the circle that best describes your feelings **while** using the board and studying/doing homework:

Focused 0 0 0 0 0 0 0 0 0 0 Not Focused
Not productive 0 0 0 0 0 0 0 0 0 0 Productive
Stressed 0 0 0 0 0 0 0 0 0 0 Not Stressed
Organized 0 0 0 0 0 0 0 0 0 0 Not Organized
Bored 0 0 0 0 0 0 0 0 0 0 Not Bored
Self-control 0 0 0 0 0 0 0 0 0 0 Lost control

Circle the face that best describes your mood/overall experience **after** you finished using the board.

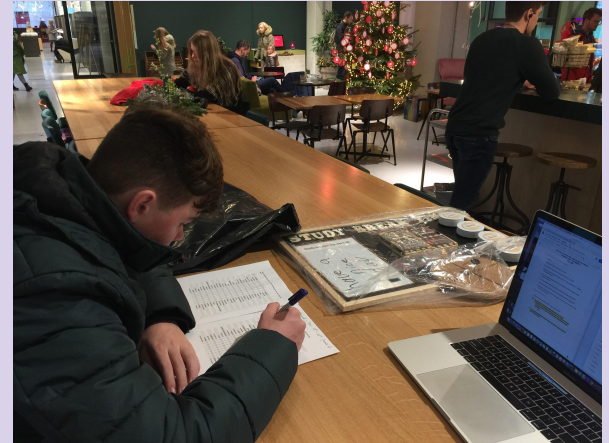
Since this would be an unmoderated usability test, I decided to give them **journals to self-evaluate themselves** and how/when they used the board throughout the week.

Basically, if the student had the board for 7 days, the above pictures show what kinds of questions the user would go through and answer if they used the board for 1 out of the 7 days.

POST-STUDY ANALYSIS

Once each high schooler was done testing their board for the week, I used **4 main methods** to collect qualitative and quantitative data ... and later analyze and evaluate those usability tests:

- 1.) Conducted a **short interview**
- 2.) Went through their **journals**
- 3.) Handed out a **User Experience Questionnaire**
- 4.) Lastly, gave an **IV Quality Assessment**



INTERVIEW INSIGHTS

Interviews regarding blackboard concept:

- Björn
 - Used during holiday break a little
 - Showed the biggest change in terms of what he spends time doing during his breaks
 - Successful “nudging”!
- Tishayra
 - “It helped. I was more excited in the beginning, but in general, it’s amazing to have.”
- Julia
 - “Movement” was her favorite category.



Interviews regarding whiteboard concept:

- Baris
 - Likes that he has a “plan” and “can see what he has to get done”
- Julia
 - Found that the colors of the pockets were “too bright”
 - She also bluntly said, “I didn’t like this board”
- Björn
 - When asked what he would like to see added or adjusted to the board, he replied with “the spinning wheel!”

When prompted with the question, “Which board, out of the two, did you like the most?” the answer was the same amongst everyone:

“THE BLACKBOARD!”

SELF-EVALUATION JOURNAL ANALYSIS

Why students did not use the board everyday were due to four possible reasons.

- 1.) They **did not have any homework** to do or finish
- 2.) They were **sick or busy** with other life happenings
- 3.) They had **hobbies** they took part in during the rest of the day
- 4.) ... or some other reason(s)? Maybe they just forgot to document it in the journals?

Perhaps the reason that was said amongst **all** of the high schooler, including the new one, was that **they just did not have any homework to do.**

SELF-EVALUATION JOURNAL ANALYSIS

USER:	Julia	Björn	Tishayra	Kaitlyn	Julia	Björn	Baris
BOARD USED:	"BLACKBOARD"				"WHITEBOARD"		
DAYS USED:	4/8	? Don't know specific days because he didn't write in journal (so refer to interview)	2/7 (had board during Christmas break)	3/7	2/15	2/8	3/15 (had board during Christmas break + extra time)
TO-DO LIST/TASKS:	English, math, reports, HW for economy, HW for cooking class	"Used the board only for activities"	English, studying for Dutch	English, health care, math, beauty, biology	Economy, math, cooking,	Dutch, history, geography, English, math	Math
STUDY BREAK ACTIVITIES ENGAGED IN:	Talk to someone, listen to music, drink and eat something, just sit and close eyes, go walk outside, doodle, write something, take deep breaths	Category: Relax, listen to soothing music	Doodle, drink and eat something	Categories: (2) Relax, (1) creative, (1) productive (2) Movement, (1) productive, (1) creative (2) Creative, (1) relax, (1) movement	Talk to someone, listen to music, just sit and close eyes, write something,	Do some physical exercises, listen to music... maybe even dance, listen to soothing music	listen to music, just sit and close eyes, take a walk outside
HOW LONG THE ACTIVITY LASTED:	10 min, 5 min, 10 min, 15 min	5 min	5 min, 13 min	20 min, 10 min, 20 min	20 min, 15 min	5 min, 5 min	15 min, 10 min, 5 min
ACCOMPLISHED TASKS?:	Some, Some, Some, Some	-	Yes, Some,	Yes, Yes, Yes	Yes, No	Yes, Yes	Some, Some, Some
WENT BACK TO STUDYING AFTER BREAK?:	Yes, Yes, Yes, Yes	-	No, No	Yes, Sometimes, Yes	Sometimes, Yes	Yes, Yes	Yes, Yes, Sometimes
USED PHONE DURING STUDY SESSION TIME OR STUDY BREAK?:	Yes (for music), Yes (texting, but not for long), Yes, Yes	Kind of - but did not look at memes that much	No, No	No, No, A little	Yes, Yes	A little, A little	Yes, A little, No
USED COMPUTER/PLAYED VIDEO GAMES/TV DURING STUDY SESSION TIME OR STUDY BREAK?:	Yes (for the reports), Yes (for the reports), No, No	-	No, Yes	No, No, No	No, Yes	No, No	Yes, A little, A little

INSIGHTS ON POPULAR ACTIVITIES

- **“Movement” = most popular category** amongst all the high schoolers
- **“listening to music”, “taking a walk outside”** and **“just sitting and closing their eyes”** = the activity that helped them the most in terms of coming back to the study session feeling energized

They mentioned they really enjoyed the different categories, but would like to see even more activities offered!

Popular activities that were picked and their categories:

Movement: Talk to someone X

Movement: Listen to music XXX

Movement: Go walk outside XX

Movement: Physical exercise X

Productive: Drink and eat XX

Relax: Sit and close eyes XX

Relax: Take deep breaths X

Relax: Listen to soothing music X

Creative: Doodle XX

Creative: Write something X

How many times a popular activity was picked and which category it was in:

Productive XXX (3)

Creative XXXX (4)

Relax XXXXXX (6)

Movement XXXXXXXX (8)

USER EXPERIENCE QUESTIONNAIRE

The scales of the questionnaire cover a comprehensive impression of the user's experience with each board. Both classical usability aspects (**efficiency, perspicuity, dependability**) and user experience aspects (**originality, stimulation**) are measured.

UX with blackboard:

- Positives: Good, organized, easy, friendly, creative, understandable, supportive
- Improvements: Security, make it less “usual”, and make it more “innovative”

UX with whiteboard:

- Positives: Predictable, organized, understandable, easy, efficient, clear, practical
- Improvements: make it less “usual”, make it more “attractive”, “creative”, and “exciting”

The **blackboard** seemed to provide a better overall user experience when compared to the whiteboard (see table on next slide).



“User Experience Questionnaire.” *User Experience Questionnaire (UEQ)*, www.ueq-online.org/.

Please assess the product now by ticking one circle per line.

	1	2	3	4	5	6	7		
annoying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	enjoyable	1
not understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	understandable	2
creative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dull	3
easy to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	difficult to learn	4
valuable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	inferior	5
boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	exciting	6
not interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	interesting	7
unpredictable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	predictable	8
fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	slow	9
inventive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	conventional	10
obstructive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	supportive	11
good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bad	12
complicated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	easy	13
unlikable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	pleasing	14
usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	leading edge	15
unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	pleasant	16
secure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not secure	17
motivating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	demotivating	18
meets expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	does not meet expectations	19
inefficient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	efficient	20
clear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	confusing	21
impractical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	practical	22
organized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	cluttered	23
attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	unattractive	24
friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	unfriendly	25
conservative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	innovative	26

BLACKBOARD - USER EXPERIENCE ANALYSIS

	User				Σ
	Julia	Björn	Tishayra	Kaitlyn	ALL
Enjoyable	2	2	2	2	8
Understandable	3	2	3	3	11
Creative	2	3	3	3	11
Easy to Learn	2	3	2	2	9
Valuable	2	-1	2	2	5
Exciting	2	1	3	3	9
Interesting	2	2	3	3	10
Predictable	1	2	3	2	8
Inventive	3	2	2	2	9
Supportive	3	2	3	2	10
Good	3	3	3	3	12
Easy	2	3	3	3	11
Pleasing	2	2	2	2	8
Leading Edge	3	3	0	-3	3
Pleasant	3	2	1	3	9
Secure	2	3	2	-3	4
Motivating	0	2	3	3	8
Meets expectations	2	1	2	3	8
Efficient	2	3	2	-2	5
Clear	3	2	0	3	8
Practical	2	3	2	3	10
Organized	3	3	3	3	12
Attractive	2	2	2	3	9
Friendly	2	3	3	3	11
Innovative	2	-3	-2	-2	-5

WHITEBOARD - USER EXPERIENCE ANALYSIS

	User			Σ
	Julia	Björn	Baris	ALL
Enjoyable	-1	2	2	3
Understandable	2	3	1	6
Creative	-2	2	1	1
Easy to Learn	1	2	1	4
Valuable	0	0	0	0
Exciting	-1	2	0	1
Interesting	-2	3	1	2
Predictable	3	2	2	7
Inventive	-1	2	1	2
Supportive	0	3	-1	2
Good	-1	2	1	2
Easy	2	2	2	6
Pleasing	-2	3	2	3
Leading Edge	-1	2	-2	-1
Pleasant	0	2	2	4
Secure	0	2	2	4
Motivating	0.5	2	0	2.5
Meets expectations	3	2	1	6
Efficient	2	3	1	6
Clear	2	3	1	6
Practical	1	3	2	6
Organized	2	3	2	7
Attractive	-2	1	0	-1
Friendly	0	2	1	3
Innovative	0	2	0	2

IV QUALITY ASSESSMENT

- Have students pick, out of 20 possible qualities, which 4 best represented the feelings the students got when using my product
- Then evaluation of the *actual* IV qualities I was hoping to achieve with my design

All in all, many picked **“comfortable”, “easy”, and “self-control” as qualities** ... but also picked at least one of my actual qualities. The only one that was **not easily recognizable was “urgency”**. Mostly, students felt **“satisfied” with the blackboard**.

Which 4 qualities best represent the product? ... aka what (4) feelings did you mostly get when using my product? *

- Entertaining
- Encouraging
- Periodic
- Informal
- Modern
- Satisfied
- Comfortable
- Durable
- Competitive
- Gentle
- Refreshed
- Commitment
- Self-control
- Gratitude
- Urgency
- Curious
- Easy
- Trustworthy
- Energetic
- Adventurous

Evaluating Actual IV Qualities

*

1 2 3 4 5 6 7

Did not feel an urgency to use the board

○ ○ ○ ○ ○ ○ ○ ○

Did feel an urgency to use the board

*

1 2 3 4 5 6 7

Felt energetic when doing an activity (assuming you took part in that activity)

○ ○ ○ ○ ○ ○ ○ ○

Did not feel energetic when doing an activity

*

1 2 3 4 5 6 7

Felt refreshed after doing the activity

○ ○ ○ ○ ○ ○ ○ ○

Did not feel refreshed after doing the activity

*

1 2 3 4 5 6 7

Did not feel satisfied once break finished and had to press the light

○ ○ ○ ○ ○ ○ ○ ○

Felt satisfied once break finished and had to press the light

- Words in red are my actual IV qualities
- Words in green are IV qualities that were popular amongst students

USER	IV QUALITIES PICKED (OUT OF 20 THAT WERE GIVEN)
Julia (BB)	Modern, Refreshed, Self-control, Easy
Björn (BB)	Entertaining, Self-control, Easy, Energetic
Tishayra (BB)	Encouraging, Comfortable, Refreshed, Energetic
Baris (WB)	Periodic, Comfortable, Easy, Energetic
Kaitlyn (BB)	Satisfied, Comfortable, Competitive, Easy

- Self-control: 2
- Comfortable: 3
- Easy: 4

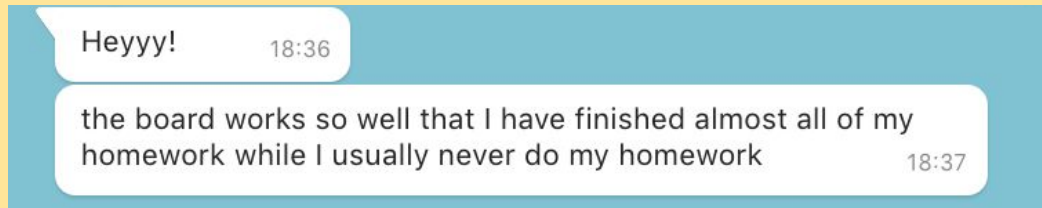
- BB = Blackboard
- WB = Whiteboard

		ACTUAL IV QUALITIES EVALUATED				
		User				Σ
		Julia (BB)	Björn (BB)	Tishayra (BB)	Kaitlyn (BB)	ALL
IV QUALITIES EXPERIENCED	Felt an urgency to use the board	3	0	0	2	5
	Felt energetic when doing an activity	3	-2	3	2	6
	Felt refreshed after doing an activity	3	-2	2	3	6
	Felt satisfied once break finished and had to press the light	2	2	3	2	9

		ACTUAL IV QUALITIES EVALUATED
		User
		Baris (WB)
IV QUALITIES EXPERIENCED	Felt an urgency to use the board	-1
	Felt energetic when doing an activity	2
	Felt refreshed after doing an activity	1
	Felt satisfied once break finished and had to press the light	-1

In addition, summarizing all the results (given by the three high schoolers that tested a particular board) from the four analysis methods, I was able to come to the conclusion that one board was clearly more popular than the other:

The **unanimous decision** by the high schoolers was that the **blackboard concept** should be the final design! The **interviews, journals, UX questionnaire, and IV assessment also support that decision**. With that said, I finished off my 5-week long unmoderated usability tests by giving a new high schooler the blackboard design to test out for one week.



A reassuring text from Julia that I got mid-usability testing week!

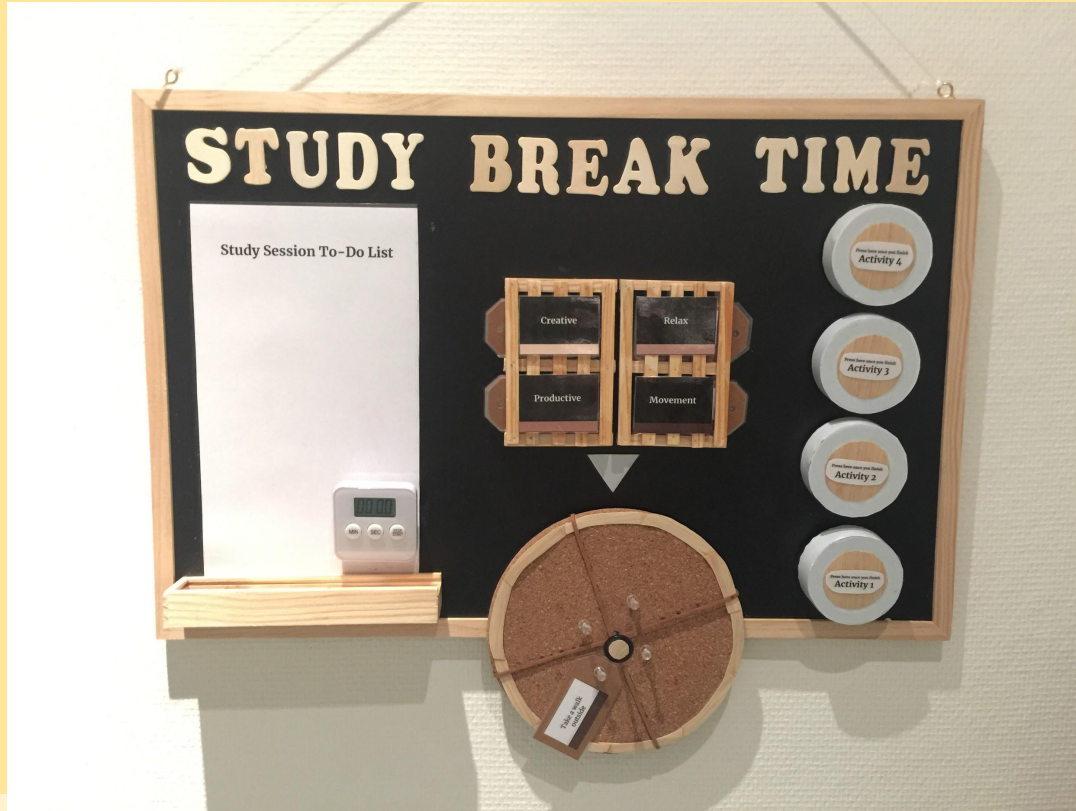
TESTING THE FINAL PROTOTYPE WITH A NEW HIGH SCHOOLER - RESULTS

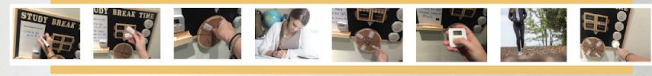
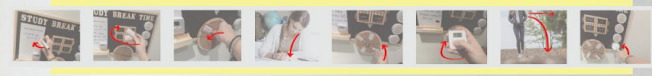
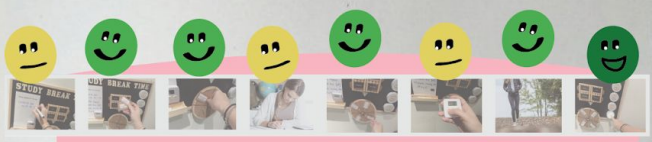
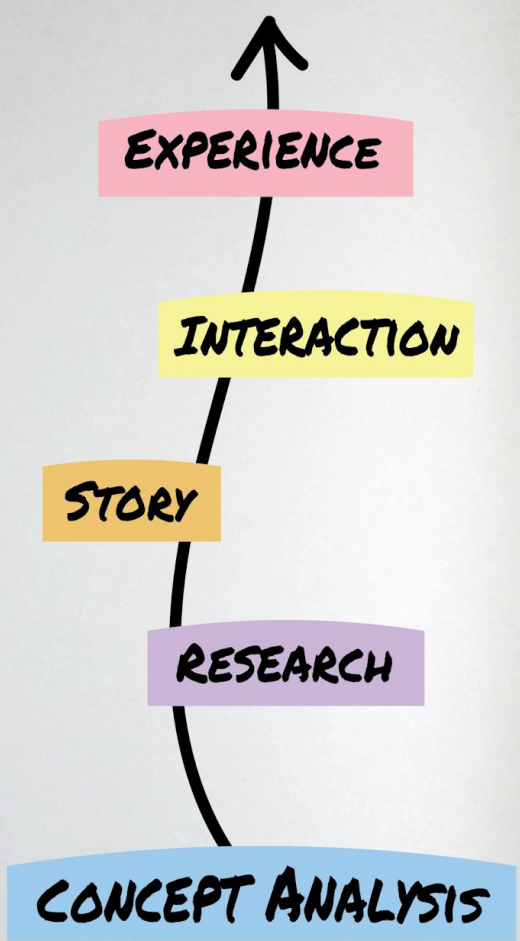
Allow me to introduce, **Kaitlyn** --

- the new high schooler I worked with for one week
- 16 year old
- last year of high school
- avid horse-back rider
- seemed as though the board helped her stay “organized” and on top of her studies! Here are some quotes from her interview:
 - “The first day was very new... but then I got more used to it so it became easier to use.”
 - “I liked the drawing activity!”
 - On a scale of 1-10, 10 representing the overall usefulness of the product, how useful was the board?: “10”
 - What frustrated her: “When the timer went off... and then I think, ‘Oh, do I really have to stop?’”
 - Her favorite part: the whiteboard and how she gets to list her study session goals/tasks



THE ABSOLUTE FINAL DESIGN AND CONCEPT ANALYSIS





Design Goal: "I want to help teenage (14-18 year old) high school students that work at their home to take better, healthier, and more meaningful study breaks."

Interaction Vision: Interacting with my design should feel like you're on a road trip where you suddenly have to fill up your almost empty car gas tank.

FURTHER RESEARCH AND RECOMMENDATIONS

Other user groups I could potentially work with:

- elementary/middle school students preferably
 - Björn's 12 year old brother wanted to use the whiteboard because he had an exam week.
 - Insight: maybe I focus in on students even younger than high schoolers... reason for that is, the sooner students build healthy/better study habits, the better!
- university students
- working professionals
 - For them, the product would then not be called "Study Break Time"... but rather just "Break Time", for instance.

Recommendations for the final board:

- Have more activities and categories to pick from
- Make lights even more dynamic -- instead of having them vertically adjusted
- Possibly lose the timer? Every student works on their own time and, in a way, find the timer to "stress them out".



FINALLY...

I think what I learned the most throughout this project was that a **design will never be perfect**. It can always and constantly improve. Ahh yes; the beauty of design thinking and the **iterative process**. Something I truly believe in as a designer.

I'd like to share this text I got from one of the high schoolers. He asked me if I would make extra boards for everyone once the project was finished. This made me realize that I truly am "**designing for our future**" and that this is the reason I'm doing what I'm doing/for where I'm at in life/etc.. Such a **rewarding feeling** for me!

Lastly, a big thank you to **coaches, colleagues, and high schoolers** for making this EI project such an amazing learning experience for me. Your help was greatly appreciated!

I think if it works you should do it 😊 Because lot's of teenagers want to study, but they cannot because of it's to difficult and some people don't now what to do first and maybe you would be that one person 👤 how will change their live for good and so they can study again 📖 I believe that you can make something great and special for the students in need 👍

Enjoy your week 🙌

20:31

You can check out
<http://bit.ly/EI-SBT> to hear
some testimonials!

THANKS!

Let's hope SBT flourishes one day.



QUESTIONS?