BACHELOR THESIS: DUTCH SUSTAINABLE FASHION WEEK

By Sebastian Surwehme (43181)

Saxion University of Applied Science Creative Media and Game Technologies

Company Supervisor: Alexandra Linn Graduation Teacher: Herman Paassen Graduation Coordinator: Hester van der Ent

> Sebastian Surwehme 431381@student.saxion.nl

Graduation Report

By

Sebastian Surwehme

Creative Media and Game Technologies (Artist)

at

Saxion University of Applied Sciences



Graduation Teacher:

Herman Paassen

Graduation Coordinator:

Hester van der Ent

Client Dutch Sustainable Fashion Week

dute , sustainable

- - FASHION WEEK - - -

Company Supervisor:

Alexandra Linn

Founder:

Cécile Scheele

PREFACE

This report is part of my graduation in Creative Media & Game Technologies (CMGT) at the Saxion University of Applied Sciences in the Netherlands. My graduation takes place at the Dutch Sustainable Fashion Week (DSFW) in cooperation with Alexandra Linn (Supervisor), Cécile Scheele (Founder) and Rick Oosthof (CMGT Student).

I would like to thank Alexandra Linn for her support and insight during the whole duration of this internship.

I would also like to thank Hester van der Ent for her assistance in aiding me with the finding of an internship spot so that I can complete my study.

Lastly, thanks to everyone who guided me at the circle meetings.

ABSTRACT / SUMMARY

The Dutch Sustainable Fashion Week tasked the students Sebastian Surwehme (artist) and Rick Oosthof (designer) to create a e-learning or gamified prototype which aims to increase the awareness of students (13 – 18 years) regarding sustainable fashion and the negative impact of fast fashion on the environment. The prototype itself makes use of emotional storytelling and allows the user to make choices regarding sustainability by following a textile (polyester) and seeing its impact on the environment as well as actions to act more sustainable in today's fashion scene. The user plays through a scenario and usually has the option between 2 or 3 choices. The next scenario is dependent on which choice the user makes. This allows for a flexible story which is similar to something that is used in dialog heavy video games, these allow for multiple outcomes that impact the story. To vary the interaction a bit, a small quiz can be taken which evaluates the current knowledge of the user. At the end of the prototype the user gets an overview of their journey and can share it on social media. All the major sources that have been used for the creation of the prototype have also been added in the end, the sources are collected on a website (articles) and on a YouTube playlist (videos).

The main question of this project is:

How to create an interactive prototype that increases the awareness of sustainable clothing and textiles and motivates teenagers (13 - 18 years) through e-learning or gamified learning to act more sustainable?

The prototype itself is created in Adobe XD and has been evaluated by the target audience with mixed results. The testing environment was not optimal because of low motivation levels by the testers, despite this, as well as the lack of interest in the full version of the prototype, a positive note emerged. According to test results of the prototype, most students learned something new about the clothing industry. It is however unclear if the prototype made a strong impact on the students.

The design philosophy of the prototype is to keep things simple and to keep the attention of the user. This means to show the most essential information upfront and avoid large texts. It is also important to understand the motivation of the user, in this case the motivation to finish the story and see what actions lead to which result. This interest should not be halted by mistakes, meaning that the user never gets the message that they have done something wrong and are therefore punished by it, this is called "safe failure." To not overwhelm the user each phase of the prototype has its own theme and therefore allows for incremental learning. This helps in aiding the user through the story, as well as not overwhelming them with information. The prototype made use of words that are understandable for the target audience, this is important because research has shown that teenagers have lower levels of patience. This means that users are easily annoyed and leave when roadblocks are discovered. So, to avoid this possibility, unnecessary features, interactions, and unfamiliar design decisions are avoided. TikTok and Instagram were main references for the team to empathize more with the target audience and to see what interactions were mostly familiar. The target audience mostly navigates through the web with their smartphone, which is why the prototype was designed with mobile viewing and mobile sharing in mind. Swiping and tapping are the main interactions in the prototype to select and confirm.

The prototype itself was a partial success, but further testing and optimizations must be done so that the target audience has a larger interest in the final product, as well as a larger incentive to share the results of the journey.

CONTENTS

Preface	2
Abstract / Summary	2
Introduction	5
Company	5
Reason for the Assignment	5
Problem statement	5
Indicator of success	6
Research Methods	7
Desk Research (External)	7
Survey	7
Research Criteria – CRAAP TEST	7
Design Thinking Method	7
Best, good & bad practices	8
Sketching	8
Prototype	8
Empathize	9
User	9
Market and Trends	10
Define Phase	11
Empathy Map	11
Main and Sub Question	12
Scope	12
Methodology	14
Sub question 1:	14
Sub question 2:	15
Sub question 3:	17
The user and UX	19
Answering the Sub-Questions	20
Answering the sub-question 1	20
Answering the sub-question 2	21
Answering the sub-question 3	22
Ideate	23
Brainstorm	23
Mind Map	24
Concept evaluation based on the scope and survey	24
Tested Color Schemes	25

SWOT-Analysis	
Idea: Textile Story + Label Scanner	
Idea: Secondhand Tracker + Label Scanner	
Conclusion	
Prototype	
Preparation	
The prototype	
Testing	
Testing Approach	
Testing Results	
Prototype Adjustments	37
Final Prototype	
Changes	
Final Prototype: Screens	
Scope Checklist	43
Conclusion	45
Recomendations	
Self Reflection Error! Bookmark n	ot defined.
References	
Appendices	

INTRODUCTION

COMPANY

This report documents the process and research of the internship of Sebastian Surwehme at The Dutch Sustainable Fashion Week (DSFW). The DSFW is an event that takes place every year in September all around the Netherlands and presents sustainable and innovative fashion to a wide range of audiences. The aim of this event is to raise awareness of sustainable fashion, to do this they partner up with multiple fashion stores and show off new fashion and hold workshops. Rick Oosthof and Sebastian Surwehme have been tasked to create a prototype tool that makes use of e-learning or gamified learning to increase the awareness among teenagers regarding sustainable fashion and its textiles that are used by the fashion industry. The Dutch Sustainable Fashion week was founded in 2014 and has currently four employees.

REASON FOR THE ASSIGNMENT

The Dutch Sustainable Fashion Week aims to increase the awareness of teenagers (12-18 years) regarding sustainable fashion through e-learning or gamified learning. The assignment itself is built on research made by Textile and Technology students from Saxion. They concluded that teenagers do not understand much about sustainable fashion and that a e-learning or gamified learning approach would be recommended (Kim et al., 2021).

This assignment aims to aid in the change of the consumers understanding and to move the fashion industry more towards sustainability so that environment, plants, and prosperity can be ensured for future generations.

PROBLEM STATEMENT

The fashion industry is a large contributor towards global warming, pollution, and impacts the life of many people through their working conditions (The Economist, 2018; Boykoff et al., 2021). The high production and consumption of cheap fashion is called fast fashion, this system is a large negative contributor towards the environment (Jacobson & Harrison, 2021; Strähle et al., 2015). In its production process excessive amounts of water and chemicals are used, which if not disposed correctly causes harm to people and environment (Radclyffe-Thomas 2018; Boykoff et al, 2021; Salem & Alanadoly, 2020). Its effects are polluted water and air, which is a major health risk for the people that live around the production facilities or places of disposal (The Economist, 2018; Radclyffe-Thomas 2018).

5,8 tons of fashion are thrown away in Europe each year, out of which around 75 percent end up in landfills or incinerators (Goossensen, 2019 & The Economist, 2018). The partial cause of this is the attitude of consumers, who instead of repairing or keeping their clothes, throw them away to replace them with new clothes (Strähle et al., 2015).

Another problem of the fashion industry is their treatment of the working people. Low wages and bad working environments are one of the main issues that present themselves. The collapse of a textile factory in Bangladesh caused the death of 1134 factory workers and exposed the practices of the fashion industry towards the public (Strähle et al., 2015).

When consumers are not aware of problems like those they cannot act in in a sustainable manner (Strähle et al., 2015; Boykoff et al., 2021; Salem & Alanadoly, 2020; Goossensen, 2019), and even if they are aware the attitude-behavior gap makes acting out those beliefs hard.

The attitude-behavior gap occurs when the attitude does not result in the wanted behavior (Strähle et al., 2015; Jacobson & Harrison, 2021; Goossensen, 2019; McKeown & Shearer, 2019).

All those problems are connected to the purchasing behavior which enables the ethics of fast fashion.

Another major role in all this is social media which pushes the message of "fast fashion" through regular advertisement or influencers.

INDICATOR OF SUCCESS

The target audience is more aware of the negative aspects of fast fashion and increases their awareness of sustainable fashion and therefore make more informed purchasing decision online and in stores, as well as treatment and mindful consumption of clothes. Aspects of sustainable fashion are regarding people, planet, and prosperity. A focus is held on the sustainability of clothing and textiles.

The prototype itself is user friendly designed and shows relevant and correct information in a way that increases the awareness of sustainable fashion to the user in an engaging way through e-learning.

The client is satisfied with the final prototypes quality and displays it in the Dutch Sustainable Fashion Week.

RESEARCH METHODS

DESK RESEARCH (EXTERNAL)

Searching for valuable already existing information regarding the given topics of sustainable clothing, negative environmental and social impact of fashion and e-learning/gamified learning principle on Google Scholar and other search engines. Articles, research papers and books are common findings in those types of research. This type of research allows for fast and varied amounts of information to be collected. Because of the small team size external desk research is necessary to find relevant information fast.

Key words:

E-Learning, gamified learning, sustainable fashion, purchase behavior, teens, increase awareness, advertisement towards teens, working condition, recycling, fast fashion, throw away fashion

SURVEY

Asking questions to a group of people and analyzing the results can give the team insight to problems and to the refinement of the prototype. This will be done through Qualtrics, a website which is focused on creating surveys fast and easy while displaying relevant data from the answered questions.

RESEARCH CRITERIA - CRAAP TEST

To ensure the quality of the desk research the CRAAP test is used. The CRAAP test is a method which contains 5 components of its evaluation of sources:

- Currency (The source is relevant; Up to date; Links are working)
- Relevance/Reliability (No open assumptions; Multiple sources for statements; Readership level is understandable;)
- Authority/Author (Trustworthy; No bias; Peer reviewed)
- Accuracy (Non contradiction; Matches the topic)
- Purpose (Multiple viewpoints; objective)

In addition, sources that have a high amount of citation are considered more trustworthy as well as newer resources.

DESIGN THINKING METHOD

The design thinking method is a problem-solving method which goes through multiple phases to create innovative products or businesses. This method is not only the approach the team took to create the prototype but also outlines the structure of this report.

The stages of design thinking are:

- E Empathize: Deepen understanding of the user and market/trend
- D Define: Define the problem, values, and scope
- I Ideate: Brainstorm solutions, evaluate them and develop a plan
- P Prototype: Create multiple prototypes to test
- T Test: Test prototypes

All stages of the design thinking method can be visited again if needed.

BEST, GOOD & BAD PRACTICES

To understand what already works is very important, especially when working in a small team with a limited amount of time and skillsets. By comparing already working designs with the teams' new designs the most obvious flaws can be redesigned to fit the targets audience current knowledge.

SKETCHING

By creating basic unrefined versions of a design, faster iterations and alternative versions can easily be created. This allows the exploration of ideas which show new design challenges that are starting points for further research. Sketches can be made digitally or on paper, because of its low skill requirement everyone in the team can participate in the contribution of ideas through this method.

PROTOTYPE

An early draft of the final design or a part of the final design can be tested by the user, client or internally to test the concept, functionality, user experience, usability, and technical limits of the prototype. A prototype is generally an unfinished version of the final design, many versions of one prototype can be made to see the performance of each on the user.

EMPATHIZE

USER

The target audience are teenagers ranging from 13 to 18 years who have an interest in learning more about sustainable fashion. Teenagers today spend more time on their smartphone than other generations before them, which is why they spend so much time in social media platforms like TikTok, Facebook and Instagram (Seo, 2013).

This high affinity with technology has created an interest in interactive concepts of learning through new technologies (Yacob et al., 2012) like virtual reality, which is useful for work simulations, in addition e-learning software like Duolingo make learning a new language more accessible, and enjoyable with the addition of gamified elements (Vesselinov & Grego, 2012). Those new methods of learning have shown their effectiveness over the years by teaching students of all age groups and even impacting their behavior (Siva, 2019; Batson & Feinberg, 2015).

Teenagers are starting to form their own opinions and are less influenced by their parents, they are also more focused towards belonging in their peer group. This can create insecurities and a need for belonging (Seo, 2013).

Previous research conducted by Textile and Technology students from Saxion have shown, that teenagers want to recognize fashion that has no child labor and no harmful impact on the environment (Kim et al., 2021). They also generally do not have a lot of money to spend on clothes which makes the price a priority for them rather than sustainability or durability. The questioned teenagers also voiced their trust in influencers from which they get most of their information from. 73% of the teenagers who were surveyed by Textile and Technology students from Saxion did not visit any events regarding sustainability in fashion, in addition only 55% voiced their interest in the topic of sustainable fashion (Kim et al., 2021).

Table 1

Profile	Students; Teenagers in the Netherlands		
Age	13 - 18		
Sex	Male, Female, Other		
Motivation	Personal interest in sustainable fashion		
Expectations	Visits the created prototype to inform themselves about sustainable fashion and therefore increases awareness		
Needs	The target audience needs a better understanding about sustainable fashion in an engaging way		
Wants	The target audience wants to understand the impact of the current fashion industry and how they can change their purchasing behavior towards more sustainable fashion		
Barriers	Price		
(Goossensen, 2019 &	Loss of Quality regarding secondhand		
McKeown & Shearer,	Information overload		
2019)	Bounded responsibilities (limited attention)		
	Sustainable fashion is unavailable		
	Hygiene doubts regarding secondhand garments		
	Personal attitude & attitude behavior gap		
	Identification of sustainable and unsustainable fashion (Knowledge gap)		
	Style (Aesthetics)		
	Fitting clothes		
	Value their behavior as insignificant		
	Low levels of patience		

Profile summary of the target audience

Motivations	Internal	External
(Goossensen, 2019)	Willingness to change behavior Brand Loyalty	Economic Personal benefits
	Selective/Biased information processing Level of awareness Personal responsibility/obligation Value their behavior as significant	Availability Social environment Personal Image Trends

Additional information, regarding the relationship between user and UX can be seen in the methodology section of the report.

MARKET AND TRENDS

The current main trend of fashion is unsustainable consumption and production of garments. This trend is enhanced by advertisement and social media platforms. However, the topic of sustainability is becoming more important for companies and consumers because of its increasingly relevant impact on people and planet (Strähle et al., 2015 & Y-Kollektiv, 2021, Goossensen, 2019). Therefore, an increasing interest regarding sustainable fashion has emerged from companies of all sizes, and over the years established itself as something that is not going to disappear like other trends. At the G7 Summit in 2019 around 32 major fashion brands revealed the "Fashion Pact" which a plan that aims to switch to 100% renewable energy by 2030 (Boykoff, 2021).

A widespread practice among larger fashion brands is something called greenwashing. Greenwashing means, broadcasting information about the attempt to act more sustainability to create a public image to ease the mind of the customer. This is however not a message of sustainability, but a veil of marketing and PR-measures to hide their current unsustainable production process (Schulz, 2022).

Known companies that have been caught greenwashing are (Robinson, 2021):

- Volkswagen
- BP
- Nestlé
- Shein
- Zara
- Coca Cola
- Star Bucks
- н&м

It is estimated that by following current trends the fashion industry is going to triple its production by the start of 2050 (The Economist, 2018; Boykoff, 2021).

DEFINE PHASE

EMPATHY MAP

Empathy maps are used to get a solid understanding of the target audience, by listing relevant information to limit the chance of misunderstanding towards the target audience.

Who are we empathizing with?

- Dutch Teenagers
- 13 to 18 years old
- Interest in sustainable fashion

What do they need to do?

- Discover the prototype
- Interact with the prototype
- Change their understanding of sustainable fashion
- Share or recommend prototype to peers
- Act more towards sustainable fashion

What do they see?

- Social Media Platforms, Influencers (TikTok, YouTube, Facebook, Instagram, Twitter)
- Smartphone
- Advertisement

What do they say?

- They want to know more about sustainable fashion
- They want to know how to live more sustainable
- The want to know if they are living sustainable
- They want to know about sustainable fashion brands
- They want to know what sustainable fashion is
- They want to understand what fast fashion and its impact is

What do they do?

- Buy clothes from physical stores or online shops
- Listening to social media channels
- Throw away clothes that could be repaired

What do they hear?

- Sustainable fashion
- Global warming
- Climate change
- Pollution and trash
- Human right violations
- Animal abuse
- Advertisement about fast- and sustainable fashion

What do they think and feel?

<u>Pains</u>

- Do not know what to do
- Knowledge gap
- Attitude behavior gap
- Emotional spending (Addiction, fear of missing out, social spending etc.)
- Fear that they are seen as preachy when talking about secondhand and sustainable fashion
- They think they will not make a difference

<u>Gains</u>

- Validation of peers
- Personal self-worth increases
- Pleasure of the impulse

The information that is presented in the empathy map allows the team to find points of interest that must be focused on in the creation of the prototype. The target audience has an interest in learning about sustainable fashion, so the team will design a prototype that feels familiar (influenced by social media) and answers the questions the target audience voiced.

MAIN AND SUB QUESTION

Main Question

How to create an interactive prototype that increases the awareness of sustainable clothing and textiles and motivates teenagers (13 - 18 years) through e-learning or gamified learning to act more sustainable?

Sub-Questions

- 1. How to use E-learning or gamified learning to increase awareness of sustainable clothing and textiles?
- 2. What actions can the user make to live a more sustainable lifestyle regarding sustainable fashion?
- 3. How to create an appealing and functional user interface for the final prototype that enhances the user experience?

SCOPE

The assignment will be created by two students, Sebastian Surwehme (Artist) and Rick Oosthof (Designer) over the course of the graduation course, which is approximately 5 months. The goal of this assignment is to create a functional e-gaming or gamified learning prototype website, which can educate teenagers about sustainable fashion. The prototype will be functional and presentable at the Dutch Sustainable Fashion Week. To ensure the functionality and ease of use of the prototype, many iterations will be made, and tests will be conducted.

Based on the above definition of the target audience, a list of requirements has been developed. This list is organized through the MoSCoW method. This method contains the requirements "Must have", "Should have", "Could have" and "Won't have" features. "Must haves" are the core mechanics the product needs to function. "Should haves" enhance the user experience and make it easier to use the product. "Could haves" are little extras that are not necessarily needed for a good user experience. "Won't have" features would enhance the product but are not feasible in the time frame or with the workforce of the team.

Must have:

These requirements are the core parts of the prototype and are without it not functional, making those critical to the success of the assignment.

- Thoroughly tested UI (appealing and functional)
- Interactive Elements
- Gamification Elements
- Displays correct Information
- Educative (Textiles, sustainable fashion choices)
- Easy to share
- Engaging towards the target audience

Should have:

These requirements are important but not essential to the success of the prototype.

- A similar visual identity as the Dutch Sustainable Fashion website
- Emotional Storytelling

Could have:

These requirements are extras that polish the prototype but are not necessary.

- 2D animation
- A design with disability in mind
- Sound & Music
- Different Languages (Dutch, English, German)

Will not have:

These points will not be included in the final prototype.

- 3D
- Virtual Reality
- Advertisement

Assumption

The prototype will increase the awareness of sustainable fashion and educate the target audience of the negative impact the fast fashion has on the environment. It is expected that the prototype is functional and has been designed for smartphone usage and teenagers ranging from 13 to 18 years of age.

Constraints:

- Only Rick Oosthof is fluent in the Dutch language
- Physical meetings are limited because both students work from home
- Timeframe: 5 months
- Polyester is the textile that will be explored in the prototype because of its dominance and impact in in the textile industry

Important Notes:

- Sebastian Surwehme is tasked with the initial creation of the prototype in Adobe XD (this is the focus of this report)
- Rick Oosthof is tasked with the creation of an independent prototype that will most likely be used by the DSFW and is using the Adobe XD prototype as a reference

METHODOLOGY

To answer the different sub-questions several methods will be applied to reach the intended goal. This chapter will explain the goal and findings.

SUB QUESTION 1:

How to use E-learning or gamified learning to increase awareness of sustainable clothing and textiles?

Goal

The goal of this sub question is to understand the best approach on increasing awareness in the target audience.

Methods



Figure 1 Methods used for sub-question 1

Findings

To effectively increase the awareness of sustainable fashion through the prototype, an approach that makes use of storytelling is recommended. Archaeological data has shown that stories have been used to teach concepts and ideas to simulate experiences, which in turn engages the listener creating an empathy bridge that allows for meaning and longer lasting memory (Barth, 2020).

A study conducted in 2019 has shown that "online learning has significant positive impact on teenagers buying behavior during online shopping" (Siva, 2019). The same research paper also mentioned 4 psychological factors

that have be taken into consideration when educating students, the 4 factors are perception specifically motivation, attitude, learning and beliefs.

Donald Clark explains in his book "Games and e-learning" (Caspian Learning & Clark, 2013) ten aspects that elearning offers to accelerate learning (Table 2). These aspects are essential for games that aim to educate users effectively.

Pedagogic Reasons for games in learning
Motivation
Learner centricity
Personalization
Incremental learning
Contextualization
Rich media mix
Safe failure
Immediate feedback
Lots of practice reinforcements
Lots of collaboration

Table 2 Ten pedagogic reasons for games in learning

SUB QUESTION 2:

What actions can the user make to live a more sustainable lifestyle regarding sustainable fashion?

<u>Goal</u>

The goal of this sub question is to have a collection of actions that can be recommended to the target audience to increase their actions towards sustainable fashion.

Methods



Figure 2 Methods used for sub-question 2

Findings

Effective actions for users to have a positive impact on the environment while staying connected to sustainable fashion are mindful consumption, recycling, repairing clothes, lending, garment collecting, boycotting, buycotting, second-hand -stores or -events (Goossensen, 2019). In addition to those actions the following of influencers that focus on educating users about the sustainable fashion industry has also shown to change user behavior and attitude. Once the user is sufficiently informed and involved in the idea of sustainable fashion mindful consumption can be achieved (Strähle et al., 2015).

SUB QUESTION 3:

How to create an appealing and functional user interface for the final prototype that enhances the user experience?

<u>Goal</u>

The goal of this sub question is to understand what type of user interfaces matches the final prototype the best.

Methods

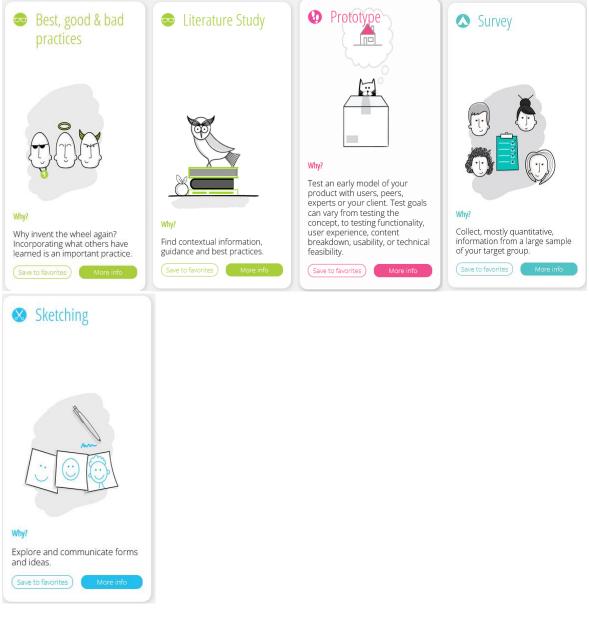


Figure 3 Methods used for sub-question 3

Findings

Multiple methods are used to determine how to design and appealing and functional user interface for the final prototype, those can be separated in to four distinct phases.

- 1. Knowledge gathering
- 2. Inspiration
- 3. Concept
- 4. Testing

In the knowledge gathering phase a basic understanding of the user interface creation must be established, this includes the software of choice and common practices. Software that are available for the use in this project are Adobe XD, Figma and Invision. After a brief comparison Adobe XD will be the software of choice for this project because of its abundance of resources such as tutorials, plugins, forums, and features that allow for live collaboration and easy prototype sharing, as well as a personal interest in the software.

As for desk research, a particularly useful resource is the website lawsofux.com which displays all theoretical principles of UX.

The UI itself will be influenced by apps like Instagram and TikTok and rely on basic actions such as swiping and tapping, so that functionality of the prototype is as familiar as possible for the target audience.

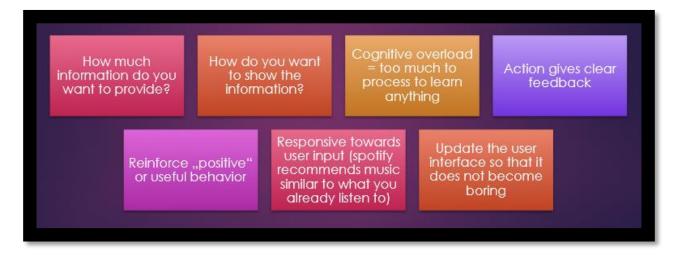


Figure 4 Notes from "Psychology Behind UI/UX Design | Harrish Murugesan | TEDxUTA"

The general workflow of the process for the creation of the prototype will be the following:

- 1. Gather Requirements
 - What does the prototype do? What are the core features? What makes the prototype unique?
- 2. Create Wireframes/Sketches Focus on usability Empathize with the target audience Be ready for changes
- 3. Design Composition Add graphics to the wireframes Create a color scheme Have a fitting visual identity Small interactions are possible
- **4. Evaluate the prototype** Change the prototype if needed (reduce major changes)

It is to mention that the actual process of creation for the prototype will explained in the final prototype section of the report.

THE USER AND UX

According to the research done by Joyce & Nielson (2019) teens have shown to be overconfident in their abilities to surf through the web. Teens have lower reading levels, are more impatient and show a lack of research skills. The research has shown that teens surf the web with a goal in mind, those goals are:

- School assignments
- Hobbies and other interest
- Entertainment
- News
- New Topics
- Connecting with friends and family
- Shopping

The research has also discovered three reasons why teens perform worse than adults when it comes to web surfing and researching. Teens tackle problems with confidence, but they give up quickly because of dramatically <u>lower levels of patience</u>, in addition so called fast-moving teens are less cautious and form opinions with less justification which result in a <u>lack of research</u> and <u>reading proficiency</u>.

Those reason make it a top priority to design for users with less patience in mind. Teens are not interested by walls of text, and they expect the most essential information up front.

ANSWERING THE SUB-QUESTIONS

ANSWERING THE SUB-QUESTION 1

To keep the attention of the user and deepen their awareness, as well as personal significance, an approach that makes use of emotional story telling is recommended. Through emotional storytelling that shows actions and consequences, an emotional bridge can be formed with the user. This has the potential to motivate change in the user's behavior. It is important to offer the user:

- 1. Motivation. The user wants to see the end of the story and the impact of their actions.
- 2. Incremental learning. The user gets bite sized information through non-formal language.
- 3. Immediate feedback. The input of the user gets recognized. The users' mistakes are corrected in a non-condescending fashion.
- 4. Rich media mix. The prototype can include selection of choices, videos, sounds and a quiz.
- 5. Safe Failure: The user can try as many times as they want. The user is even encouraged to replay the story to find different story branches.

ANSWERING THE SUB-QUESTION 2

Below are examples of actions and descriptions the user can take to improve their sustainability regarding sustainable fashion. Most of those actions will be implemented in the emotional storytelling of the prototype.

Action	Description		
	Converting overconsumption to level that is most		
Mindful Consumption	efficient for the consumer. Consumption for		
	personal sake not for the sake of consumption.		
Recycling	Clothes that are no longer used for upcycling or		
	reuse can be recycled. Recycled clothes can be		
	remade into fibers which can be used to create new		
	clothes or be used as material for filling furniture or		
	as isolation for houses.		
	Minor damages in clothing can be fixed with the		
Repairing clothes	right kind of equipment and knowledge, but most of		
	the time smaller stores exist that offer the option to		
	repair damaged clothing.		
Lending garments	A new form of fashion store which offers customers		
	the option to lend clothes for a fixed timeframe.		
	Older but still wearable garments can be handed in		
Garment collecting	to the garment collection places so that they can be		
	donated to lower income families or sold to		
	recycling.		
	Rejecting to buy certain stores or fashion brands		
Boycotting	which have shown to be untrustworthy and allow		
	unsustainable practices.		
	Supporting certain stores or fashion brands which		
Buycotting	have shown to be trustworthy and allow for		
	sustainable practices.		
	Buying clothes second hand in stores is a cheaper		
Second-hand stores	and more sustainable alternative to buying new		
	clothes.		
	On second-hand events people gather in dedicated		
Second-hand events	places to trade or sell their old clothes. The prices		
	are affordable and lengthens the usage cycle of the		
	garment.		
	By following social media channels that inform the		
	user about sustainable practices a knowledge base		
Following Social Media Channels	can be build up by the user to increase the chances		
	of sustainable actions and increase the traction of		
	the social media channel.		

Table 3 Actions the user can take to contribute to sustainable clothing

ANSWERING THE SUB-QUESTION 3

Some principles have shown to be successful in the design for teens:

- Display small chunks of content which is meaningful with white space
- Make use of words that are understandable for them without a condescending tone
- Short sentences and paragraphs
- Use bullet points
- Have larger fonts
- Do not make use of unnecessary interactive features
- Show them something new and keep them focused on a goal
- Fast loading times
- Avoid mandatory registration
- Have them in control what and how they share it
- "Copy link options" for direct message sharing
- Design with mobile viewing in mind

The research has shown positive results in interactive features that allow the teens to be engaged in the activity itself rather than passively reading or listening. The interactive features are:

- Quizzes
- Feedback or asking questions
- Voting
- Games
- Sharing pictures
- Editing content
- Expectation of brand sites: Professional
- Expectation of informational sites: Simple and polished

In conclusion:

The use wants the most essential information up front, this means that they want to main information up the moment they engage. This means that the UI should highlight the necessary information in an effective and easy to digest format. Pictures, compact lists, and bullet points are designs that can be used in the prototype. Long text and unnecessary features are disliked and can distract them from the initial goal.

IDEATE

BRAINSTORM

To start the ideation phase, both team members collected ideas and presented them to each other. Afterwards, a mind-map (Figure 5) has been created to display the ideas and related information. Ideas that came out of the brainstorm (Table 4) are:

Table 4 Results of the brainstorm

Idea	Description
Chatbot	A website hosting a chatbot that answers questions
	regarding sustainable fashion, fast fashion, and what
	actions the target audience can take.
Quiz for education	A quiz that can be used in classrooms by teachers to
	test the knowledge of students. Different cards
	showing interesting facts about fast- and sustainable
	fashion are also available for print.
List of sustainable clothing stores	A website that displays information about
	sustainable clothing stores and brands, what makes
	them special and why it matters to buy sustainable
	fashion.
Secondhand tracker	A website that shows secondhand shop and events
	that are happening close by as well as local groups
	from social media platforms like Facebook.
Label Scanner	Users can visit a website that allows them to take
	pictures of their garments label to see interesting
	information about the product. In the end it rates
	their clothes with a score, this can be shared on
	social media.
Textile Story	User can visit a website to see the lifecycle of their
	garment and play through it by making choices in a
	dialog screen.

MIND MAP

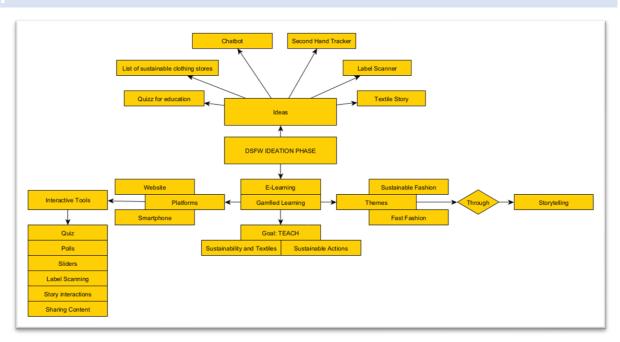


Figure 5 Mind-map of the ideation phase

CONCEPT EVALUATION BASED ON THE SCOPE AND SURVEY

The different brainstorm ideas will be evaluated through the various aspects of the scope and results of the survey.

The survey results can be seen in Appendix A.

Table 5 Evaluation of brainstorm ideas

Legend: ♥Fulfilled ♥ Not Fulfilled ♥Somewhat fulfilled ♥Unclear ♥Possible

		Chatbot	List of sustainable clothing stores	Quiz for education	Secondhand Tracker	Label Scanner	Textile Story
Must Have	Thoroughly tested UI	8	0	0	0	0	9
	Interactive Elements	Ø	*	0	*	Ø	Ø
	Gamification Elements	8	⊗	ø	⊗	\bigotimes	Ø
	Displays correct Information	ø	Ø	Ø	Ø	Ø	Ø
	Educative	Ø	*		*	Ø	Ø
	Easy to share	ø	ø	Ø	Ø	ø	Ø
	Engaging towards the target audience	8	*	⊗	Ø		Ø

Should have	Similar visual identity as the DSFW	Ø	ø	Ø	Ø	ø	Ø
	Emotional Storytelling	8	8	8	⊗	്	Ø
Could	2D animation	⊗	\otimes	ø	⊗	8	Ø
have	Design with disability in mind	8	ø	Ø	Ø	ø	Ø
	Sound & Music	*	×	*	⊗	*	*
	Different Languages	ø	ø	Ø	Ś	ø	Ø
Will not	3D	Ø	S			Ø	Ø
have	Virtual Reality	0	0			8	
	Advertisement	Ø				I	

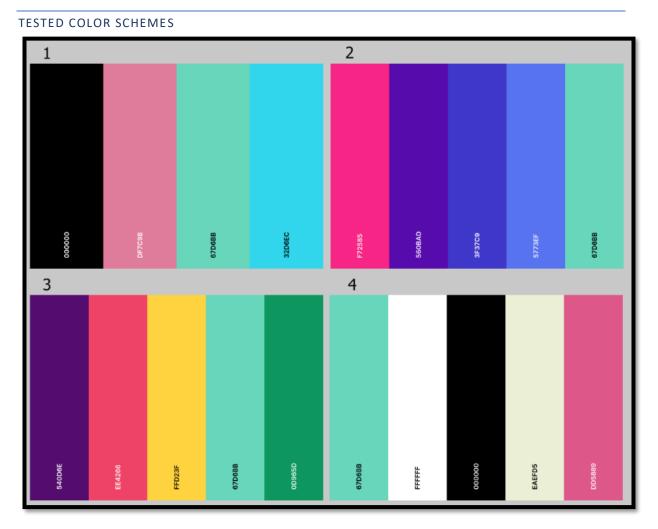


Figure 6 Color schemes that have been evaluated in the survey

SWOT-ANALYSIS

IDEA: TEXTILE STORY + LABEL SCANNER

Strength:

- Simple user input (Tapping and swiping)
- Interactive
- User is in control
- Communication through images
- Expandable
- Easily sharable (among users)
- Storytelling
- Available on Smartphone and PCs
- Simple prototype
- E-Learning applied
- User interaction is related to subject

Weakness:

- Demands high amount of artwork
- Not much variation
- Weak incentive to replay

Opportunity:

- Expansion into multiple languages (English, German)
- Usable in fashion sustainability education for the target audience
- First of its kind (regarding sustainable fashion education)

Threat:

- Label Scanner is complex to implement
- Quality of artwork can suffer from the amount of artwork needed

IDEA: SECONDHAND TRACKER + LABEL SCANNER

Strength:

- Relevant expansion for the DSFW website
- Available on Smartphone and PCs
- Simple prototype

Weakness:

- Demands manual updates
- Easily replaced by a Google search
- No significant E-learning aspect
- No emotional story telling
- No increase in awareness for users that have a lesser interest in sustainable fashion

Opportunity:

- Expansion into multiple languages (English, German)

- Opportunity to form partnerships with secondhand companies/events

Threat:

- Label Scanner is very complex to implement
- Does not persuade users to get into second hand

CONCLUSION

Based on the evaluation and team- as well as client discussions, the team concluded to further develop the ideas Label Scanner in combination with the Textile Journey. This decision was made, because the Label Scanner is a valid idea but not enough to engage and educate the target audience in a meaningful way.

The team decided to use the color scheme that is currently in use by the Dutch Sustainable Fashion Week, this decision is based on the survey results which have shown that the color scheme of the Dutch Sustainable Fashion Week has the most neutral response from the surveyed users. The general outline of the prototype will be made in Adobe XD by Sebastian Surwehme, this prototype will have the essential functions and give a good overview of the design and content of the prototype. Technical aspects of the Label Scanner and Textile Journey will be developed separately by Rick Oosthof so that the client can display the prototype in the Dutch Sustainable Fashion Week event and develop it further outside of the Adobe XD software. It is to note that the Adobe XD prototype has limitations. The prototype cannot store variables, meaning that a correct evaluation of a sustainability score is not possible. In addition, the label scanner cannot be implemented in the Adobe XD prototype because of its technical limitations. A placeholder will simulate the experience of the label scanner and sharing options. Lastly, because of the amount of artwork that is needed, only stock images that are fitting will be used instead of stylized drawings.

PROTOTYPE

PREPARATION

To start off the prototyping process, a mind map (Figure 7) has been created to outline the user's possible journey throughout the Textile Journeys prototype. The mind map is separated into multiple phases, which all have something to do with the different life cycles of a textile. Different phases have different requirements to access them, because of the different branches of the prototype only certain phases can be accessed by the user. This encourages the user to play through the game multiple times to find the undiscovered branches.

The phases the user will go through are:

- **Menu**: Navigating through the starting menu and defining what the textile the user wants to follow and from which country its coming from. Those can be defined manually or through the previously mentioned label scanner.
- Production and Transport: In this part of the prototype, the user can familiarize themselves with the interactions and can make smaller choices that have less of an impact on the journey itself. Once they are finished with that, they can take a small quiz or have an overview of the impact the textile has on the planet.
- Following a customer: In this phase, the user can influence different decisions of the customer that bought the textile. Here, important topics such as frequency of cleaning, repairing and child labor will be brought up. This phase is the most educative part of the Textile Journey, and the decision the user makes in this branch will influence the outcome the most.
- **Disposal**: In this phase the unregulated disposal process will be explained, the overall tone of this section is darker and tries to tie the impacts of the textile back towards the user themselves to allow for retrospection which in turn increases awareness of the actions the user has taken.
- **Garment Collecting:** An alternative route for the user which shows the possible ways the textiles can take, here it is possible to go to the disposal phase or getting recycled.

Each phase makes use of the different actions (Table 3) that contribute to sustainable fashion. The whole experience of the textile journey is built around the simulations of the textile process and the actions the consumer can make. Over the course of the journey the user will be directly addresses in a non-formal tone, which allows for playful interactions with the user in a respectable way. At the end of the journey, the user can see how many percent of people have chosen the same path as they have, as well as a final score to summarize their level of sustainability. Here they can share the journey or the results in social media. After that the user can check out the sources through an external website which host links to articles, as well as a hyperlink that transports them to a YouTube playlist containing all the videos that have been used to create the prototype.

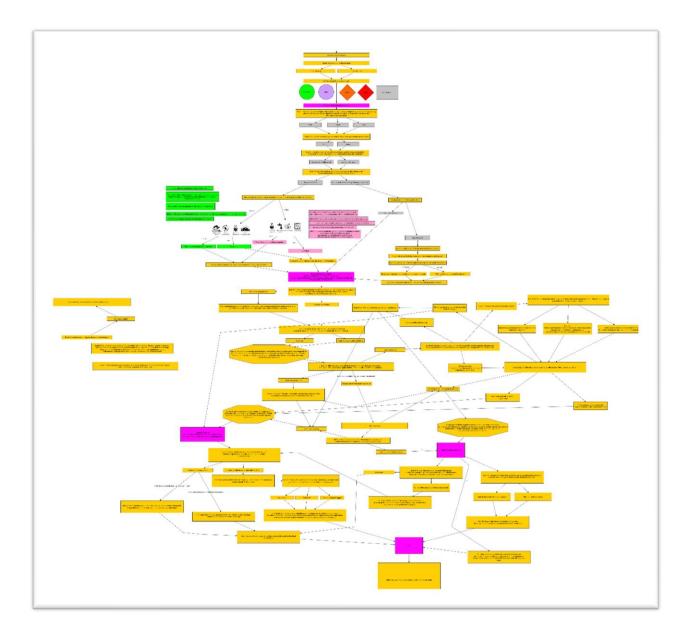


Figure 7 Mind-Map of the Textile Journey and its different branches

Access Figure 7 through:

https://drive.google.com/file/d/13jOtICQvxqshL67RTuARDGYRtZifU8xt/view?usp=sharing

THE PROTOTYPE

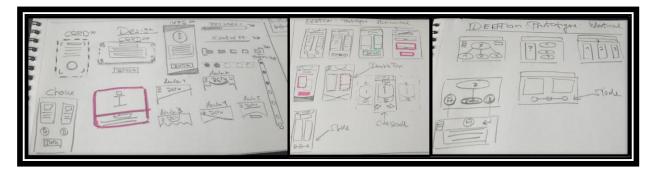


Figure 8 Sketches of the UI and elements

The process of the prototype creation started with basic sketches (Figure 8) which show the general placement of elements and its design variations. A vertical- and a horizontal version of the prototype where taken into consideration at the time. The design of the horizontal prototype is largely inspired by another e-learning game called Payback (Next Gen Personal Finance, n.d) (Figure 9) which educates upcoming students to simulate the impact of choices they make to increase or decrease the loans they have at the end of their education.

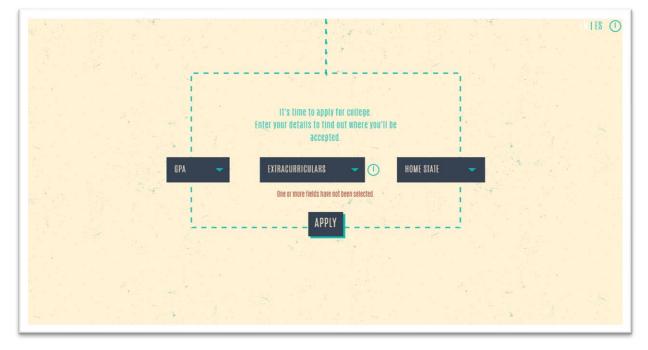


Figure 9 Image showing the Payback E-learning website

What differentiates Payback from our prototype, is its scenarios and approach on story telling. While Payback is very linear, the prototype of the Textile Journey has many different branches the user can find themselves in.

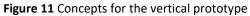
The vertical prototype took many inspirations from the popular E-learning game Duolingo (Duolingo, 2011) which specialized in teaching languages to its users through gamified elements and simple but varied interactions.



Figure 10 Horizontal prototype (Final version)

The last version of the horizontal prototype (Figure 9) was from its structure very minimalistic and showcases only necessary elements. While a horizontal version of the prototype allowed for a unique approach towards the composition of the design elements, in the end the team decided to go for a vertical approach. Reasons for the switch were a general preference of phone users to keep using the vertical mode of their smart phone (Pogue 2018; Colom et al. 2017; ScientiaMobile 2018), in addition to that it is slightly disorientating with the implementation of the label scanner. The switching between the horizontal mode in the Textile Journey, and vertical mode in the label scanner (camera) feels unnatural and is a possible source of disorientation of the user. This goes against the general attitude of the prototype to have simple and clear interactions.





The vertical prototype had many variations, mostly because it was unclear to us which selection method for the different choices was the most effective one. So, many versions have been created to check which fits the Textile Journey the most. Some made use of swiping, others double tap, single taps with a confirmation button and even one where the currently selected card was moved to the front. Different design elements like the choices which differentiate between scale and placement have been made to find working aspects which can be filtered and implemented towards the final version of the prototype. The team also took the chance to compare the different header and footer designs.

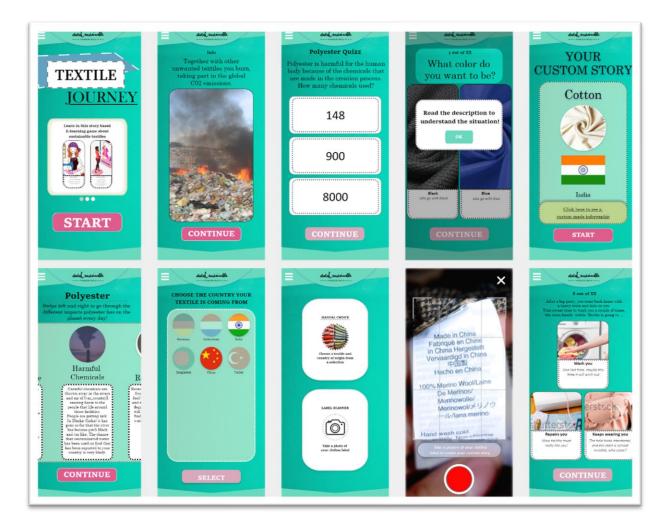


Figure 12 Prototype screens (Final versions for testing)

After filtering out the most interesting design aspects, a version of the prototype has been made (Figure 10). The prototype is made in Adobe XD and follow the DSFW color scheme, the color scheme allows for a nice contrast between the buttons (pink) and background (green). This is called a complementary color scheme and makes it almost impossible to miss the button once a choice has been selected.



Figure 13 Complementary color scheme of the final prototype

stalety sustainable	dalih sustainelle	dutch sastinulle	dulch saylandle
1 out of XX	1 out of XX	1 out of XX	1 out of XX
What color do	What color do	What color do	What color do
you want to be?	you want to be?	you want to be?	you want to be?
65		SELECTED	UNSELECTED
Black Black Letz go with block Letz go with blue	Efficiency of the blue of the second	Black Letts go with Black Letts go with Black	Disck Lets go with black Lets go with black
CONTINUE	CONTINUE	CONTINUE	CONTINUE

Figure 14 Design of the prototype screens – Golden Ratio – Complementary Color – Contrast

TESTING

TESTING APPROACH

Main Goals of the prototype:

- The prototype is enjoyable
- The user's awareness increases

Main Goals of the testing:

- Flaws/Problems are discovered
- User ideas are collected
- Users' opinion of the prototype is collected

During the Adobe XD Prototype session:

- Watch the user navigating through the UI (Record gameplay if possible)
- At the end, ask questions about the navigation experience and user opinion
- Be there to answer questions during the testing session, note down the question and analyze if certain question repeat
- Try to record the time it takes for the students to fill out the survey. This information can prove valuable in case the prototype takes much longer than anticipated. If this is the case, changes to the length of the prototype must be considered

Sequence of the testing:

- Inform the user about the circumstances: The goal of the prototype The limitations of the prototype Explaining the sequence of the testing session
- 2. Question the users through a Qualtrics Survey General Information is collected

- Prototype testing session
 User tests the prototype
 User gets asked questions regarding the prototype
 User gives feedback
- 4. Feedback will be evaluated Feedback from the testing session will be evaluated
- 5. Changes are applied to the prototype Plans for the prototype will be discussed with the client Prototype will be adjusted

Possible Questions:

ASPECT	INDICATORS	Question
(What do you need to know)		
The prototype has flaws,	User is annoyed	What did you dislike about the
we must discover them	User quits the game	prototype?
	Negative emotion	
The prototype has good	User has fun/smiles/laughs	What did you like about the
aspects, we must know them to improve on it	User replays the game	prototype?
	Positive emotion	
Is the prototype going to be	User has interest	Would you replay the
used once or will people replay it	User wants to play the prototype again	prototype to discover other paths?
	prototype again	
The experience of the	Users' opinion is mostly positive	Was the prototype enjoyable?
prototype was good	User recommends it	
The prototype increases the	The target audience has	Do you think that the
knowledge	increased their knowledge about the impact of the fashion	prototype has increased your knowledge about the textile?
	industry	
	The user knows certain methods to live a more	
	sustainable life	
The user has ideas of their own	User gives ideas	Do you have anything you would like to see in the final
U U U U U U U U U U U U U U U U U U U	User has improvements	product?

The time it takes to complete the prototype is optimized	The user finishes the prototype The user's opinion of the length of the prototype is positive The user is not distracted while testing the prototype	What do you think about the length of the prototype?
The language of the prototype is suited for the target audience	User can read it User can understand it Tone of voice of the prototype is enjoyable	What do you think about the tone of the prototypes text?
The prototype is easy to look at	The user has no problems reading text The user's opinion of the look and feel of the prototype is positive	What do you think about the look and feel of the prototype? (Is it professional?)
The prototype is easy to navigate through	The user has no problem to navigate the different screens The user is not stuck while using the prototype	Did you have any problems with navigating through the prototype?

Table 6 Possible Questions that are asked in the survey

The survey results will be shown in Appendix B.

TESTING RESULTS

The testing session was conducted only by Rick Oosthof with two classes from the 4th year because of the language barrier. The students age ranged from 15 to 18. Approximately 40 students participated in the prototype testing and survey. Additional results from other classes with no guidance from Rick Oosthof have emerged shortly after the visit at the class. The second survey has 28 responses. Making a total of 68 testers.

Problems that emerged:

- Students were confused why the label scanner did not allow them to take a picture. Once they understood that the image is provided, and the label scanner is unfinished the curiosity turned into disappointment
- Loading time issues because of a slower internet connection
- Prototype did not display correctly on some smart phones. The continue button was outside of the screen which hurt the quality of the prototype testing.
- Disinterested student skipped through the survey
- It was unclear what the point of the label scanner was
- Out of the forty students questioned only seventeen finished the survey. Out of the seventeen finished survey only thirteen answered seriously.

Positive	Negative	Findings
The prototypes Textile Journey was rated mostly positive	The Textile Journey was too long	The statement "The environment is important to my live" is answered neutrally
Interest in replaying the prototype to find the different paths was voiced	 The students did not like: The subject Country options in the textile adventure The color options in the textile adventure The feeling of having little choice 	The statement "The choices that I make have influence" is answered slightly negatively
Appearance and (professional) look of the prototype were rated slightly positive	Out of the seventeen answered survey results only 6 would like to play the finished version of the prototype	The statement "The environment has influence in the choices I make" is answered slightly negatively
 The students liked: Finding out what the textiles are made of The story elements The choices that are presented to them The creativity of the prototype Picking images 		15 out of 40 students were using an iPhone
11 out of 17 responses said that they learned something new		Everyone who finished the survey also finished the prototype
		It took the student 10 minutes on average to finish the prototype 9 out of 19 would play the
		journey again to find hidden routes

Table 7 Test findings with school students

PROTOTYPE ADJUSTMENTS

Based on the student feedback and discussion with the client, the following changes will be applied to the last version of the prototype:

1. Color choices for the textile where not well received so instead more vibrant colors will be chosen next time

- 2. The burger menu at the top left will be used to display a map that showcases:
 - a. The current position of the user in the Textile Journey
 - b. Already traversed paths of the user, as well as undiscovered paths

This change is supposed to encourage and make it easier for the user to replay the game.

The length of the prototype will not be changed despite the feedback from the students. The team assumes that this feedback was so prevalent in the first test because of the low motivation of the students towards taking part in the journey. In addition to that, cutting parts of the story is not possible because it would disrupt

the flow of the story that is already created. This would make it mandatory to change the whole story while losing important aspects of the prototype that showcases multiple aspects of the sustainable lifestyle the Dutch Sustainable Fashion Week wants to teach to users.

FINAL PROTOTYPE

CHANGES

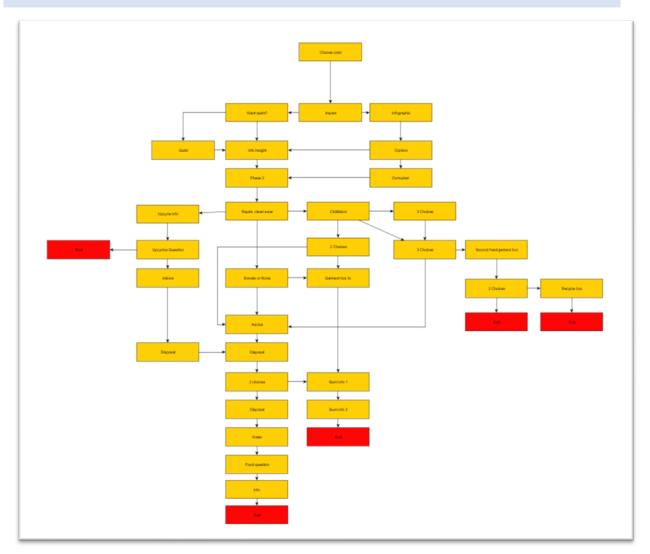


Figure 15 Mind map of the structure for the map of the Textile Journey

To make it easier for users to see their current position in the prototype, as well as the paths they have taken and not taken, a simple map has been made. The map only showcases major points in the journey, this design decision has been made to simplify the design of the map to avoid a cluttered and complicated appearance that can discourage users to interact with the prototype and diminish the interest of users to replay the prototype. Based on the mind map a non-responsive version of the journey map has been added to the Adobe XD prototype. It was important for the design to clearly showcase the paths that have been visited by the user as well as keeping the overall design simple without the use of too much text. A point of confusion in the design is that the flow of the journey is not detailed, meaning that the map as it is now can be interpreted in a way so that the user can loop or go backwards. This could have been avoided with the usage of arrows pointing at the next possible point, this however makes the design too cluttered and deviates from the simplicity the team was going for.

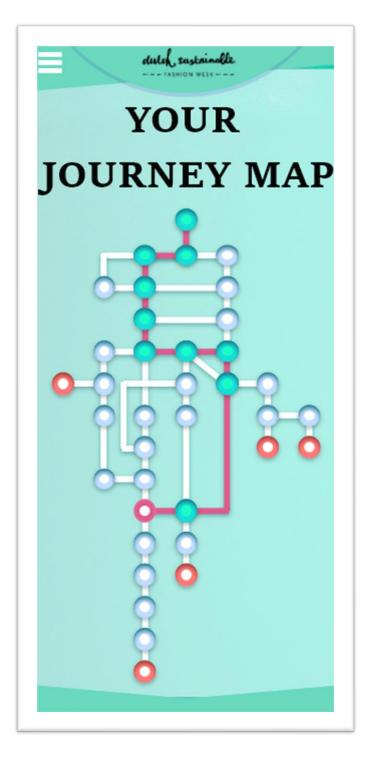


Figure 16 Unresponsive design of the journey map in Adobe XD



Figure 17 (Left) New color choices; (Right) Old color choices

A small number of testers voiced their dislike for the colors that could be chosen for the garment they created. So, more vibrant colors are replacing the older choices.

FINAL PROTOTYPE: SCREENS

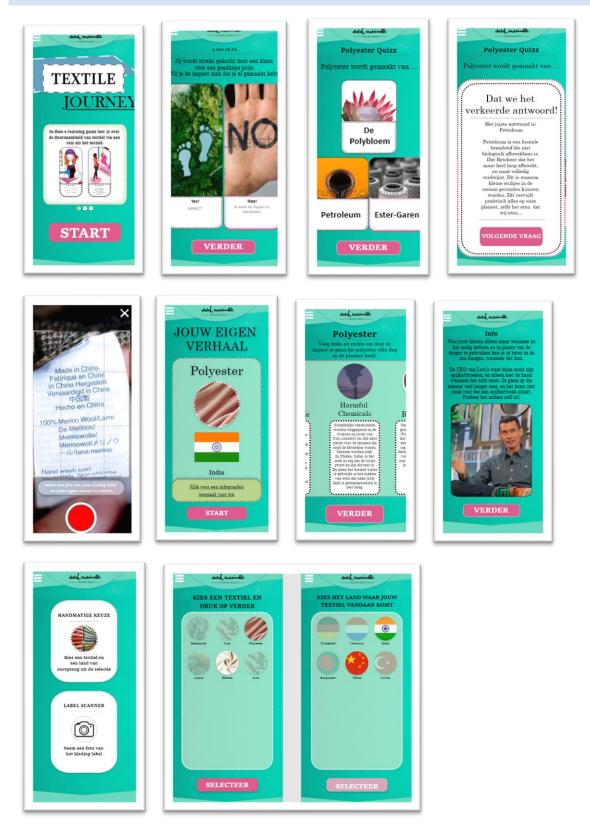


Figure 18 Collection of different screen types;

1.Textile Journey Screen; 2. 2 Choices; 3. 3 Choices (Quizz); 4. Quizz answered; 5. Label Scanner Screen; 6: Story Overview Screen; 7: Textile Info; 8: Info Screen; 9: Manual or Label Scanner Choice; 10: Manual Screen for Textile and Language;



Figure 19 Long Screens; 1. Sources; 2. Your Journey Overview;

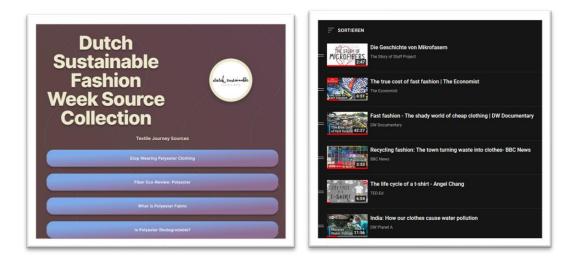


Figure 20 Source Websites; 1. Article Collection Website; 2. YouTube Playlist;

Accessible through:

- 1. <u>https://www.youtube.com/playlist?list=PLJXgHjpzWcJmjSqtzXGmNdbUcKvpsqJWj</u>
- 2. https://dsfw.carrd.co/

The final prototype is available through the link:

https://xd.adobe.com/view/cf2362dc-8b95-4747-93dd-1dee429be9bc-9a70/?fullscreen&hints=off

SCOPE CHECKLIST

Priority Level	Scope Category	Status	Description
Must have	Thoroughly tested UI	Fullfilled	The Adobe XD prototype has
			been tested once in person,
			and twice through online
			surveys. The style and visual
			identity have also beent
			tested.
	Interactive Elements	Fullfilled	The prototype has interactive
			elements like buttons, the
			label scanner, swipeable
			screens and images to choose
			from.
	Gamification Elements	Somewhat fullfilled	The structure of the Adobe
	Gammeation Elements	Somewhat rummeu	
			XD prototype is similar to
			dialog heavy adventure
			games which is why
			emotional storytelling has
			been used to deepen
			awareness of the topic.
	Display correct information	Somewhat fullfilled	Information displayed in the
			Adobe XD prototype has
			checked sources which are
			displayed at the end of the
			prototype for users that want
			to deepen their
			understanding of the topic.
	Educative	Fullfilled	According to the survey, the
			user has learned new aspects
			of polyester and the clothing
			industry. 16 out of 28 users
			answered they have learned
			something new about
			polyester and the clothing
			industry.
	Easy to share	Somewhat fullfilled	At the end of the journey the
			user has the option to share
			their journey on social media.
	Engagin towards the target audience	Fullfilled	19 out of 9 answered that
	_		they enjoyed the experience
			with the Adobe XD
			prototype.
Should have	A similar visual identity as a Dutch	Fullfilled	The color schemes of the
	Sustainable Fashion website		Dutch Sustainable Fashion
			Week has been applied.
	Emotional Storytelling	Fullfilled	The story has an emotional
			tone that occasionally
			adresses the user and
			displays the consequences of
			the fashion industries current
			influence on the environment
			and people.

Could have	2D animation	Somewhat fullfilled	Nuanced animations have
		Somewhat rummeu	been used for screens, texts
			and selections. No frame by
			frame animation or tween
			animation or tween
		Company to at faultfill and	
	A design with disability in mind	Somewhat fullfilled	The design of the color
			scheme have good contrast
			and make it easier for people
			with visual impearment to
			see changes, but no major
			design changes have been
			made to be more accessible.
	Sound & Music	Easily implementable	No sounds have been added
			to the Adobe XD prototype.
			Though it is easily
			implementable.
	Different Languages	Possible	It is possible to make the
	(Dutch, English, German)		Adobe XD prototype more
			accessible by translating the
			current dutch text to other
			languages. The team has the
			ability to translate all the
			text, but because of time
			constraints and testing
			purposes it was decided to
			stay with the dutch language
Won't have	3D	Fullfilled	3D was not an option and
			would feel out of place.
	Virtual Reality	Fullfilled	A virtual reality prototype
			would be interesting, but
			because of the small team
			size which has no
			programmer, a VR prototype
			could not have been feasible
			for the team.
	Advertisement	Possible	Ideas regarding
			advertisements are shown in
			the "Recommendations"
			section of the report.
		<u> </u>	section of the report.

Table 8 Scope Checklist containing current status and descriptions

CONCLUSION

The project's initial goal, which is to educate teenagers (13 - 18 years) through an e-learning platform about the sustainable fashion industry, is a partial success. It is only slightly successful because the final version of the prototype must be released and even more thoroughly tested to come to a clear conclusion. It is also important to mention that the test results that have been used to conclude, did not have an optimal testing environment because of miscommunication with the testers as well as lower interest in the testing session. Therefore, additional testing with the current prototype is recommended.

Main Question:

How to create an interactive prototype that increases the awareness of sustainable clothing and textiles and motivates teenagers (13 - 18 years) through e-learning or gamified learning to act more sustainable?

The tests have shown that emotional storytelling that includes the user in combination with simple interactions, as well as short and precise info sections keep the user engaged and motivated.

Through the engagement and personal investment (time, emotional) the users have increased their knowledge in a playful and entertaining way.

The e-learning aspects of the prototype are the most successful part because:

- 1. The user was motivated to reach the end of the story to see the impact of their action
- 2. Bit sized information allowed for easy consumption of information
- 3. The user is in control
- 4. Low response time and immediate feedback
- 5. Multiple interactions (Quiz, Choices, Label Scanner)
- 6. Safe Failure
- 7. Sources for highly interested users are added

It is assumed, that this increase in knowledge also increases the awareness of the testers, this in turn, has the potential to change the behavior of the target audience. To prove this assumption, another questionnaire can be performed in the same class to see if the prototype had any significant impact.

The software that was used for the creation of the prototype is Adobe XD. Adobe XD has proven to be very useful and beginner friendly. This helped the team with the exploration of different designs as well as setting up the test (online) for the users. The auto-animate feature in Adobe XD was especially useful to create simple animations for selections and buttons.

The sustainable actions that are used in the final version of the protype are findings from professional sources (Goossensen, 2019 & Strähle et al., 2015) that have been presented to the company supervisor Alexandra Linn.

Access through the last version of the prototype (Adobe XD):

https://drive.google.com/file/d/13jOtICQvxqshL67RTuARDGYRtZifU8xt/view?usp=sharing

RECOMENDATIONS

Over the course of this project, it was clear that an additional student would have been very beneficial for the whole team. In some sections the testing and designing of the prototype were not as polished as they could have been. During the ideation and prototyping stage of the design thinking method, another person's input could have accelerated the completion of said stages, which in turn gave us more time to more critically think about the decisions the team made, as well as catching oversights in the design. As a result of this, most of the artwork used in the final version of the prototype is from stock photo websites, which are thematically appropriate but not something the artist of the team has envisioned in the final design.

The final deliverable however still fulfills the needs of the client and allows future students to iterate and expand on the current design. It is recommended that for the next assignment at least 3 students (artist, programmer, and designer) who are fluent in the Dutch language are forming a team. This is important because the translation/editing and importing of the text was slowing the projects advancements down significantly. The final product could include additional textiles, more story branches as well as alternative language options.

It is also recommended to have a simple and minimal design for the aesthetic of the images that are displayed in the definitive version (Figure 21) if the future team and clients go for a stylized approach. If the team decides to go with the stylized aesthetics, a survey that evaluates the target user's preference is also recommended.

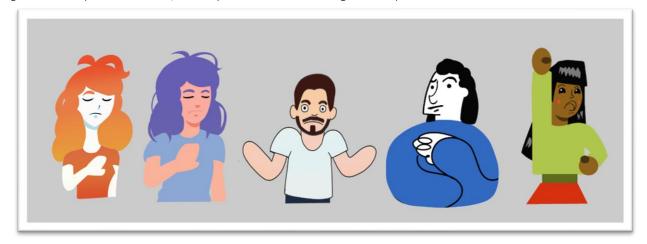


Figure 21 Possible art styles for the Textile Journey

In addition to the deliverable, the research displayed in this report is also valuable because it details the target audience's behavior and current perspective regarding the fashion industry. To advertise the final product towards the target audience a combination of social media influencers who are interested in sustainable fashion, schools and through the social media of the Dutch Sustainable Fashion week is recommended.

REFERENCES

Barth, A. (2020, March 19). *Why e-learning is killing education*. TED Talks. https://www.ted.com/talks/dr aaron barth why e learning is killing education

Batson, L., & Feinberg, S. (2015). Game Designs that Enhance Motivation and Learning for Teenagers. PSU.Edu. Retrieved 2021, from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.128.9391&rep=rep1&type= pdf

- Boykoff, M., Chandler, P., Church, P., & Osnes, B. (2021). Examining climate change and sustainable/fast fashion in the 21st century: 'Trash the Runway.' Oxford Open Climate Change, 1(1). https://doi.org/10.1093/oxfclm/kgab003
- Caspian Learning, & Clark, D. (2003). *Games and e-Learning*. Cedma Europe. Retrieved 2021, from <u>http://www.cedma-</u> <u>europe.org/newsletter%20articles/misc/Games%20and%20e-</u>

Learning%20(Nov%2006).pdf

Colom, A., van Elk, A., Lauke, P. H., Milstein, M., Hoober, S., Hoober, S., Hoober, S., Børgesen, F., Hall, C., E., & Kenedy, M. (2017, March 6). *Design for Fingers, Touch, and People, Part 1*. UXmatters. Retrieved 2022, from https://www.uxmatters.com/mt/archives/2017/03/design-for-fingers-touch-and-people-part-1.php

Duolingo. (2011). *Duolingo - Learn a language for free @duolingo*. Retrieved 2022, from https://www.duolingo.com/

Goossensen, M. (2019, March). Sustainable clothing consumption in The Netherlands. Https://Edepot.Wur.Nl/504788. Retrieved February 2022, from https://edepot.wur.nl/504788

[Master's Thesis, Wageningen University & Research]

- Jacobson, J., & Harrison, B. (2021). Sustainable fashion social media influencers and content creation calibration. *International Journal of Advertising*, 41(1), 150–177. https://doi.org/10.1080/02650487.2021.2000125
- Joyce, A., & Nielson, J. (2019, March 17). *Teenager's UX: Designing for Teens*. Nielsen Norman Group. Retrieved 2022, from https://www.nngroup.com/articles/usability-ofwebsites-for-teenagers/
- McKeown, C., & Shearer, L. (2019). Taking sustainable fashion mainstream: Social media and the institutional celebrity entrepreneur. *Journal of Consumer Behaviour*, 18(5), 406–414. <u>https://doi.org/10.1002/cb.1780</u>
- Next Gen Personal Finance. (n.d.). *Play Payback*. Timeforpayback. Retrieved 2022, from https://www.timeforpayback.com/
- Pogue, D. (2018, March 1). Video Looks Most Natural Horizontally, but We Hold Our Phones Vertically. Scientific American. Retrieved 2022, from https://www.scientificamerican.com/article/video-looks-most-natural-horizontally-butwe-hold-our-phones-vertically/?error=cookies_not_supported&code=991f1dd5-b0a4-4311-9c34-557af6c92fb0
- Radclyffe-Thomas, N. (2018). Designing a sustainable future through fashion education. *Clothing Cultures*, 5(1), 183–188. https://doi.org/10.1386/cc.5.1.183_1
- Reutlingen University Faculty of Textile & Design, Strähle, J., Will, C., & Freise, M. (2015, July). COMMUNICATION OF SUSTAINABILITY AT EUROPEAN FASHION
 ONLINE SHOPS. Reutlingen University. <u>https://publikationen.reutlingen-university.de/frontdoor/deliver/index/docId/224/file/224.pdf</u>
- Robinson, D. (2021, August 2). *10 Companies and Corporations Called Out For Greenwashing*. Earth.Org - Past | Present | Future. https://earth.org/greenwashingcompanies-corporations/

- Salem, S. F., & Alanadoly, A. B. (2020). Personality traits and social media as drivers of word-of-mouth towards sustainable fashion. *Journal of Fashion Marketing and Management: An International Journal*, 25(1), 24–44. https://doi.org/10.1108/jfmm-08-2019-0162
- Saxion University of Applied Sciences, Beens, K., Gorter, L., Hullegie, R., Kruiper, M., Peters, C., & V. Egberts, J. (2021). *Into the future II*. Dutch Sustainable Fashion Week. https://drive.google.com/file/d/1-PmrTqCVWINfnENHKCg9oV-Zv1L9ghMS/view?usp=sharing
 - The source was internally available, if you request access to the document once the link expires please contact the Dutch Sustainable Fashion week.
- Schulz, C. (2021, February 24). *Was ist Greenwashing? Definition, Beispiele & Mehr* •. CareElite. Retrieved June 3, 2022, from https://www.careelite.de/greenwashing/
- ScientiaMobile. (2018, May 8). Smartphone vs Tablet Orientation: Who's Using What? https://www.scientiamobile.com/smartphone-vs-tablet-orientation-whos-using-what/
- Seo, H., Houston, J. B., Knight, L. A. T., Kennedy, E. J., & Inglish, A. B. (2013). Teens' social media use and collective action. *New Media & Society*, *16*(6), 883–902. https://doi.org/10.1177/1461444813495162
- Siva, C. (2019, July). IMPACT OF ONLINE LEARNING ON TEENAGERS BUYING BEHAVIOUR. Researchgate. Retrieved February 2021, from https://www.researchgate.net/publication/334430332_IMPACT_OF_ONLINE_LEAR NING_ON_TEENAGERS_BUYING_BEHAVIOUR
- The Economist. (2018, November 29). *The true cost of fast fashion | The Economist* [Video]. YouTube. https://www.youtube.com/watch?v=tLfNUD0-8ts&feature=youtu.be
- Vesselinov, R., & Grego, J. (2012). Duolingo Effectiveness Study. Https://Static.Duolingo.Com/S3/DuolingoReport_Final.Pdf. Retrieved 2021, from https://static.duolingo.com/s3/DuolingoReport_Final.pdf

- Yacob, A., Kadir, A. Z. A., Zainudin, O., & Zurairah, A. (2012). Student Awareness Towards E-Learning In Education. *Procedia - Social and Behavioral Sciences*, 67, 93–101. https://doi.org/10.1016/j.sbspro.2012.11.310
- Y-Kollektiv. (2021, January 7). Secondhand Boom bei Zalando und About You: Nachhaltig oder smartes Business? [Video]. YouTube.

https://www.youtube.com/watch?v=umDppT51wPU&feature=youtu.be

APPENDICES

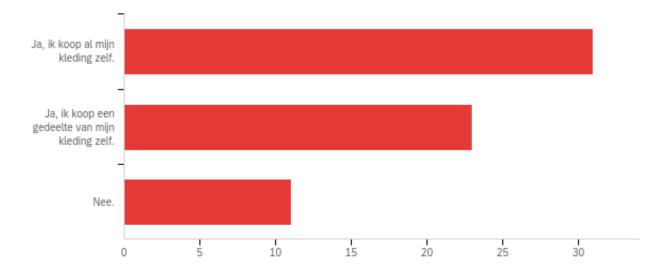
Appendix A

DSFW - Enquête May 17th, 2022, 5:12 am MDT

Q45 - Click to write the question text

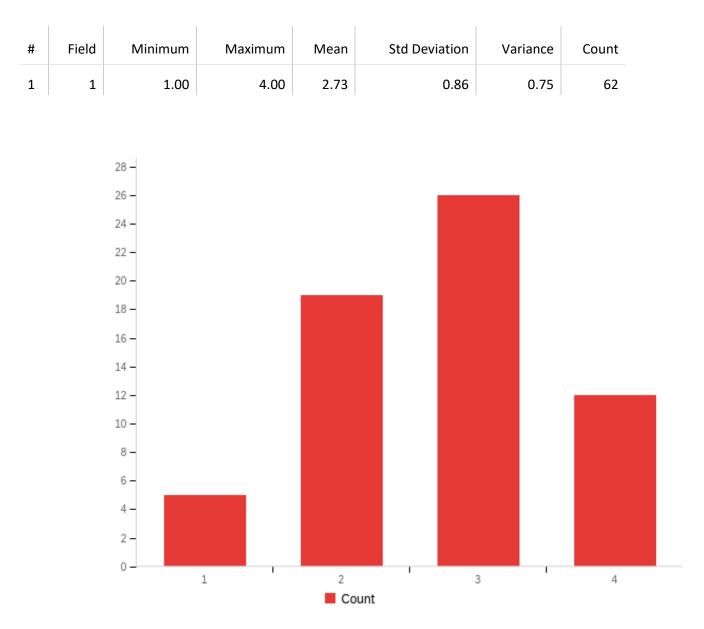
#	Answer	%	Count
1	10	1.54%	1
2	11	1.54%	1
3	12	1.54%	1
4	13	7.69%	5
5	14	4.62%	3
6	15	15.38%	10
7	16	21.54%	14
8	17	26.15%	17
9	18	12.31%	8
10	19	3.08%	2
11	20	1.54%	1
12	21	3.08%	2
	Total	100%	65



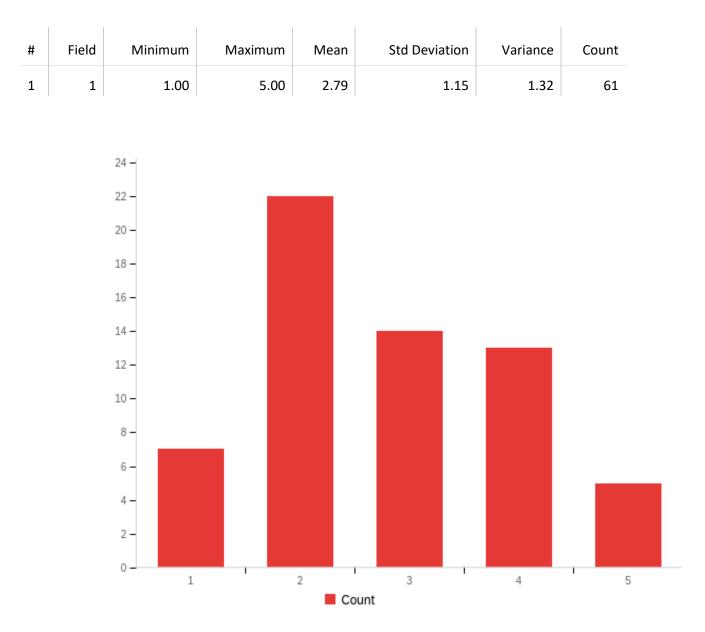


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Koop jij jouw eigen kleding?	1.00	3.00	1.69	0.74	0.55	65

#	Answer	%	Count
1	Ja, ik koop al mijn kleding zelf.	47.69%	31
2	Ja, ik koop een gedeelte van mijn kleding zelf.	35.38%	23
3	Nee.	16.92%	11
	Total	100%	65

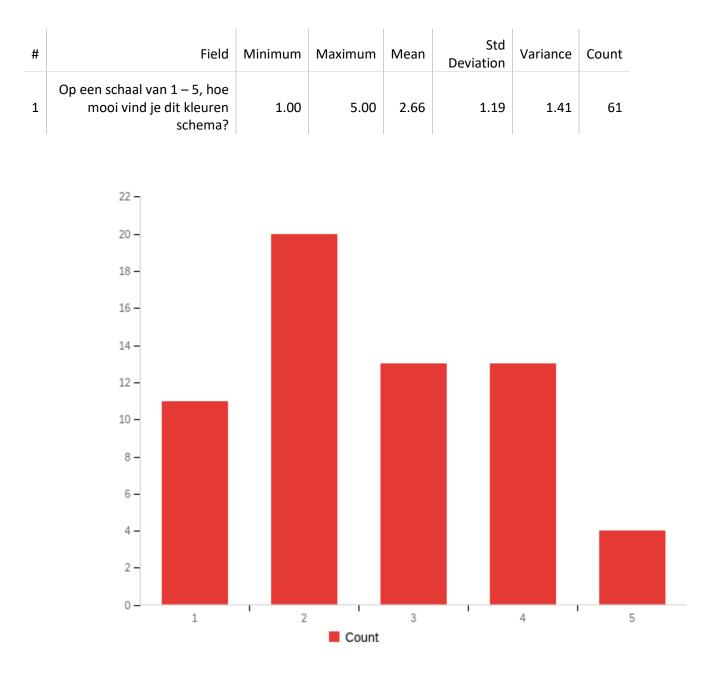


Q1 - Op een schaal van 1 - 5, hoe mooi vind je dit kleuren schema?

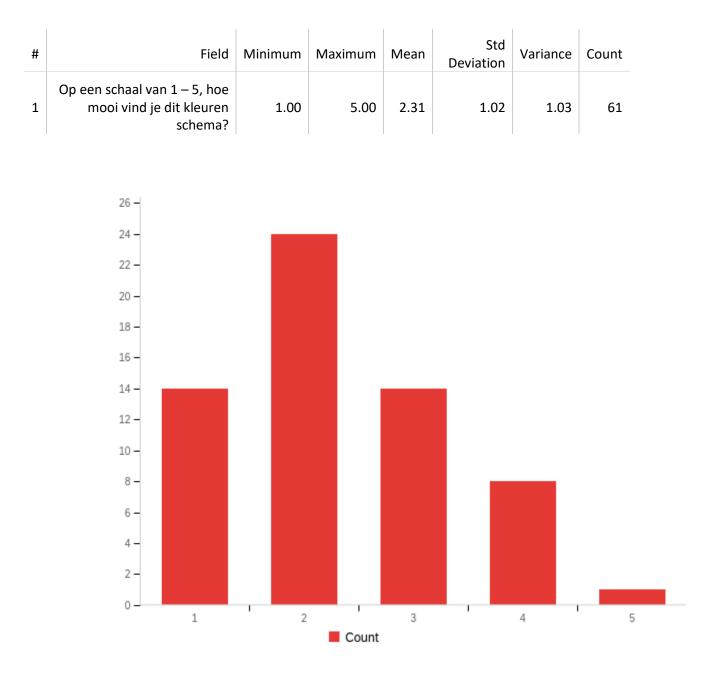


Q2 - Op een schaal van 1 - 5, hoe mooi vind je dit kleuren schema?

Q3 - Op een schaal van 1 - 5, hoe mooi vind je dit kleuren schema?



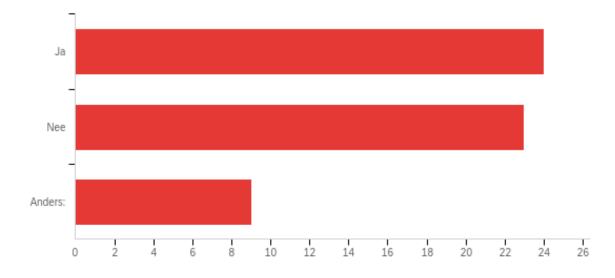
Q4 - Op een schaal van 1 - 5, hoe mooi vind je dit kleuren schema?



Q5 - Idee: Label scanner De label scanner is een website waarop je een foto van een kleding label kan nemen, de website geeft dan relevante informatie zoals de materialen, de duurzaamheid, textuur en als potentieel de werk condities in het land van afkomst.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	1.00	5.00	3.30	1.31	1.71	56
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	1.00	5.00	3.39	1.22	1.49	56
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	1.00	5.00	3.25	1.21	1.47	56

Q31 - Zou jij dit gebruiken?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	3.00	1.73	0.72	0.52	56

#	Answer	%	Count
1	Ja	42.86%	24
2	Nee	41.07%	23
3	Anders:	16.07%	9
	Total	100%	56

Q31_3_TEXT - Anders:

Anders: - teks	t			
Soms				
Somsheid				
Misschien har	ngt er van af			

Soms

Af en toe

misschien

Waarschijnlijk niet bij alles, maar alleen als ik het graag wil weten bij een bepaald kledingstuk

Weet ik niet

Q30 - Andere opmerkingen over dit idee?

Andere opmerkingen over dit idee?

Hhhhh

Kanker

Nee

Een leuk idee

Niemand gaat moeite doen per product

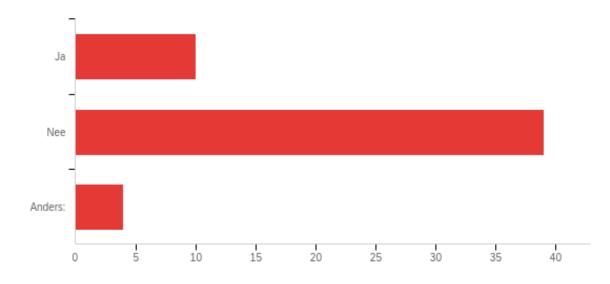
Ik zou niet bij elk kledingstuk kijken maar ik vind het zeker belangrijk. Ik denk dat als mensen dit doen dat ze zien waar het echt vandaan komt en hoe het is gemaakt.

Ik vind het handig om snel te kunnen kijken of het kledingstuk duurzaam is

Q6 - Idee: Quizz Een website waar je heen kan gaan om je kennis over duurzame kleren te testen, compleet met encyclopedie vol info.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	1.00	5.00	2.48	1.07	1.14	54
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	1.00	5.00	2.60	1.10	1.22	53
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	1.00	5.00	2.74	1.17	1.36	53

Q32 - Zou jij dit gebruiken?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	3.00	1.89	0.50	0.25	53

#	Answer	%	Count
1	Ja	18.87%	10
2	Nee	73.58%	39
3	Anders:	7.55%	4
	Total	100%	53

Q32_3_TEXT - Anders:

Anders: - tekst Soms Misschien

Misschien een paar keer maar niet regelmatig

Q37 - Andere opmerkingen over dit idee?

Andere opmerkingen over dit idee?

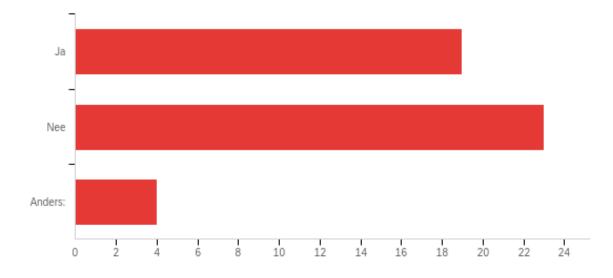
Kanker

Nee

Q7 - Idee: Tweedehands tracker Dit idee is een website vol met alle informatie over tweedehands shoppen, alle tweedehands winkels bij jouw in de buurt, events en tweedehands groepen op social media. Daarnaast heeft het ook nuttige informatie over goed zorgen voor je tweedehands kleren, zodat ze zo lang mogelijk mee gaan.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	0.00	5.00	2.93	1.58	2.50	46
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	0.00	5.00	2.98	1.62	2.63	46
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	0.00	5.00	2.67	1.46	2.13	46

Q33 - Zou jij dit gebruiken?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	3.00	1.67	0.63	0.39	46

#	Answer	%	Count
1	Ja	41.30%	19
2	Nee	50.00%	23
3	Anders:	8.70%	4
	Total	100%	46

Q33_3_TEXT - Anders:

Anders: - tekst

Misschien

misschien maar ik shop niet zo veel tweede hands

Ik koop zelf niet veel tweedehands kleding, maar als je dat wel doet zou ik het sowieso gebruiken

Q38 - Andere opmerkingen over dit idee?

Andere opmerkingen over dit idee?

Kanker

Ik shop de laatste tijd al vaker tweedehands en ga vaak naar de zelfde winkels dus dat is leuk als ik nieuwe winkels leer kennen.

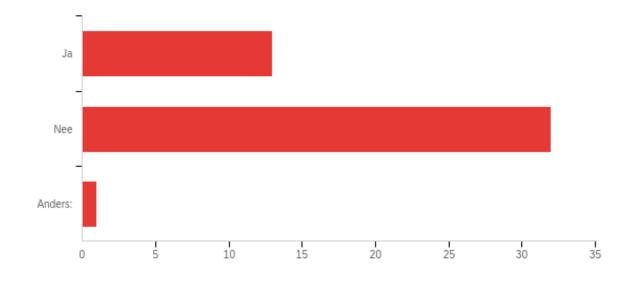
Ik zou het niet gebruiken omdat ik eigenlijk nooit naar een tweedehands winkel ga

lijkt op Vinted

Q8 - Idee: Duurzaamheid bot De duurzaamheid bot is een chat bot die je vragen kan stellen over duurzame mode en kleren. De bot geeft dan antwoord op jouw vragen en op die manier kan je meer leren over wat nou duurzaam is en wat niet.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	0.00	5.00	2.39	1.42	2.02	46
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	0.00	5.00	2.59	1.51	2.29	46
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	0.00	5.00	2.65	1.58	2.49	46

Q34 - Zou jij dit gebruiken?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	3.00	1.74	0.49	0.24	46

#	Answer	%	Count
1	Ja	28.26%	13
2	Nee	69.57%	32
3	Anders:	2.17%	1
	Total	100%	46

Q34_3_TEXT - Anders: Anders: - tekst

Q39 - Andere opmerkingen over dit idee?

Andere opmerkingen over dit idee?

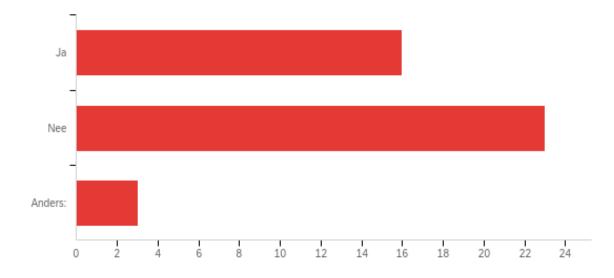
Kanker

Ik denk dat ik niet vragen ga stellen ofzo maar als er leuke voorbeelden op staan dan heb ik daar meer aan

Q9 - Idee: Duurzame Merken Deze website laat alle duurzame merken in de buurt zien, samen met een rating van hoe duurzaam ze nou zijn. Zo weet je zeker dat de groene label bij de H&M of C&A ook echt groen is.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	0.00	5.00	2.74	1.50	2.24	42
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	0.00	5.00	2.76	1.49	2.23	42
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	0.00	5.00	2.71	1.44	2.06	42

Q35 - Zou jij dit gebruiken?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	3.00	1.69	0.60	0.36	42

#	Answer	%	Count
1	Ja	38.10%	16
2	Nee	54.76%	23
3	Anders:	7.14%	3
	Total	100%	42

Q35_3_TEXT - Anders:

Anders: - tekst

Misschien

Q40 - Andere opmerkingen over dit idee?

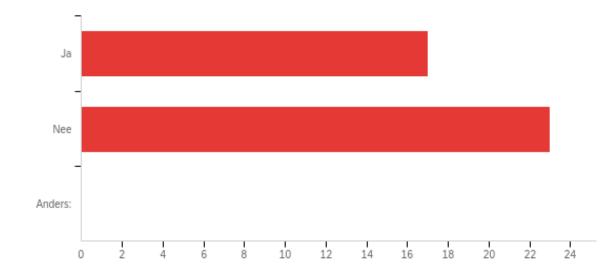
Andere opmerkingen over dit idee?

Kanker

Q10 - Idee: Textiel Reis Volg het pad van één van jouw kledingstukken, vul eerst alle informatie in en dan neemt deze app jou door de reis die jouw kledingstuk ook gemaakt heeft, van hoe de materialen origineel verzameld zijn, naar de fabriek, je kast en dan wat er mee gebeurt nadat je het weg gooit.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Hoe leuk vind jij dit idee? 1 = niet leuk, 5 = heel erg leuk.	0.00	5.00	2.67	1.65	2.72	40
2	Hoe nuttig vind jij dit idee? 1 = niet nuttig, 5 = heel erg nuttig.	0.00	5.00	2.48	1.63	2.65	40
3	Hoe uniek vind jij dit idee? 1 = niet uniek, 5 = compleet uniek.	0.00	5.00	3.00	1.67	2.80	40





#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	- Zou jij dit gebruiken? Selected Choice	1.00	2.00	1.57	0.49	0.24	40

#	Answer	%	Count
1	Ja	42.50%	17
2	Nee	57.50%	23
3	Anders:	0.00%	0
	Total	100%	40

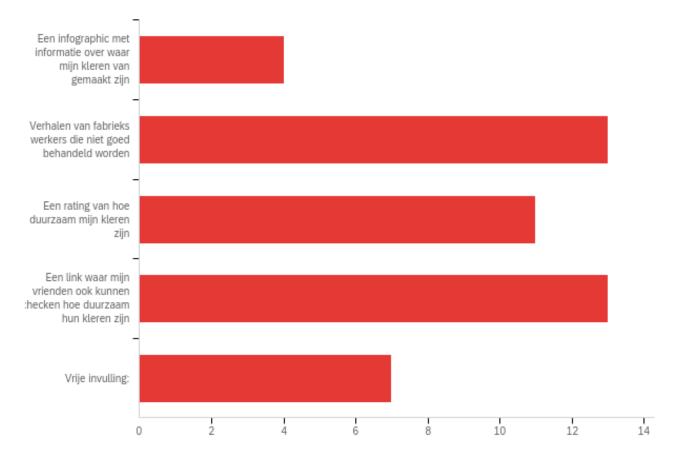
Q36_3_TEXT - Anders: Anders: - tekst

Q41 - Andere opmerkingen over dit idee?

Andere opmerkingen over dit idee?

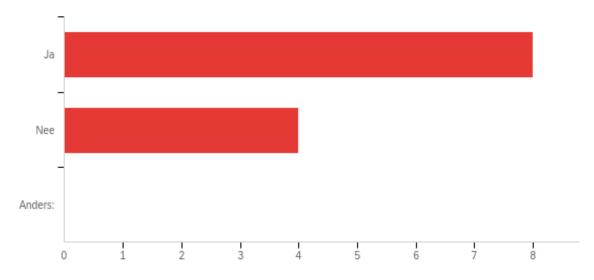
Dit is heel leuk. Tenminste als je iets besteld zie je vaak wanneer het bijna aankomt maar nu kan je het helemaal volgen. Ik denk ook dat mensen een beter beeld krijgen wat er allemaal gedaan moet worden om het in jou huis te krijgen

Q43 - Welke van deze onderwerpen zou jij delen op social media of met je vrienden in een chat groep (Zoals whatsapp of discord)?



#	Answer	%	Count
1	Een infographic met informatie over waar mijn kleren van gemaakt zijn	8.33%	4
2	Verhalen van fabrieks werkers die niet goed behandeld worden	27.08%	13
3	Een rating van hoe duurzaam mijn kleren zijn	22.92%	11
4	Een link waar mijn vrienden ook kunnen checken hoe duurzaam hun kleren zijn	27.08%	13
11	Vrije invulling:	14.58%	7
	Total	100%	48





#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Zou jij ook de infographic of rating delen als jouw kleren niet duurzaam zijn? - Selected Choice	1.00	2.00	1.33	0.47	0.22	12

#	Answer	%	Count
1	Ja	66.67%	8
2	Nee	33.33%	4
3	Anders:	0.00%	0
	Total	100%	12

Q44_3_TEXT - Anders: Anders: - tekst

Appendix B

On-site School Survey May 16th 2022, 3:20 am MDT

Q5 - Click to write the question text

Browser

#	Answer	%	Count
Safari iPhone	Safari iPhone	78.57%	22
Chrome	Chrome	17.86%	5
Chrome iPhone	Chrome iPhone	3.57%	1
	Total	100%	28

Versie

#	Answer	%	Count
15.4	15.4	46.43%	13
15.2	15.2	10.71%	3
92.0.4515.166	92.0.4515.166	7.14%	2
96.0.4664.104	96.0.4664.104	7.14%	2
101.0.4951.41	101.0.4951.41	3.57%	1
101.0.4951.44	101.0.4951.44	3.57%	1
14.0.3	14.0.3	3.57%	1
14.1	14.1	3.57%	1
15.0	15.0	3.57%	1
15.1	15.1	3.57%	1
15.3	15.3	3.57%	1
Unknown	Unknown	3.57%	1
	Total	100%	28

Besturingssysteem

#	Answer	%	Count
iPhone	iPhone	82.14%	23
Android 11	Android 11	14.29%	4
Android 12	Android 12	3.57%	1
	Total	100%	28

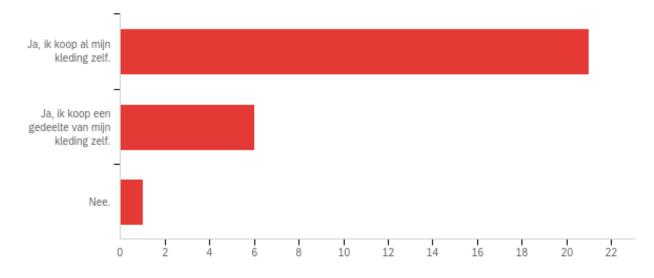
Resolutie

#	Answer	%	Count
414x896	414x896	35.71%	10
375x812	375x812	21.43%	6
390x844	390x844	10.71%	3
360x800	360x800	7.14%	2
375x667	375x667	7.14%	2
385x854	385x854	3.57%	1
393x873	393x873	3.57%	1
412x915	412x915	3.57%	1
414x736	414x736	3.57%	1
428x926	428x926	3.57%	1
	Total	100%	28

Q1 - Hoe oud ben jij?

#	Answer	%	Count
1	10	0.00%	0
2	11	0.00%	0
3	12	0.00%	0
4	13	0.00%	0
5	14	0.00%	0
6	15	21.43%	6
7	16	28.57%	8
8	17	32.14%	9
9	18	17.86%	5
10	19	0.00%	0
11	20	0.00%	0
12	21	0.00%	0
	Total	100%	28





#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Koop jij jouw eigen kleding?	1.00	3.00	1.29	0.52	0.28	28

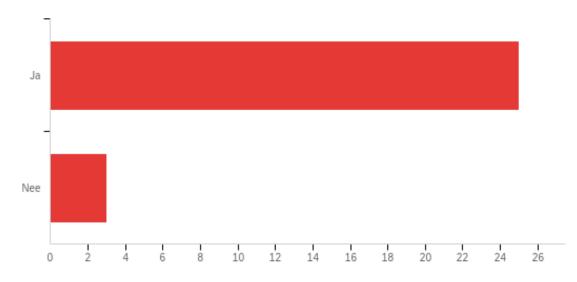
#	Answer	%	Count
1	Ja, ik koop al mijn kleding zelf.	75.00%	21
2	Ja, ik koop een gedeelte van mijn kleding zelf.	21.43%	6
3	Nee.	3.57%	1
	Total	100%	28

Q7 - Hoe veel ben jij het eens met deze verklaringen?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Het milieu is belangrijk in mijn leven	1.00	5.00	3.54	1.05	1.11	28
2	Keuzes die ik maak hebben invloed op het milieu	1.00	5.00	2.89	0.90	0.81	28
3	Het milieu heeft invloed op mijn keuzes	1.00	5.00	2.75	1.09	1.19	28

SCANNER PROTOTYPE

Q10 - Heb je het prototype afgemaakt?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Heb je het prototype afgemaakt?	1.00	2.00	1.11	0.31	0.10	28

#	Answer	%	Count
1	Ja	89.29%	25
2	Nee	10.71%	3
	Total	100%	28

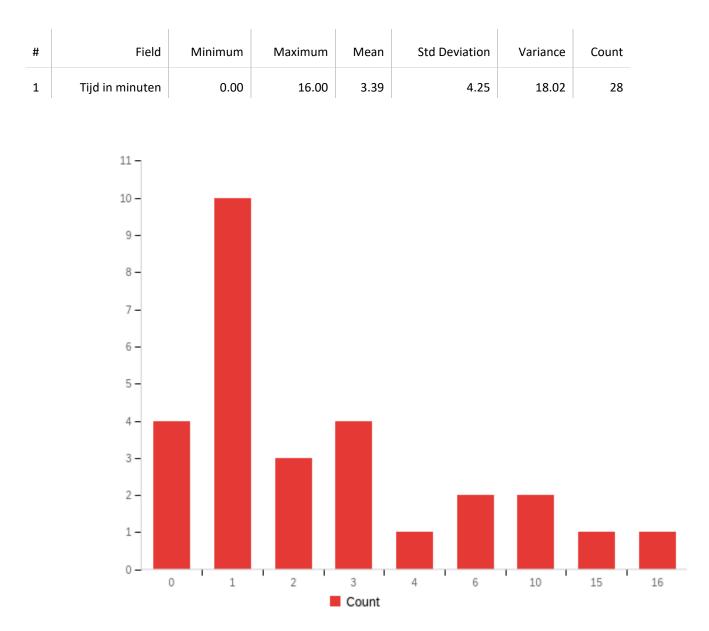
Q11 - Waarom niet?

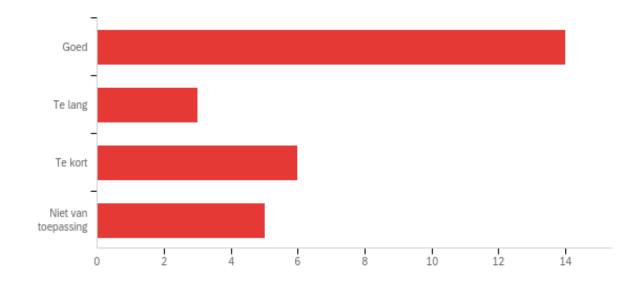
Waarom niet?

het werkte niet

want ik heb het geskipt

Q9 - Hoe lang duurde het jou om ze ver in het prototype te komen?



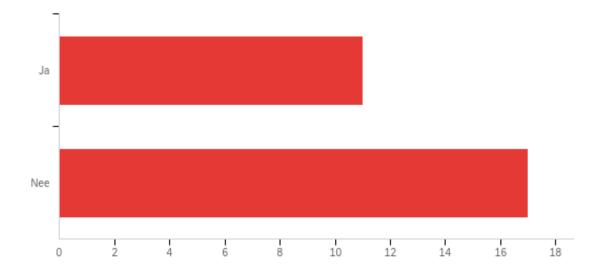




#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Wat vond je van de lengte van het prototype?	1.00	4.00	2.07	1.19	1.42	28

#	Answer	%	Count
1	Goed	50.00%	14
2	Te lang	10.71%	3
3	Te kort	21.43%	6
4	Niet van toepassing	17.86%	5
	Total	100%	28





#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Was het prototype leuk?	1.00	2.00	1.61	0.49	0.24	28

#	Answer	%	Count
1	Ja	39.29%	11
2	Nee	60.71%	17
	Total	100%	28

Q15 - Wat vond je (wel) leuk aan het prototype?

Wat vond je (wel) leuk aan het prototype? Dat je zelf actief bezig bent in plaats van alleen lezen Niks Niks Het was makkelijk Ik vond het wel oke Ik vond het wel prima Veel informatie over een kleding stuk Niks Niks nee De vragen nik Om het land van oorsprong te weten Niets Niks Om eens stil te staan waar bepaalde kleding va genaakt is Weet ik niet Er achter komen waar het van gemaakt is en waar het gemaakt is. het was handig om te zien of het kledingstuk recyclebaar was Ik vond het handig. kwam achter dingen die ik niet wist Dat ik een foto maakte van een kledingstuk ging maken(label) Het ging snel en alles is duidelijk Dat je weet van wat het is gemaakt Het onderzoek die naar kleding word gedaan en allerlei technieken om milieubewust te werken

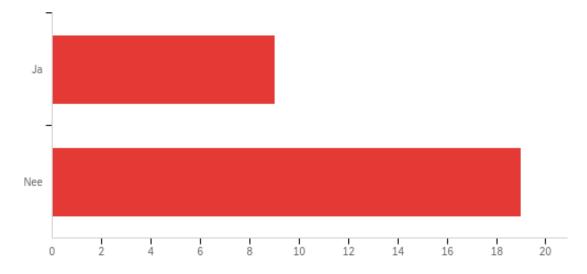
niks

Q16 - Wat vond je niet leuk aan het prototype?

Wat vond je niet leuk aan het prototype?
Dat het te kort was en weinig informatie had
Alles
Alles
Kon zelf niet scannen
Niks
Niks
Was een beetje te kort
Alles
Bijna alles
alles
Niks
nee
T was oke
Het was te kort
Ik vind het beetje nutteloos
Weet ik niet
Het deed heel moeilijk en het ging niet zo soepel, waardoor het minder leuk werd.
eigenlijk niets, vond het prototype wel handig
Niks, het is handig als je meer informatie over het product te weten wilt komen.
niks voor mij
Te saaie vragen
Onderwerp was een beetje saai maar als het over iets anders ging zou t anders zijn
Beetje onduidelijkheid niet overzichtelijk
Teveel vragen

ik begrijp het nut ervan niet, je ziet die informatie toch al op de label?

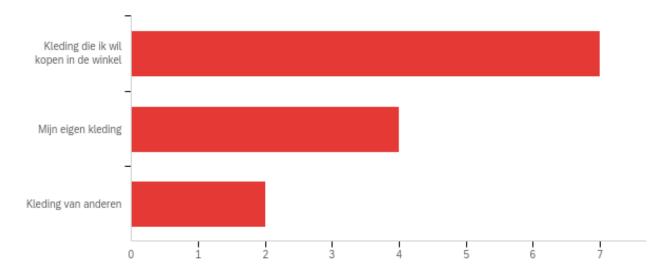




#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Zou jij het prototype willen gebruiken als het klaar is?	1.00	2.00	1.68	0.47	0.22	28

#	Answer	%	Count
1	Ja	32.14%	9
2	Nee	67.86%	19
	Total	100%	28

Q34 - Wat voor soort kleding zou je het mee gebruiken? Klik alles wat relevant is.



#	Answer	%	Count
1	Kleding die ik wil kopen in de winkel	53.85%	7
2	Mijn eigen kleding	30.77%	4
3	Kleding van anderen	15.38%	2
	Total	100%	13

Q17 - Wat vind je van het uiterlijk van het prototype?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Mooi	1.00	5.00	2.79	1.21	1.45	28
2	Professioneel	1.00	5.00	2.93	1.25	1.57	28

Q18 - Waren er problemen met het navigeren door het prototype?

Waren er problemen met het navigeren door het prototype?

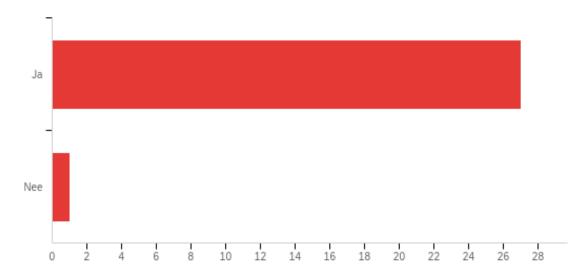
Nee Ja ik kon niet zelf iets scannen Ja Nee Nee Nee Ja
Ja Nee Nee Nee Ja
Nee Nee Ja
Nee Ja
Nee Ja
B
Ja het deed het niet
Nee dat niet
ja ik kon er niet uit gaan
Nee
ja
Nee
la
Nee
Nee
Ik kon geen foto maken van een label
Ja, ik kon in het begin niet scannen en het ging niet zo snel en gemakkelijk.
als eerst wel, maar dat komt omdat ik de site verkeerd had getypt :)
Ja het lukt niet helemaal goed met scannen.
Jaa beetje hapering en onduidelijk
Nee
Nee
Het was een beetje onduidelijk
Ja
nee

Q32 - Nog iets anders wat je kwijt wilt over het prototype?

Nog iets anders wat je kwijt wilt over het prototype?
Als het af is zal het zeker interessant en leuk zijn
Nee
Dit was tijdverspilling
Nee
Nee
Nee
Het zou een betere begin/start pagina kunnen hebben in het begin vond ik het een beetje onduidelijk
Nee
Verleng het
nee
Beetje confusing
het was slecht
Nee
Het is moeilijk te volgen
Nee
Nee
Niet ieder kledingstuk heeft een label
Het was wel leuk om zo iets te doen en ook best interessant, want ik heb er toch nog wat van geleerd.
keep up the good work :)
Nee.
nee
Nee
Nee
Het mag wat duidelijker zijn
Nee
nee

JOURNEY PROTOTYPE

Q19 - Heb je het prototype afgemaakt?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Heb je het prototype afgemaakt?	1.00	2.00	1.04	0.19	0.03	28

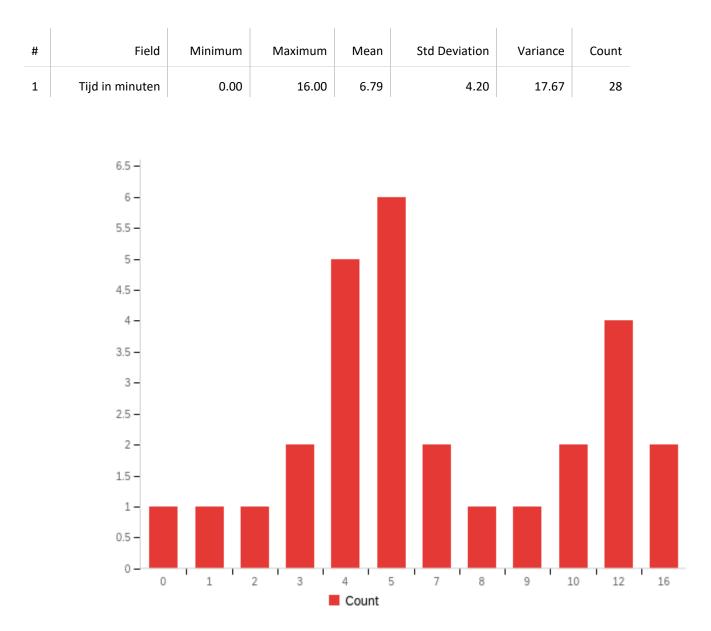
#	Answer	%	Count
1	Ja	96.43%	27
2	Nee	3.57%	1
	Total	100%	28

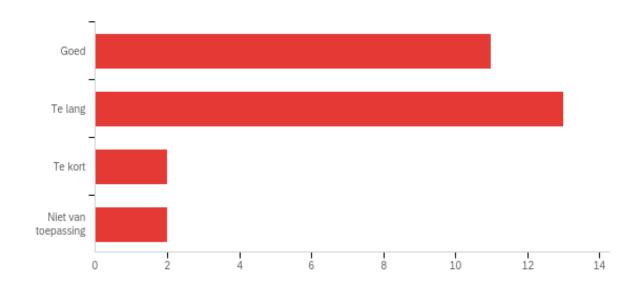
Q20 - Waarom heb je het prototype niet afgemaakt?

Waarom heb je het prototype niet afgemaakt?

Het lukte niet





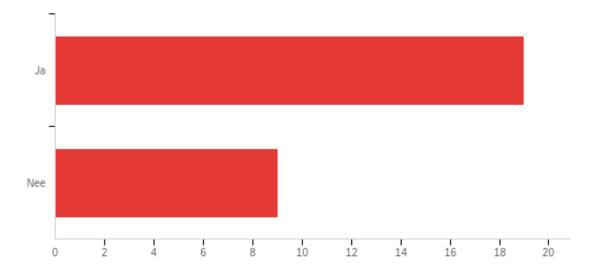


Q22 - Wat vond je van de lengte van het prototype?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Wat vond je van de lengte van het prototype?	1.00	4.00	1.82	0.85	0.72	28

#	Answer	%	Count
1	Goed	39.29%	11
2	Te lang	46.43%	13
3	Te kort	7.14%	2
4	Niet van toepassing	7.14%	2
	Total	100%	28





#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Was het prototype leuk?	1.00	2.00	1.32	0.47	0.22	28

#	Answer	%	Count
1	Ja	67.86%	19
2	Nee	32.14%	9
	Total	100%	28

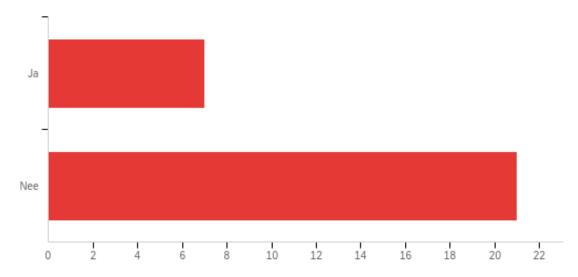
Q25 - Wat vond je (wel) leuk aan het prototype?

Wat vond je (wel) leuk aan het prototype? Dat je zo erg mee gaat met het verhaal en je erin plaatst Nee Niks Had genoeg opties Veel leuke vragen Dat het van die gekke vragen stelde Veel informatie Beerje interactief niks De vragen waren interessant Ontdekken Niets Niks Het was wel leuk om te zien wat voor impact het zou hebben Niet veel Het er achter komen waar het van gemaakt is en waar het gemaakt is. het verhaal die na de keuzes kwamen Dat ze alles uitlegden Het was interessant Dat ik me eigen kledingstuk kan ontwerpen Creatief Plaatjes kiezen Je gaat milieubewust bezig

Q26 - Wat vond je niet leuk aan het prototype?

Wat vond je niet leuk aan het prototype?
Dat het te lang was want het was te uitgebreid
Nee
Het duurde te lang
Beperkte keus
Niks, het was best leuk
Niks ik vond het best grappig
Beetje kort
De vele verhaaltjes waren soms onnodig daardoor voelde het wat langer
alles
De lengte
ik had 100% score
Niks
Het was te lang
Het werkt niet
Veel
Het was niet zo duidelijk en het liep niet zo soepel.
keuzes tussen nederland of duitsland, ik zou liever een ander land dan deze twee willen kiezen
Duurde te lang
niks voor mij
Dat het te lang was
Saai onderwerp
Weinig keuze
Het was te lang

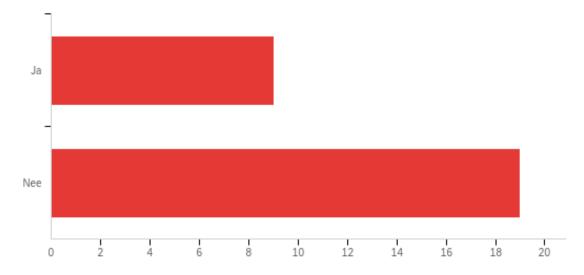




#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Zou jij de volledige versie van het prototype willen gebruiken als het klaar is?	1.00	2.00	1.75	0.43	0.19	28

#	Answer	%	Count
1	Ja	25.00%	7
2	Nee	75.00%	21
	Total	100%	28

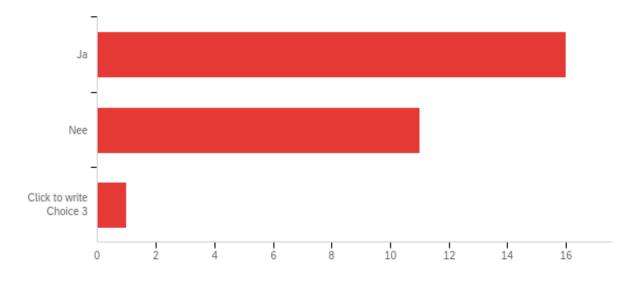




#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Zou je het opnieuw willen spelen om andere routes te ontdekken?	1.00	2.00	1.68	0.47	0.22	28

#	Answer	%	Count
1	Ja	32.14%	9
2	Nee	67.86%	19
	Total	100%	28

Q33 - Heb je iets nieuws geleerd over polyester of de kleding industrie in het prototype?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Heb je iets nieuws geleerd over polyester of de kleding industrie in het prototype?	1.00	3.00	1.46	0.57	0.32	28

#	Answer	%	Count
1	Ja	57.14%	16
2	Nee	39.29%	11
3	Click to write Choice 3	3.57%	1
	Total	100%	28

Q27 - Wat vind je van het uiterlijk van het prototype?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Mooi	1.00	5.00	3.29	0.99	0.99	28
2	Professioneel	1.00	5.00	3.11	1.08	1.17	28

Q28 - Waren er problemen met het navigeren door het prototype?

Waren er problemen met het navigeren door het prototype?
Nee
Nee
Ja
Nee
Nee
Nee
Ja
Nee
ja ik kon er niet uit
Nee
ja
Nee
Beetje
Ja
Nee
Nee
Ja, het lukte in het begin niet zo goed met het scannen en het kon wat mij betreft wel wat gemakkelijker allemaal.
op het begin wel, link deed het niet
Nee volgensmij niet.
ja het liep beetje vast
Nee
Nee
Niet efht
Ja
nee

Waren er problemen met het navigeren door het prototype?

Q31 - Nog iets anders wat je kwijt wilt over het prototype?

Het is al helemaal geweldig alleen had je teveel keuzes waardoor je er te lang mee bezig was Nee Nee Nee Nee Nee Kan een beter opmaak hebben Prima jima nee Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! iegenlijk niets, keep up the good work :) Nee	
Nee Nee Nee Kan een beter opmaak hebben Prima jima nee	Het is al helemaal geweldig alleen had je teveel keuzes waardoor je er te lang mee bezig was
Nee Nee Kan een beter opmaak hebben Prima jima nee Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee Nee <td>Nee</td>	Nee
Nee Nee Kan een beter opmaak hebben Prima jima nee Nee nee Nea	Nee
Nee Kan een beter opmaak hebben Prima jima nee Nee Nea Nea Nea Nee Perstond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee	Nee
Kan een beter opmaak hebbenPrima jimaneeNeeNeaNeaNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeNeeHet was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd!eigenlijk niets, keep up the good work :)Nee.Nee </td <td>Nee</td>	Nee
Prima jima nee Nee nee Ne3 Nee Nee Nee See Nee Nee Nee Nee Nee Nee Nee Nee Nee Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee	Nee
nee Nee nee Ne3 Nee Nee Nee Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee	Kan een beter opmaak hebben
NeeneeNe3NeeNeeSeeNeePredEr stond spijkerbroek met een plaatje van een jasHet was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd!eigenlijk niets, keep up the good work :)Nee.Nee <t< td=""><td>Prima jima</td></t<>	Prima jima
nee Ne3 Nee Nee Storm St	nee
Ne3 Nee Nee Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee Nee <t< td=""><td>Nee</td></t<>	Nee
Nee Nee Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee Nee <t< td=""><td>nee</td></t<>	nee
Nee Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee Nee <t< td=""><td>Ne3</td></t<>	Ne3
Nee Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee	Nee
Er stond spijkerbroek met een plaatje van een jas Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee Nee	Nee
Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd! eigenlijk niets, keep up the good work :) Nee. Nee Nee Nee Nee Nee Nee Nee Nee	Nee
eigenlijk niets, keep up the good work :) Nee. Nee Nee	Er stond spijkerbroek met een plaatje van een jas
Nee Nee Nee	Het was best leuk en interessant om te doen, want ik heb er wel nog wat van geleerd!
Nee Nee	eigenlijk niets, keep up the good work :)
Nee	Nee.
Nee	Nee
	Nee
	nee

Nog iets anders wat je kwijt wilt over het prototype?

Appendix A

Self-Reflection June 22nd, 2022, 11:12 am MDT

Over the course of the graduation, I learned new skills regarding UI, UX, testing with students, Adobe XD and how much extra work translations can create. The actual translation takes time, the inserting of texts and changes in text size matter for composition purposes and small mistakes are hard to detect because of the language barrier. This experience gave me a new appreciation for localization of media in general.

Because of the research regarding sustainability and fast fashion practices in the fashion industry I effectively increased my personal awareness and deepened my understanding of the topic. This also changed my personal belief and behavior. This is quite amusing to me, because the theory that I use to change the awareness in the target audience also applied to me in some sense. I took some of the actions that are included in the prototype to heart. I noticed that I own many different shirts and jeans, of which I wear maybe 20% regularly. In reaction to that, I removed a lot of garments in my garderobe and sent them to the garment collection agency close to me. I also gained the knowledge on certain textiles and how/where and what aspects I need to consider when buying new clothes. I was never a regular consumer of clothes, which is why the next time I buy some I will put more effort in choosing the right brand and textile because I no longer want to participate in this behavior that is not only unsustainable but also unethical and self-harming. It also helped me to grow out of the idea that "my actions don't matter." Just because the world does not change, does not mean I should not. Yes, the trash is still there, yes, the problem is still just as large as ever before, but I do not want to participate in it anymore.

As for negatives, my work ethic was at times (especially at the end of the project) not as efficient as I would have liked it to be. Once all the major changes to the prototype where done, I procrastinated a lot in finishing this report, especially on the final section because with this paper my last major project in this study comes to an end. I also should have put more effort in the testing phase of the project, many problems that occurred where oversights and miscommunications that could have been prevented.

I am currently unsure if I can get a position in the industry. The previous year's search for an internship position has given me a reality check that I am currently not good enough to be a concept artist in the games industry. This internship and the last internship where all possible because I got lucky. I feel like I have not improved on the skills I wanted to value and that now, it is too late for me to drastically change that. I believe that I am unable to join a studio any time soon. The skills that I have gathered where not the once I desired and I think even If I get a position somewhere with the said skills, I will not feel fulfilled.

Therefore, I have decided for myself to change my direction. I am currently looking for an apprenticeship in Germany as a programmer and hope that this will fit me better. But I will still do my art on the side, I might not be able to join the industry, but that does not stop me from finding some enjoyment out of something I simply like to do.

Sebastian Surwehme 431381