Story shiney

DPB100 PROJECT 1 PLAY TO LEARN

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INTRODUCTION

This project is about finding a playful and fun way to learn. We focused on the target group children, particularly children between zero and six years old, and on finding a way to make reading to children more fun and more educational.

StoryShine projects the words on the wall together with short animations. Some words even have a different texture to explain its meaning better. The child cannot only read along with the parent, but he can also see the meaning of certain words projected.

It is very easy to upload the books into the design. Just download the app, scan the barcode and press upload. With the Bluetooth connection the data will be transferred to the design.

The design is also great for the bond between the parent and the child, as they are reading together and watching the fun words and animations projected on the wall.

Image 1: Our team

PROJECT GOAL

The goal of our project is to connect parents and children of age 0 to 6 in an educational way. We believe reading to your child is a very important part of the bonding between parent and child and that's why we want to encourage that through StoryShine.

On top of that, (starting early with) reading to children is very helpful for their development of language skills and helps them understand the world around them better. With StoryShine we also think we contribute to the educational part of reading to children. It will help them by use of the pictures/animations and creating associations with the text that is displayed.

STORYSHINE SHOULD STIMULATE THE LANGUAGE DEVELOPMENT OF CHILDREN

PROCESS

We began working on this project by doing a pressure cooker. In a short time, we had to brainstorm about problems we wanted to solve, which fit in with our subject 'Play to Learn'. After this ideation process, we decided that we didn't really want to work on those subjects and we broadened our horizons by brainstorming according to our visions. This led to our current concept, StoryShine.

After that, we focused on concept development. We brainstormed about our design's values and different aspects. Our concept was a product that would make being read to more interesting, by projecting illustrations and text on the walls, ceiling or blanket, and help children go to sleep, by projecting sheep on the ceiling, which they could count. We brainstormed about the opportunities and the specific functions of our prototype.

At this point, we needed the opinion of our target group. We wanted to gather more information on reading and parent's habits when they read to children. That's why we did literary research into language development of children and set up a questionnaire for parents to fill in.

Whilst we were waiting for the responses to our questionnaire, we thought our physical design

through. We thought about the shape, taking both aesthetics and usage into consideration. Also, we thought about the technical realisation and the user interface.

On the Midterm DemoDay, we presented our deliverables, which were two prototypes, an animation, a video, the results of the survey and an app. The questionnaire showed that people wanted to control our product via an app, so we had to think about the app's features and aesthetics. That's when we decided on a style and colour scheme, which we also used for the poster and prototypes.

After the DemoDay, we focused on a couple things, namely our physical design, doing necessary research to confirm our previous assumptions and to the book rights for the animations.

For our physical design, we brainstormed and tried shapes that looked more child-friendly. Our dodecahedron is practical, but looks technical and has too sharp edges. We had an elaborate brainstorm on different shapes, but eventually chose to stick with our original dodecahedron. To improve our shape, we made the edges round and added stickers to our concept, to make it look more adorable. Also, we reconsidered the speaker. On the DemoDay, we

presented our product with different aesthetical and technical prototypes.

For our research, we have interviewed a lot of people. At first, we interviewed an author to hear her opinion on our design and receive more information about the traditional world of literature. We needed insight on the rights of the text and illustrations we would like to project. Then, we held an interview with Dr. Sikkema – De Jong, a professor from Leiden University who is specialized in the language development of children and specifically the effects of reading to children. She has provided us with a lot of information about the correct balance between animations and text, an appropriate target group and the specific functions of our design. Lastly, we interviewed Jan Maurits, the head of the company Identity Games, a company which produces games with the traditional board and new technology. He gave us new insights in the right way of combining new and old technology and the power of our design. The processed version of these interviews can be found in the appendix.

Finally, we worked on the business side of our project. We came up with an attractive starter package and set up a business plan. The business plan can be found in the appendix.
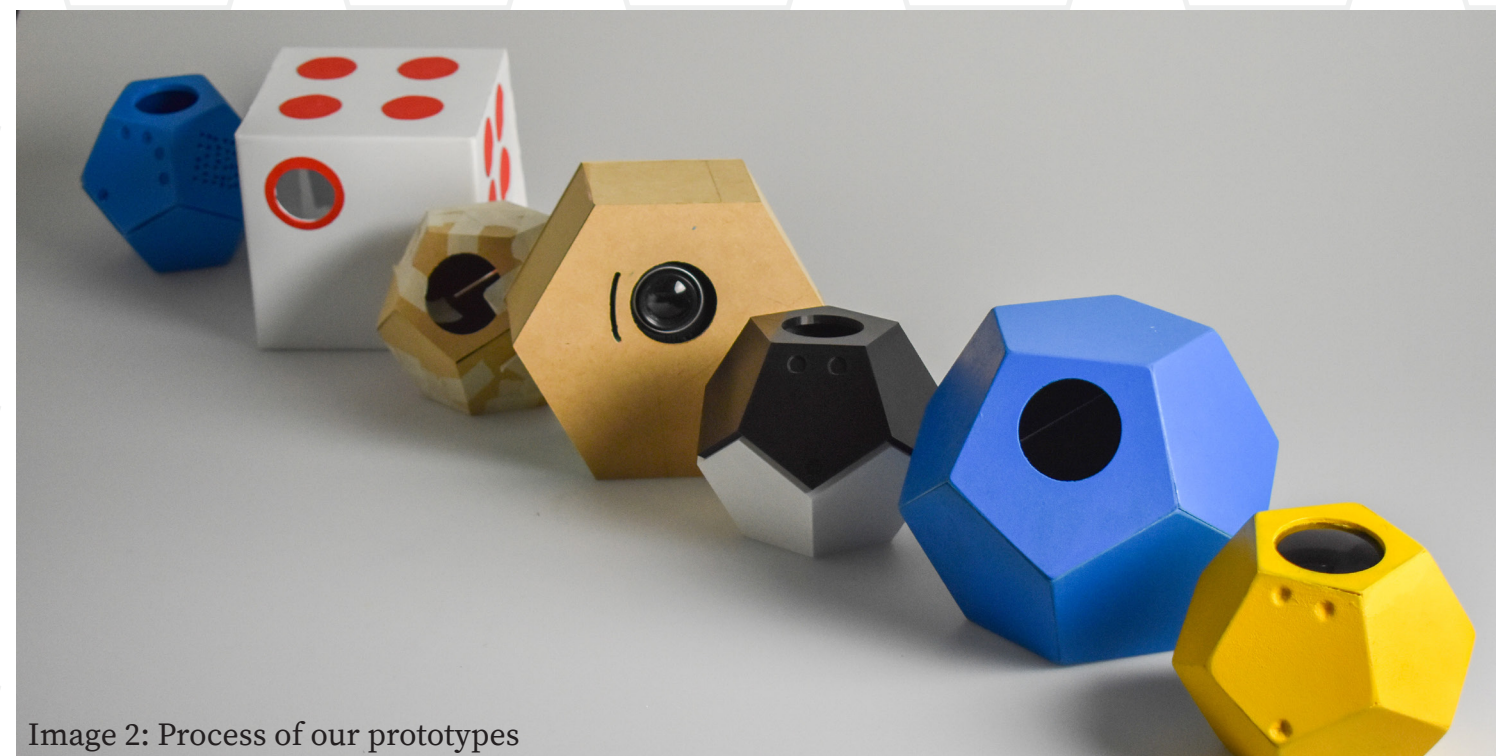
Image 2: Process of our prototypes

PROJECT TIMELINE

STORYSHINE WAS BORN

PRINTING 3D PROTOTYPES

INTERVIEWS

FINAL DEMODAY

ANIMATIONS

BUSINESSS

QUARTILE 3

QUARTILE 4

| PRESSURE COOKER | DESIGNING STORYSHINE | FURTHER DEVELOPMENT OF (BUSINESS) PLAN | WORKING TOWARDS DEMODAY |

BRAINSTORM ABOUT VALUES

SURVEY

USERTESTING

LO-FI IDEATING

MIDTERM DEMODAY

BIG ITTERATION ABUOT PROTOTYPE LOOKS

STARTER PACKAGE
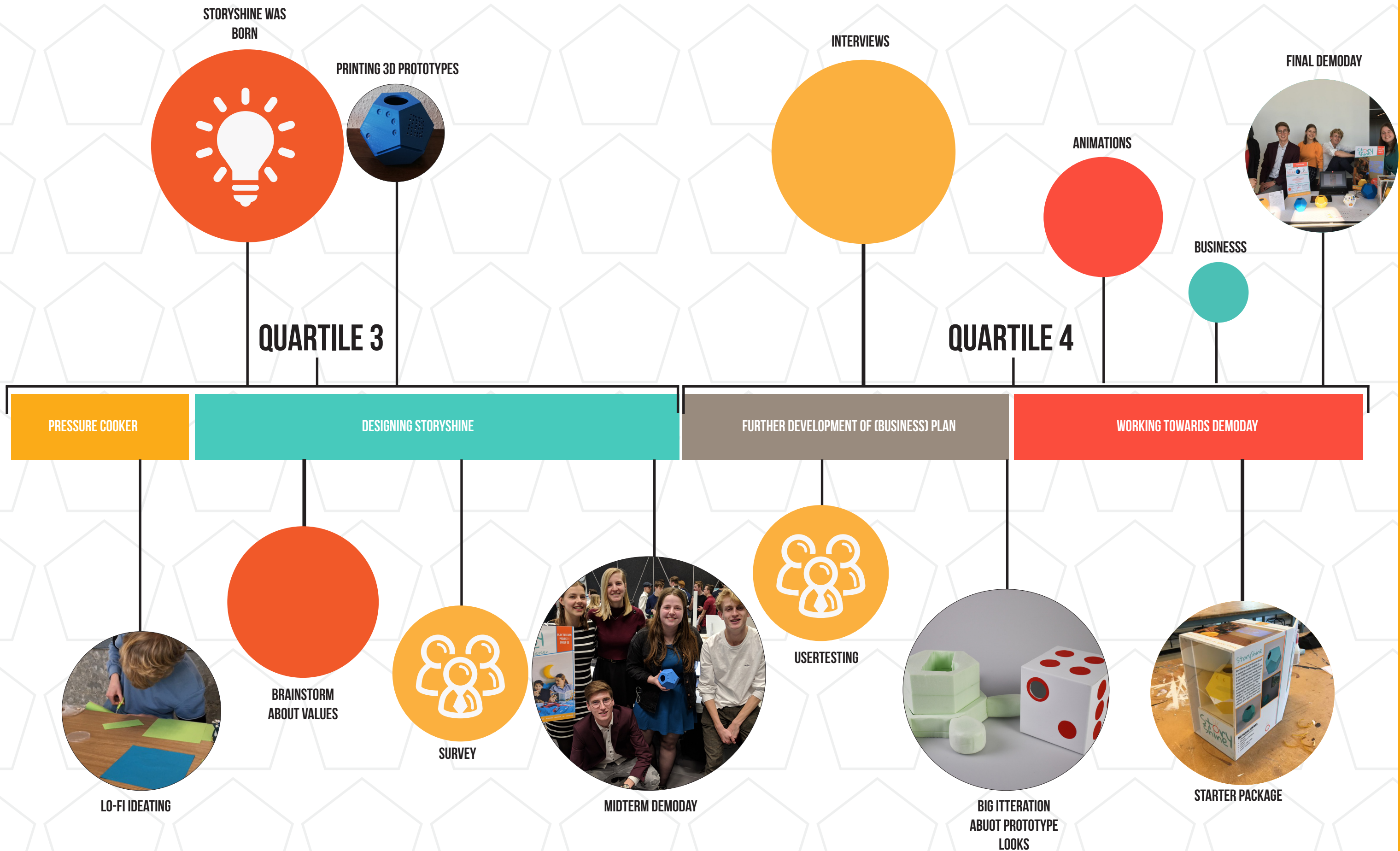
ITERATIONS

Pressure Cooker

At first, we did a Pressure Cooker. For the Pressure Cooker, the goal was to generate as many ideas as possible in a short amount of time. We did this by thinking of problems we encountered in our lives, such as waking up early and varied cooking as a student, and trying to come up with solutions to them. After generating those problems, we selected the six cases that we found most interesting. On these cases, we brainstormed even further. This led to two ideas, namely a game similar to 'Simon Says' on the tiles of a train platform to make waiting for a train more bearable, which is visible in image 5, and an object that generates a random sound when you turn it around to initiate conversation topics between elderly and their caretakers called Speak & Sound, which is demonstrated in image 5 and made in image 4.

Sharing visions

After we decided to let go of the pressure cooker ideas, we brainstormed again, but this time with our own visions as starting point. The goal was to come up with a concept which fitted with most of our visions and interests. All of us brainstormed individually and came up with ideas within subjects that we found interesting. Afterwards, we presented all of our ideas to each other, so that we could react and give feedback to each other. When all of us presented our ideas, we chose the ones we found most interesting. We went through this selection of six subjects again and thought about a possible product that would come with it and how realisable it would be. On those terms, we decided to combine the subjects children and language and sleep into a product which would project animations and text whilst a parent reads to his children.
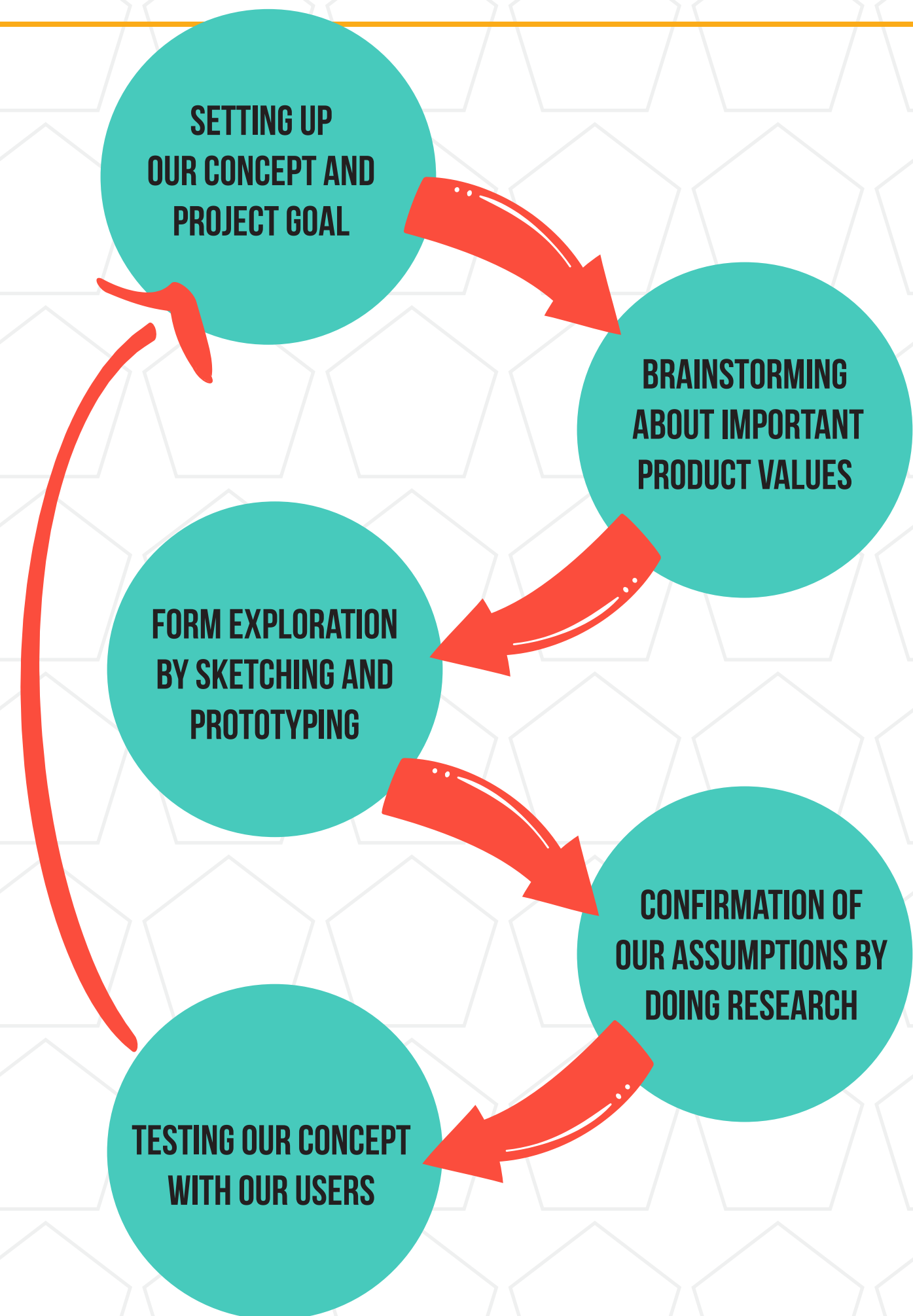

Image 3: 'Simon Says' waiting game

Image 4: Speak & Sound

Image 5: Sharing visions brainstorm

SETTING UP OUR CONCEPT AND PROJECT GOAL

BRAINSTORMING ABOUT IMPORTANT PRODUCT VALUES

FORM EXPLORATION BY SKETCHING AND PROTOTYPING

CONFIRMATION OF OUR ASSUMPTIONS BY DOING RESEARCH

TESTING OUR CONCEPT WITH OUR USERS

Values and aspects

After we decided on a concept, we needed to think about the different values we found important and aspects of the product. We wrote everything that came to our minds on individual post-its. Then we clustered them to get a clear overview, which is visible in image 6, and discussed all of them. We decided that we would only focus on helping children with their language skills and leave helping them go to sleep. The most important values we came up with for our physical design are the fact that it should not be too big, because it needs to fit at multiple places easily, it should not be too distractive, because the child needs to fall asleep after reading and it should look cute and funny and fit in with the aesthetics of a children's room.

About the projected text, we decided that there should only be enough light to light up the animations and text, but not to wake up the child. Other ideas we had were a changing ambiance according to the story, for example different fonts for a male and female voices, and a sleep function, which means it turns off automatically after a certain amount of time. We neglected these ideas, because of the possible distraction and the fact that we only wanted to focus on the language development.

Apart from the changing ambiance, we decided to make the experience as complete as possible. Apart from the text and illustrations, we could use some sound effects. Also, it is important that it is as budget friendly as possible and easy to travel with you, for possible holidays or sleepovers.

The product should be very user friendly. Reading to children has been done for a long time, which means that a lot of people will have to adjust to this new technology. It should be easy to understand for multiple generations. Parents will use it most often, but grandparents and older siblings might set it up as well. The use of the product should be very intuitive. This is something we would like to test in user tests.

Lastly, we came up with interactive storytelling. Our system would be a good opportunity for stories in which children can make decisions for the characters to influence the storyline. To decide if this could work and what would be best and realistic for the rest of our ideas, we needed the opinions of parents, which is why we set up the survey.

Image 6: Clustered values

Physical design

Some of the values were about the physical design of our product, specifically about the fact that it should be easy to use and understand. To realise this, we had a brainstorm about the possible shapes. All of us started sketching our possible visions for the physical outcome and then we presented it to each other.

We decided that it would be useful to use a geometrical shape, because it gives the user the possibility to put the beamer in as many angles as possible and looks nice. We also came up with a different system, namely a cylinder shape, with a beamer in the front which you can face in different directions with a handle. To visualise those shapes, we made some out of cardboard, which is visible in image 7, and 3D printed our favourites, namely a dodecahedron and a similar shape, made of hexagons and squares instead of pentagons, which are pictured in images 8 & 9. On the DemoDay, we led the audience decide which one they preferred.

Image 7: Lo-fi cardboard modeling

Image 8: Dodecahedron 3D-print
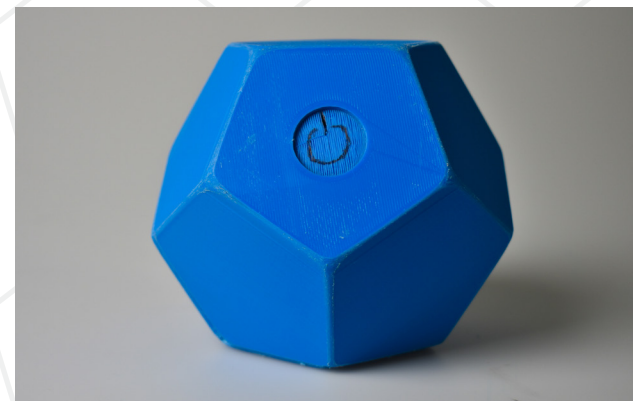

Image 9: Hexagon 3D-print

Image 10: On/off button

Image 11: Midterm Demo Day set-up

We also thought about the specific features of the design, namely the buttons, beamer and speaker. The buttons should be on intuitive positions with clear symbols on them. We decided to use two volume buttons next to the speaker, two zoom buttons next to the beamer, a Bluetooth button across from them to connect the design with the app and a power button on the other side. This arrangement is visible in images 8 and 10.

Survey

The intention of our survey was to answer the questions we had about the preferences of parents regarding our product and their habits when they read to children. We asked them about demographics, reading habits of them with their child and their child alone and direct questions about our design. The most important results were the reason why parents read to children, how they read to children, their preferences for controlling the product and the fact that they do want to be able to move the product around easily. The specific questions, results and processed data can be found in the Appendix.

Research: Reading to Children

Doing research is a part of the design process. We did make some decisions based on our own survey. However, a similar research has been done by 'Stichting Lezen' on a much larger scale than we could do during this Project. It even provides us with additional info. A short description about the most important findings can be found in the appendix, together with a comparison of some corresponding questions in our survey and the research by 'Stichting Lezen'.

Midterm Demo Day

On the Midterm Demo Day, we received feedback about the looks of our prototype, our future technical realisation and the business side. We led the visitors give their opinion about our two favourite physical designs, namely a dodecahedron and a similar shape, consisting of squares and hexagons. Most visitors voted for the dodecahedron. Also, many visitors commented that our prototype looks very nice, but not like a children's product. The feedback we received on the future technical realisation was mostly about ventilation of the beamer, leaving enough space for a battery to charge the beamer and thinking about having a separate aesthetical and technical prototype. On the business side, visitors gave us advice on ensuring the rights of the books and the traditional world of literature. An elaborate list of the received feedback on the midterm demo day can be found in the appendix.

User tests

After the Midterm Demo Day, we realised that is was of high importance to do some user tests. Apart from our survey, we had not had the feedback from our target customers. The goal of our user tests was to receive feedback on every aspect of our design, namely the shape of our design, the aesthetics, the usage of the app and the physical design and what they thought of the name and the future price. In short, the users preferred the dodecahedron shape, would like to customise the design to make it look more like a children's product, understood the app well, liked the possibility of putting the device in different angles and thought the name StoryShine suited our product. For the future price, they would like the product alone to be € 60 on average. However, someone recommended thinking of a starter package and expected that to cost € 100. The processed forms of our user-tests can be found in the appendix.

> "WITH THIS MODEL YOU ARE COMBINING A ROBUST, TECHNOLOGICAL PART WITH A ROUND, CHILD-FRIENDLY PROTOTYPE, WHICH LOOKS A BIT ODD. IT COMBINES TWO VERSIONS, BUT USUALLY IT IS BETTER TO CHOOSE ONE."

Form exploration

One of the biggest iterations we have worked on in the second half of our project is the huge brainstorm about the shape of our design. On the midterm demo day, many visitors gave us the feedback that our product looked too technical for a children's product. That is why we decided to have a new, huge brainstorm about different shapes that looked cute and fun. However, we had chosen our dodecahedron shape, because of the handiness of the fact that the user is able to face the projection easily towards the walls or the ceiling. This was an important value of our design, so we wanted our new ideas to have the same benefit.

All of us started sketching different ideas. At first, we have done research into the style of children's bed rooms. We have made a moodboard, on which we based our new sketches. We discussed our ideas, gave feedback and adjusted each other's concepts and finally chose our favourites. Those favourites were the shape of a dice, which you could adjust to project horizontally and vertically, and the shape of animals with a house on their back, such as a turtle and a snail. The house on the latter ones would be geometrically shaped, similar to our original design, and it would be able to take them out. The rest of the animal could function as a docking station. To decide between our new ideas and our original plan, we made some prototypes, which are visible in image 12.

Eventually, we decided to stick with our original plan, for multiple reasons. We thought the dice would not be ideal, because it is likely that children will want to throw the dice out of habit. The turtle or snail could work, but they do not look as cute as they could have been, because of the necessary geometrical shape. As our project coach Claudia stated, it combines a cute with a technical look, which makes it look odd. Also, especially the turtle takes up a lot of space. Finally, the production costs would be higher if you would develop a turtle and snail, to give children the choice between the two, because the shapes are so different. Producing our original shape in different colours is a lot cheaper.

The fact that we chose to continue working on our original design meant that we did have to improve our plan. We should still make it look cuter and more child-friendly, without sharp edges.

Stickers

To make it look more adorable, we came up with the idea of producing stickers. Stickers are easily and cheaply printed, which means that we could easily produce multiple packages of stickers for the children to choose from. We could produce the device itself in one simple colour, such as white or black. Then, the children could customise it themselves with their stickers.

At first, our plan was to print stickers in the shape of pentagons, so they would fit exactly over the tiles. However, we decided that it would be funnier for the children to be able to decide which sticker they would like more and see the colour underneath the sticker as well. That is why we decided to produce StoryShine in the three colours of our colour scheme, red, yellow and blue, and produce the stickers in the shape of their design. The designs of our stickers were based on our earlier moodboard and can be found in the appendix.

Image 12: Turtle and dice prototypes
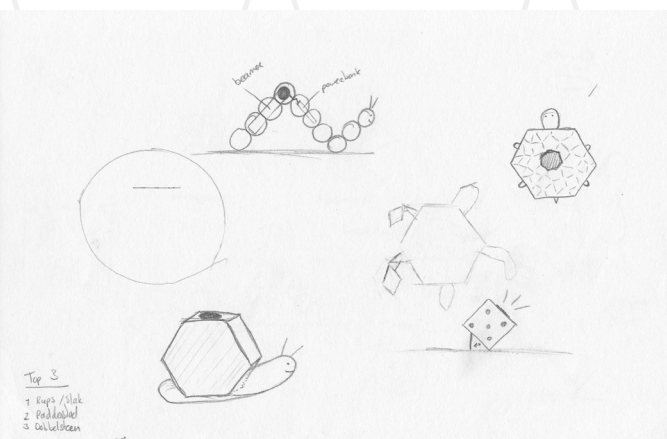

Image 14: Sketches for stickers

Image 13: Form exploration sketches

Sharp edges

Even with the stickers, our design still needed to be more child-friendly. Currently, our edges were too sharp. We thought of multiple solutions to this situation, starting with a 'bumper' for our design. A bumper is similar to a cover, but only covers the edges. We wanted to make our bumper out of silicone. To try if this would work and look good, we made a bumper out of hot glue and with a tube of silicone kit. However, we decided that this would not look or work very good. The result turned out very wobbly and fragile, which is visible in image 15. It made us reconsider the use of a bumper and think of something new, namely round edges. To see what round edges would look and feel like, we shaved our 3D-printed model, which is visible in image 16. This looked and felt very nice, so we decided to use round edges for our design.
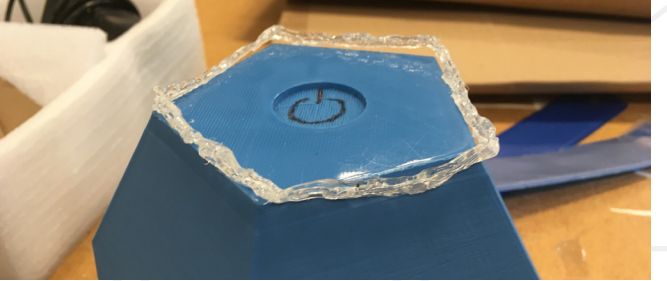

Image 15: Silicone bumper

Image 16: 3D-print with round edges

Speaker

Our original prototype had a speaker next to the projector, which is visible in image 16. Our plan was that this speaker could produce sound effects to make the story more intriguing and help children with their understanding of the read words. However, after a couple weeks we realised we had not thought through the speaker at all. Our user tests showed that the users were not particularly excited about the speaker and worried that it would be too distracting. The language expert we interviewed explained that some sound effects could be useful and illustrative, but it would soon be too many and would only distract the child. That is why we decided to leave out the speaker. Our main goal is improving children's language skills and if sound effects would distract the child and make reading to your children less effective, it should not be part of our design.

This meant that we had to change our prototype. Leaving the speaker meant that we also would not need volume buttons. Therefore, we rearranged our buttons, which is visible in image 17.

Starter package

Our user tests showed that our users liked our concept, but they mentioned it would be more attractive if Story-Shine would already have a couple of books on it when the customer first buys it. Our concept was that Story-Shine was just an empty device and the user needed to scan the barcode on the back of the book via our app at first in order to play the animations from our device.

So, from the business perspective of our project, we came up with a starter package. This starter package would consist of a StoryShine device (in the customer's colour choice), 3 physical books, one package of stickers (in the theme of customer's choice), one cover to protect StoryShine whilst travelling, one micro-USB cable and a user manual. The books come physically with the package, but are also already downloaded on the app. The user manual can be found in the appendix.

This starter package comes in a box, which we designed as well. The different stages are shown in images 18 and 19. The box has a see-through front, so the StoryShine device and the books inside are visible. The print of the package shows the content of the box, the purpose of our design and the options for colours and stickers. The package can be found in the appendix.
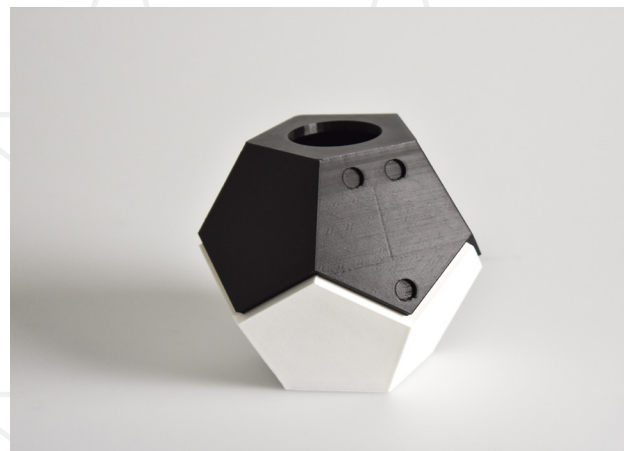

Image 17: Rearranged buttons

Image 18: Lo-fi prototype of package

Image 19: Final package with print

Final prototype

For the Demo Day, we decided to have a technical and an aesthetical prototype separately. We have bought a small beamer, which is visible in image 20, but this does not have a Bluetooth connection. To see the technology inside the beamer we screwed it loose, only to discover we were not able to demolish it and make it fit in our prototype. The electricity would fit in it eventually, but our small beamer was made in the wrong shape. Therefore, we decided to make a bigger prototype in the same style as our aesthetical prototype to fit the beamer in. This turned out to be a flat pentagon, which is the shape of the tiles that the dodecahedron is made of, and is visible in image 21.

We also made a bigger dodecahedron. This was made at first to explore if our beamer would fit in there, but was eventually used to demonstrate the different lights on the on/off switch and the Bluetooth connection. This prototype is visible in image 22.

For our aesthetical prototype, we have made use of multiple techniques. We want our final product to be made of plastic, because it is light and cheap. However, we did not manage to create round edges in our 3D print, which is visible in image 23, apart from sanding it. However, sanding a 3D-printed model looks a bit messy. That is why we also have a wooden prototype, which is sanded neatly and painted over and is visible in image 24. Also, the buttons of our wooden prototype are rounded the way we like.
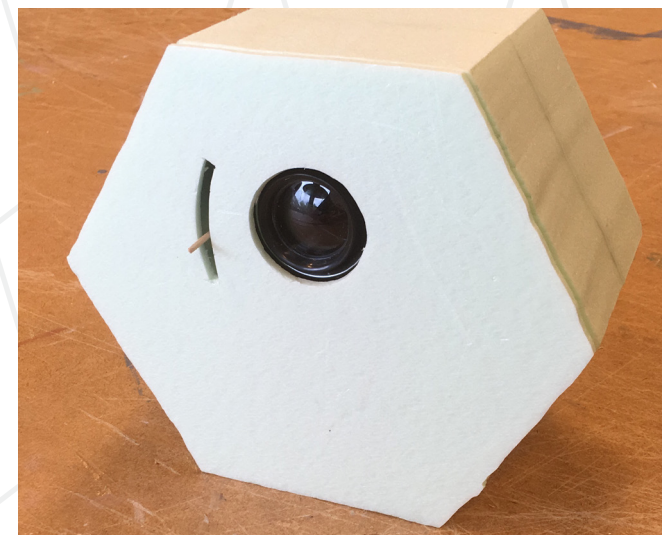

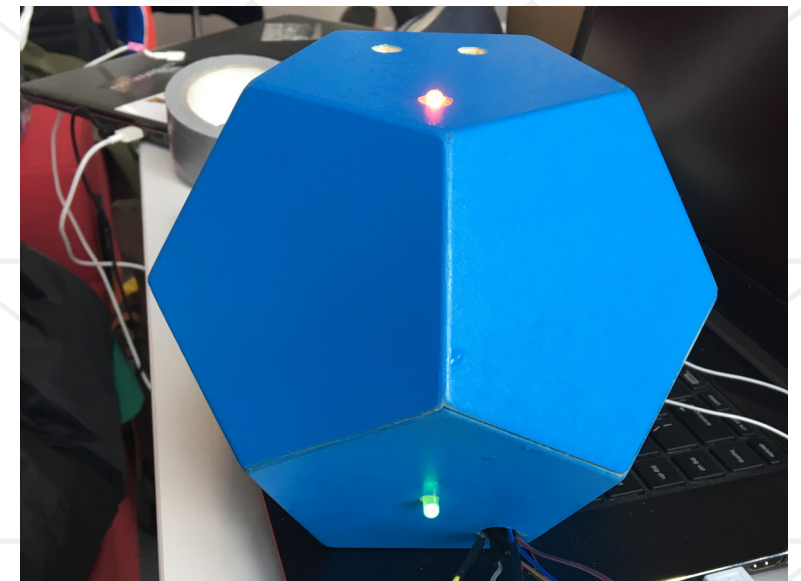Image 21: Technical prototype

Image 20: Small beamer

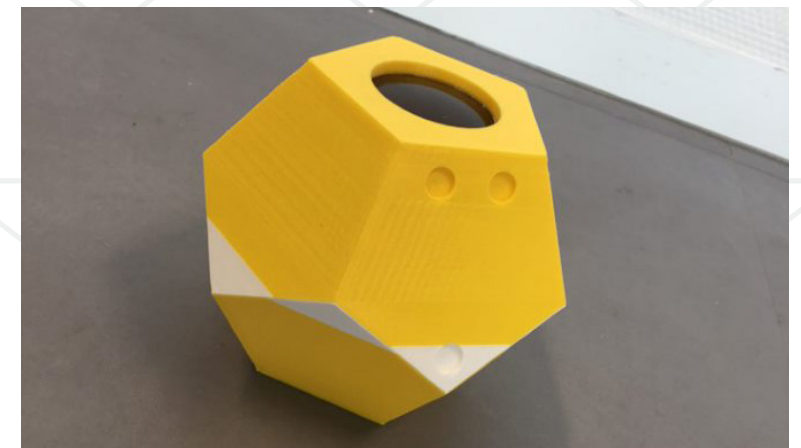Image 22: Indicative lights on prototype

Image 23: Final 3D-printed prototype

Image 24: Wooden prototype

OVERALL RESULTS

Our current product is a small beamer, which stimulates the language development of children. It makes reading to children more fun and more educational by projecting animations and the text on the walls or ceiling. We made an animation for the books 'Rupsje Nooitgenoeg', 'De mooiste vis in de zee' and 'De Gruffalo'. These animations have all the lines appearing one by one. Some words are standing out because of their font and corresponding illustration.

The product itself has the shape of a dodecahedron and the product is available in three different colours; yellow, blue and red. One of the sides has a hole through which the light of the beamer shines. The tile next to the beamer has two zoom buttons and a Bluetooth button. On the tile exactly opposite to this one, are both the on/off button and a micro-usb entrance to charge the beamer.

The Bluetooth button is to connect the product with the StoryShine app. This app allows you to choose the book by scrolling though the shelfs. Every book comes with an appropriate age, the number of pages, a rating and a description. When the book is selected, the user presses 'play' and the book is sent to the product. When the parent starts reading, the animations and text start appearing via a speech recognition system. When the user's done, he can safe its progress in the app and start where they left off the next time. Also, the user can add new books. He has to scan the bar code on the back of a book and the app downloads the animations and text of the book and puts it on the shelf.

The product also comes in a starter package. This package contains the beamer, three physical books to start with, sticker sheets, a cover, a user manual and a charger. The animations and text for the three books are already available in the app, so the user can immediately use the product. The sticker sheets can be used by children to personalize their beamer and the cover can be used to transport it safely.

CONCLUSIONS

Looking back at the project, we could say we are happy with the results we made and how everybody contributed to this project as well. We made a very nice aesthetic prototype, made a technical prototype with the use of the animations, did user tests, had interviews with some professionals to confirm our assumptions, we did so much, of what we could be very proud of.

However, not everything went always that well. We sometimes forgot the purpose of our project, the language development of children, this meant that we sometimes wanted to do unnecessary things. But with the help of our project coaches, we knew that we needed to focus on our goal, so put some more attention in the animations, which really make our product unique.

Secondly, we said in the first report that we wanted to more research into the business side, we did this, but it could be better. However, this is not fully our problem, when making contact with publishers, we noticed that it is hard to keep contact, because they are so busy as well. Unfortunately, we did not find all the answers we want. For next time we need to try a bit more to keep in touch with the publishers.

And to end with a happy note, the demo day went very smoothly, for the first half hour we had an amazing user experience, but then the sun came out and ruined kind of the projections on the wall. But that did not matter, we solved it using an iPad for the animations to still get an experience for the people who came by. We got many positive reactions and we were very happy with the reactions; it made our day!
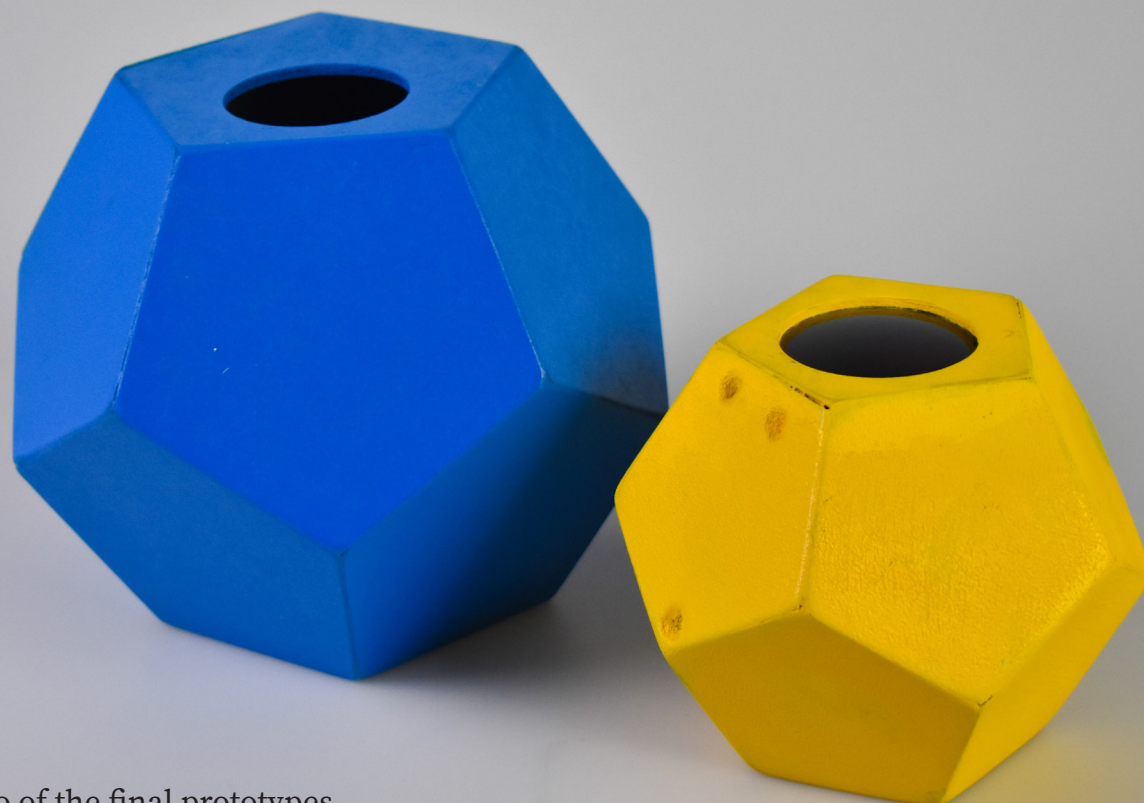

Image 25: Two of the final prototypes

Image 26: Final Demo Day set-up

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YORN THIJSSEN

This semester I started a project within the theme Play to Learn. In this project we, as a group, try to stimulate the language skills of children with use of a device that will be used when the parents will read to their children. On top of that will it stimulate the bond between parents and child.

In this half year of project 1 I feel like I have made serious steps forward in terms of my own development. On top of that, I have learned several small things which eventually piles up to serious knowledge. I will first start explaining the latter. These small things mentioned include that I have learned new features of PowerPoint and learned and gained confidence working with several Adobe programs. I have learned this by making animations in PowerPoint, stickers in Illustrator and a user manual in Indesign. Since learning (mainly the Adobe) programs was a goal of mine, I can say I achieved this goal.

In terms of my personal development I learned to 'reset' my mind when having an idea of something, in this case the theme. At first, I really thought this theme had to do with education, and of course it does. However, it can be so much more than that. With help of the other team members I did 'reset' my mind and together we came up with ideas that go beyond education.

Moreover, I have learned to give away control. I'm a person who wants to deliver quality and if I get involved in a deliverable, I know what the quality will be. I am proud of myself that I did not want to get involved in making the video for the demo day. Even though I know the quality could have been better, it was Emile and Eileen their first time making such a video and for a first time I am proud of their result.

I felt at ease in this project and the freedom motivated me to take initiative in things that need to be or can be done. However, I have not really left my laptop within taking this initiative. For upcoming projects my goal is to make more (aesthetically pleasing) prototypes. This is going to be a challenge since working with my hands is not really 'my thing'. It will be a path of just doing and mostly gaining confidence in doing, so that I eventually will achieve this goal.

APPENDIX

Interview Author: Manon Berns

"The book business is very traditional. There is not a lot of innovation. That is why I am so happy with such an innovative product as yours."

Interview language expert: Dr. Sikkema - De Jong

"The right balance between animations and text of course depends on your target group."

"If children should learn something from books and being read to, the text should be qualitively good. Texts in children's books are written by professional authors. Learning to read properly of course also depends on motivation. Do not try to do the work an author can do much better."

"The conservation of the original book is one of the powers of your design."

"You should not animate for fun if the goal is to develop the language of the children. Children should understand the meaning of the text better because of the images."

"If you watch children who are read to often for a long period of time, it is visible that they have internalised more text characteristics. Reading to the children apparently really helps them to become better literate. Therefore, making the written text visible seems to me to be important."

"A sound effect could support the meaning, but irrelevant sound effects are solely distracting."

"If children are read to from the beginning, it stimulates the motivation for reading and has a positive influence on the language development."

"If I should advise you, I would say that it would be smart to choose a defined agegroup, such as three to six years old."

"Children read increasingly less books in their spare time. Your design may stimulate reading in the spare time of older children as well. That could be a step for the future. For this project however, I would stick with a younger agegroup."

"If you want children to pay attention to the text and the story, you should limit the amount of extras that do not have anything to do with the story."

Interview Head of Identity Games: Jan Maurits

"It is important to stay with the core of your product and always keep the main purpose in mind. In your case, improving language development of children is the power of your design. Every decision should be made to achieve that."

"It is very difficult to determine whether or not your thought-through combination of old and new technology will please the audience. However, in your case, the traditional, physical book is still needed and the technology itself is not very difficult."
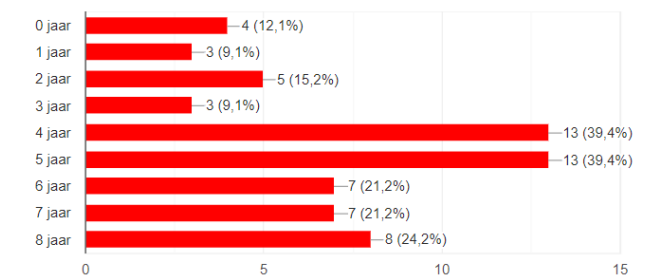
Questionnaire: Questions & Results
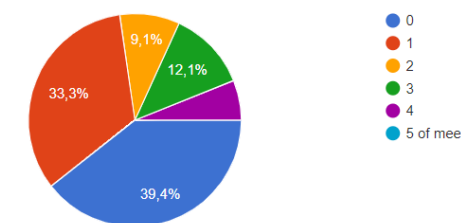
1. Hoeveel kinderen heeft u?
33 antwoorden

- 1: 27,3%
- 2: 36,4%
- 3: 24,2%
- 4
- 5 of meer
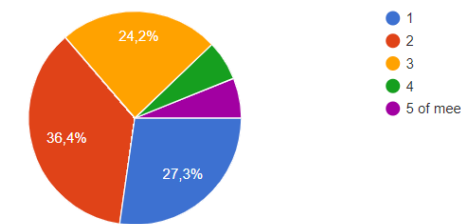
2. Hoe oud is uw kind/zijn uw kinderen? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- 0 jaar — 4 (12,1%)
- 1 jaar — 3 (9,1%)
- 2 jaar — 5 (15,2%)
- 3 jaar — 3 (9,1%)
- 4 jaar — 13 (39,4%)
- 5 jaar — 13 (39,4%)
- 6 jaar — 7 (21,2%)
- 7 jaar — 7 (21,2%)
- 8 jaar — 8 (24,2%)

3. Hoeveel van uw kinderen kunnen al lezen?
33 antwoorden

- 0: 39,4%
- 1: 33,3%
- 2: 12,1%
- 3: 9,1%
- 4
- 5 of meer

4. Hoe oud zijn de kinderen die al kunnen lezen? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- Mijn kind kan/ mijn kinderen kunnen nog... — 14 (42,4%)
- 1 jaar — 0 (0%)
- 2 jaar — 0 (0%)
- 3 jaar — 0 (0%)
- 4 jaar — 3 (9,1%)
- 5 jaar — 2 (6,1%)
- 6 jaar — 7 (21,2%)
- 7 jaar — 7 (21,2%)
- 8 jaar — 8 (24,2%)
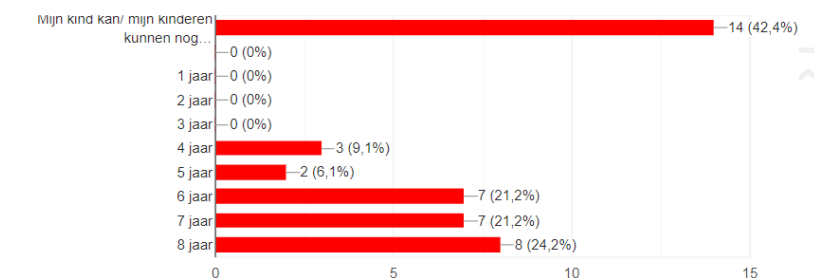
5. Leest u/uw partner uw kinderen wel eens voor? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- Ja — 32 (97%)
- Nee (geef aan bij anders waarom niet) — 1 (3%)
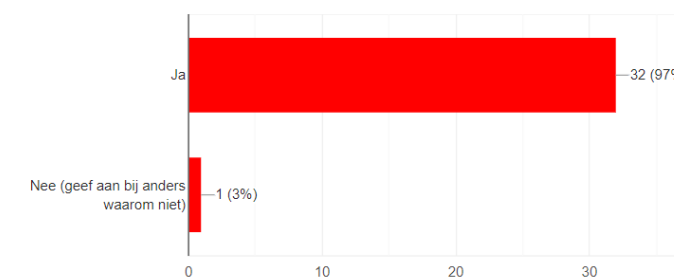
6. Waarom leest u uw kind(eren) voor? Meerdere antwoorden zijn mogelijk.
33 antwoorden
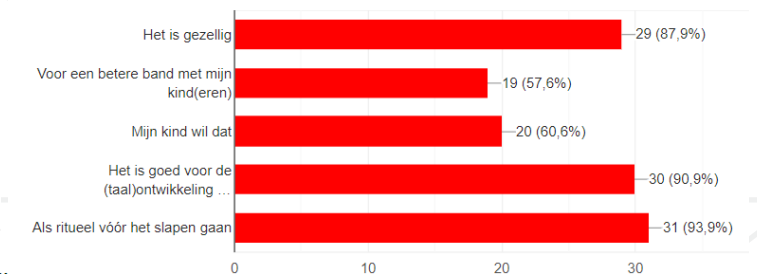
- Het is gezellig — 29 (87,9%)
- Voor een betere band met mijn kind(eren) — 19 (57,6%)
- Mijn kind wil dat — 20 (60,6%)
- Het is goed voor de (taal)ontwikkeling ... — 30 (90,9%)
- Als ritueel vóór het slapen gaan — 31 (93,9%)

7. Hoe leest u uw kind(eren) voor? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- Fysiek boek — 33 (100%)
- E-reader — 2 (6,1%)
- Ipad/Tablet — 1 (3%)
- Mobiele telefoon — 0 (0%)
- Donald Duck — 1 (3%)
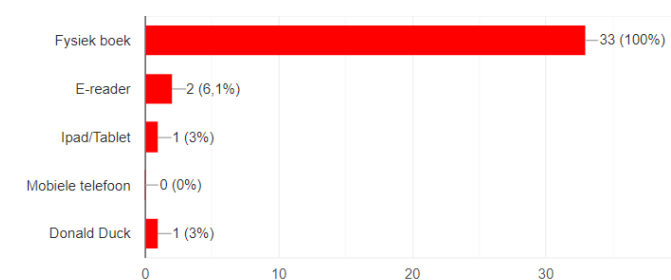
8. Leest het kind mee als u voorleest?
33 antwoorden

- Ja: 69,7%
- Nee: 30,3%
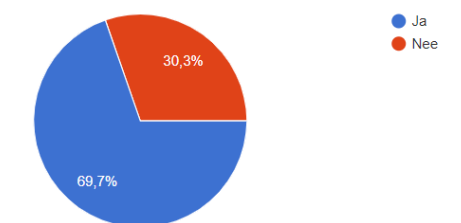
9. Waar leest u uw kind voor? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- Slaapkamer — 31 (93,9%)
- Woonkamer — 22 (66,7%)
- Badkamer — 1 (3%)
- Wachtkamer (Tandarts, dokter ,etc) — 3 (9,1%)
- Trein/lange busreis — 1 (3%)
- trein — 1 (3%)
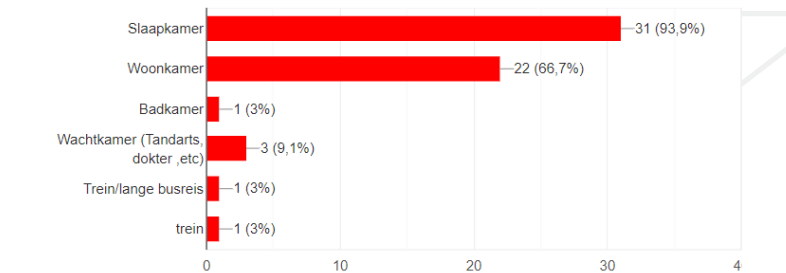
10. Hoe vaak per week leest u uw kind(eren) voor?
33 antwoorden

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8 of meer

Research into children's reading development

Reading to children helps children with recognizing letters and they learn to understand that the written word is a representation of the spoken word. The conversation, the emotional quality, interactions and discussions during reading to children is even more important than the reading. This includes talking about the images and asking questions. It can make children enthusiastic about reading. (Bus, 2003) Reading to children is stimulating the language skills and in addition it also improves the bond and verbal interaction between parent and child. (Vivas, 1996: Wells, 1983).

11. Hoe lang duurt het voorlezen gemiddeld per keer?
33 antwoorden

- 0 tot 5 minu...
- 6 tot 10 min...
- 11 tot 15 mi...
- 16 tot 20 mi...
- 21 tot 25 mi...
- 25 tot 30 mi...
- Langer dan ...
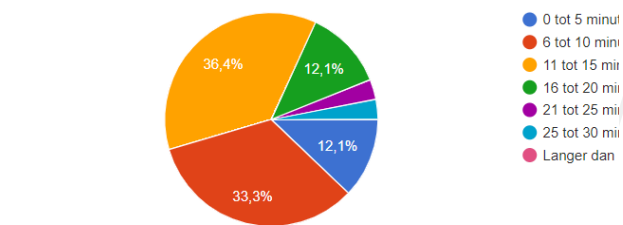
12. Wordt het voorlezen leuk gevonden door uw kind(eren)
33 antwoorden

- Ja
- Vaak
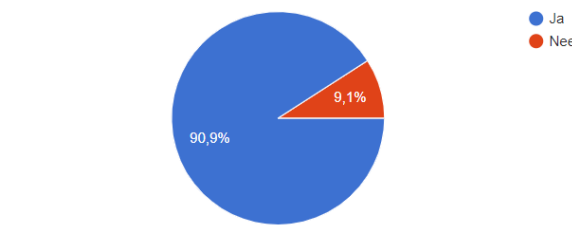- Soms wel /soms niet
- Nee
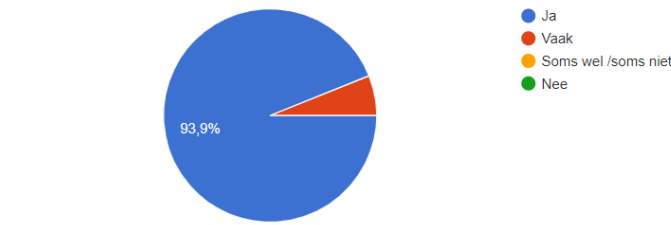
13. Denkt u dat animaties/afbeeldingen het voorlezen leuker maken?
33 antwoorden

- Ja
- Nee
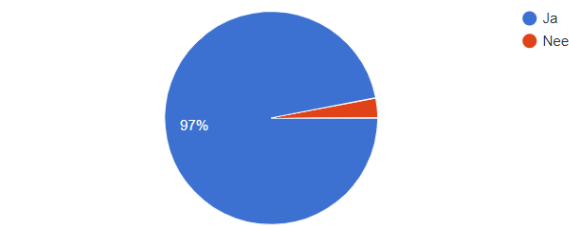
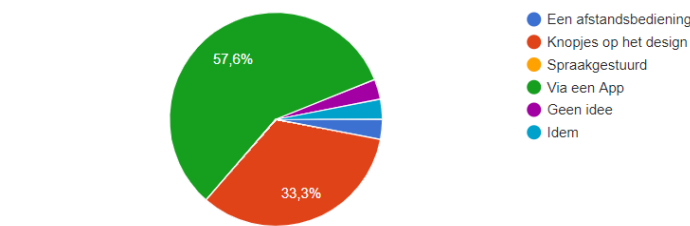## 14. Denkt u dat animaties/afbeeldingen het voorlezen leerzamer maken?
33 antwoorden

- Ja
- Nee

Question:	Our Survey	Research
How many times do parents /read to their children	- Every day: 61.3% - 1 or 2 timer per week: 9.7%	- Every day: 61% - 1 or 2 times per week: 21%
What is the duration of the reading to children?	- 5 - 10 min: 35.5% - 10 - 15 min: 38.7% - 15 - 20 min: 9.7%	- 5 - 10 min: 40% - 10 - 15 min: 40% - 15 - 20 min: 11%
Where takes the reading place:	- Bedroom: 93.5%	- Bedroom: bit less than 30%
Do the children like the reading?	- Yes: 93.5% - Often: 6.5%	- Yes: 90% - Sometimes: 6%

15. Welke manier om uw kinderboeken in ons design in te voeren heeft uw voorkeur?
33 antwoorden

- Eenmalig het boek scannen & uploaden vi... — 21 (63,6%)
- Bij elke keer voorlezen een geheugenkaa... — 0 (0%)
- — 4 (12,1%)
- Geen idee — 1 (3%)
- Ik heb hier geen behoefte aan — 1 (3%)
- Ik kan me voorstellen dat je wellicht i... — 1 (3%)

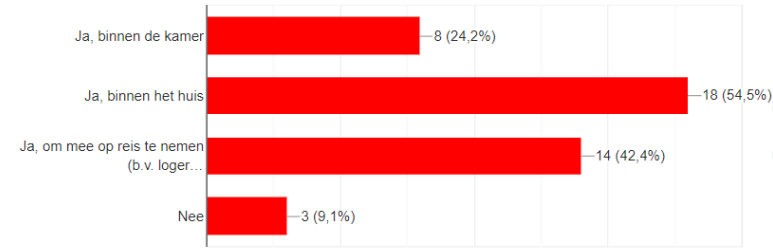## 16. Welk bedieningsmechanisme van ons design heeft uw voorke... (boek invoeren, boek kiezen, start/stop voorlezen, etc)
33 antwoorden

- Een afstandsbediening
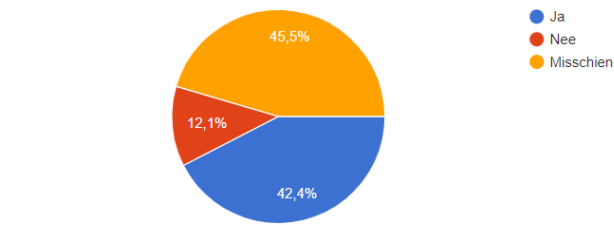- Knopjes op het design
- Spraakgestuurd
- Via een App
- Geen idee
- Idem

17. Zou u het design willen kunnen verplaatsen? Meerdere antwoorden zijn mogelijk.
33 antwoorden

- Ja, binnen de kamer — 8 (24,2%)
- Ja, binnen het huis — 18 (54,5%)
- Ja, om mee op reis te nemen (b.v. loger... — 14 (42,4%)
- Nee — 3 (9,1%)

18. Zou u interesse hebben in een dergelijk product?
33 antwoorden

- Ja
- Nee
- Misschien

Reflection Midterm Demo Day

Tops:
- Most people liked the idea, liked the smaller shape
- Great how It was presented
- Neat clothing
- Nice way of presenting together
- People liked the animations and the poster
- Colours were nice

Tips:
- Think more about the design, some thought it seemed more for boys than for girls, just looking at the designs, maybe have two different ones, one for boys, one for girls, but just try it out with user tests
- Make it more child friendly, use less sharp edges etc.
- Think of which material to use for the design, for example that silicone stuff idk
- Think about the assumptions we made, some might not be as true as we think (best way of improving language skills etc)
- Think about the age difference of children
- Maybe use a drawing function to make it more interactive
- Try not to change the book industry
- Use some soft lights to make it more attractive
- Start doing more and more user tests for every area, technical wise and aesthetic wise
- Gaps of the green one could be used as ventilation for the beamer
- Switch it on/off by putting the gaps together and open the gaps. (in elkaar schuiven)
- (amazon voice recognition)
- What about rights for the book industry
- Think less big than changing the whole book industry, less is more
- The battery could bring the design out of balance, because the center of gravity changes when you turn the design
- The design looks quite modern & technical, but we might want to make it look more like something for children, a bit cuter
- Name is a bit too simple
- Use voice recognition from your phone instead of integrating it in the design
- Design could be used as a nightlight or projection of stars on the ceiling
- App icon plus not clear enough, maybe change to barcode
- On the poster it would be nice if the projection was also shown

Results of our user tests

General stuff

Name	Age	Sexuality	Where do you read your child/ Where are you read to?
Nicole van Deursen	47	Female	Bed/couch
Jip Hameleers	9	Female	Bed/couch
Xavi Noorden	7	Male	Bed
Sicco Noorden	7	Male	Bed
Siri Noorden	9	Female	Bed
Dominique Fabry	40	Female	Bed
Yuna Miyazaki	3	Female	Bed
Stefanie Metsemakers	32	Female	Bed
Bart Thielen	34	Male	Living room
Wijnie Thielen	34	Female	Living room
Agathe	48	Female	Bed
Bram	8	Male	School/Bed

App testing

Person	Exercise 1	Exercise 2	Exercise 3	Exercise 4	Exercise 5
Nicole	3/3	1/1	4/2	2/2	4/4
Dominique	3/3	1/1	5/2	4/2	4/4
Stefanie	3/3	1/1	4/2	2/2	4/4
Bart	3/3	1/1	3/2	2/2	4/4
Agathe	3/3	3/2	2/2	2/2	4/4

Interesting comments made during the thinking out loud technique:

- Nicole: 'The plus sign is not immediately clear, but because there are only 2 buttons, it is still possible to find the scanner easily'

Interaction testing

Try to say in words how they first used it:

- Nicole/Jip: both were searching for a place where the child could lay on her back and watch the animation from the ceiling, because she is used to just listen when she get read to. Struggled a bit, because of quite a full room and lots of things on the wall etcetera.
- Dominique/Xavi/Sicco/Siri: was hard to really test this without the prototype, but by asking questions, I noticed that they were a bit struggling to find a place where they all could read, because they have a bunkbed, so the ceiling would not be an option, but the wall was for them the solution. All the kids also just listen when read to, so they needed a central point to focus on.

- Stefanie/Yuna: it was again hard to test this without the prototype, but by asking questions, they would like to get the projection on the ceiling, so Yuna can watch along. Now Yuna sometimes sits just to watch the pictures in the book, but this would mean she can already lay down.
- Bart/Wijnie: first the minibeamer was used, however even after darkening the room the text was not readable. But the mom automatically started talking about the pictures. When using the PC she started reading along. The child was clapping in her hands.
- Agathe/Bram: I think you can see it the best on that wall. Lay flat on your bed please. I will look for the book and read rupsje nooitgenoeg. Child is getting tired really fast, because he lays flat in bed and is really interested in the book. User is asking about controlling the pictures, if you have to push a button to go to the next animation.

What did they think about the animations?

- Nicole/Jip: both agreed that the animations were spot on, enough animation, especially the text element helped a lot for the child to follow the story, so they were happy about that.
- Dominique/Xavi/Sicco/Siri: they all thought it would help them reading the story along, they also liked that they, as kids, knew what actually happened in the story and what was coming up. And this would stimulate them to read along. Xavi would like some more visualization, but they told me he always wants it more visual, he is a visual thinker.
- Stefanie/Yuna: They liked the animation, Yuna was already trying to read along and sometimes said out loud what she saw, so it grabbed her attention.
- Bart/Wijnie: They liked the animations and said that it can tell more than just images in a book. They questioned if something like this was also suitable for children for age six. The animation should, for younger children (0/1), maybe contain less text, the movement of things and small sounds are attention grabber for young children. However, it must not become a movie.
- Agathe/Bram: They liked that the child can just lay in bed, without having to look at the book because he can just look at the animations with the text.

What did they think about our ideas?

- Nicole/Jip: Liked the idea that they could use it in different positions, although they will probably only use one position. Also they thought that it would help the children with their language development.
- Dominique/Xavi/Sicco/Siri: they liked the ideas of the product being able to be used in different positions, also the fact that the text was always there, so it would really help them reading.
- Stefanie/Yuna: /
- Bart/Wijnie: They were really enthusiastic, and compared it with their soundbox, which projects lights at the ceiling, which they have in their daughters' room.
- Agathe/Bram: Very cool idea, useful and a fun addition to the book world as we know it.

Design testing

General comments:

- Nicole/Jip: 'Would not want to work with a speaker, we believe that it would give to much of a movie effect and can be disturbing when reading'

- Nicole/Jip: 'The buttons were clear, but if it is possible we would like to see two more buttons for the clarity of the animation'
- Bart/Wijnie: Bart commented that some designs will cost more in the making of them. The ball will for example cost more to make than the hexagon. He also said that the ball looks more professional and can stand in a living room as design, and the hexagon suits a children room more. Wijnie added that if only the parents will use the design, she preferred the ball, and if the children will use it as well the hexagon will indeed be nicer.
- Agathe/Bram: The book we use has not that many pictures, so how will we use the storyshine device? I question if a child will look at the text of the book, if it is a really imaginary book. Just pictures are better then. Or maybe you could combine the text of a difficult book with some pictures, so the child has to pay attention to the slides. For a difficult book maybe one picture per chapter. In the past we did read books with more illustrations. The storyshine is a good addition for those books, because the child already gets sleepy while laying down, while he can also look at the pictures from the book.

Top 3 of the designs

Person	1.	2.	3.
Nicole	Sphere	Heptagon	Hexagon
Jip	Sphere	Cylinder	Hexagon
Xavi	Hepta gleuf	Hepta	Hexa
Siri	Hepta	Hexa	Pyramid
Sicco	Hepta gleuf	Hexa gleuf	Sphere
Dominique	Hepta	Hexa	Cylinder
Yuna	Cylinder	Hepta	Sphere
Stefanie	Hepta	Hexa	
Bart/Wijnie	Hexa	Cylinder	Sphere
Agathe/Bram	Hepta gleuf		

Top 3 of the materials

Person	1.	2.	3.
Nicole	Silicone	Blue material	Plastic
Jip	Silicone	Plastic	Blue material
Xavi	Blue material	Silicone	Wool
Siri	Blue material	Silicone	Plastic
Sicco	Silicone	Blue material	Wood/metal
Dominique	Silicone	Wood	Plastic (recycled)
Stefanie	Silicone	Divers suit material	Using covers
Bart/Wijnie	Plastic with rubber	Wood	
Agathe/Bram	Silicone	Wood	

Questions

Person	Which positions want you be able to get with the product?	How big would you like the product to be?	Which colours would you like to see?
Nicole/Jip	Beamer facing the ceiling or a bit up/ bit down	The size of the blue prototype	Sky blue/ Lilac/ Green
Dominique/Xavi/ Sicco/Siri	Beamer being able to face the wall and the ceiling	3 preferred the smaller one, Xavi preferred the bigger one	Green, rainbow, orange, dark blue, black, white, wood
Stefanie	Ceiling	Bigger one, because she thinks it is nicer for children and it grabs more attention, so parent knows better where it is	Yuna: Blue Stefanie: Just check kids products or search for children rooms, she likes pastel or just not active colours before going to sleep.
Bart/Wijnie	If it is for sleeping, they preferred the projection at the ceiling.	As mentioned, before they were thinking about travelling and thought about something smaller than the green model. It is nice to create the safe situation elsewhere just like home.	Bart: a calm colour. For peoples taste: multiple colours but this is not a vereiste. Maybe even multiple colours in 1 design: blue white: sea, with some bird/fish on it. Wijnie: Black or white could also be possible, more for in living room.
Agathe/Bram	I would like to place it in the bed, but I prefer it to be higher, because in our bedroom it has to shine over my child. The diagonal shining is perfect for this.	Not too big, because I would like to take it while traveling. The size of the blue one is great.	Blue is maybe a bit too much for boys. Maybe red is a cool color for both boys and girls. Green or yellow could also be cool. A primary beautiful color.

Person	Looking at the shape, is it more for boys or girls?	Do you want 2 versions, one for a boy and one for a girl?
Nicole/Jip	Gender neutral, especially the sphere	Would prefer just 1, gender neutral is the way to go nowadays
Dominique/Xavi/ Sicco/Siri	Gender neutral	Gender neutral
Stefanie	Gender neutral	Gender neutral, using covers to make it more a boy or girl edition
Bart/Wijnie	No	
Agathe/Bram	Gender neutral	Gender neutral

Final questions

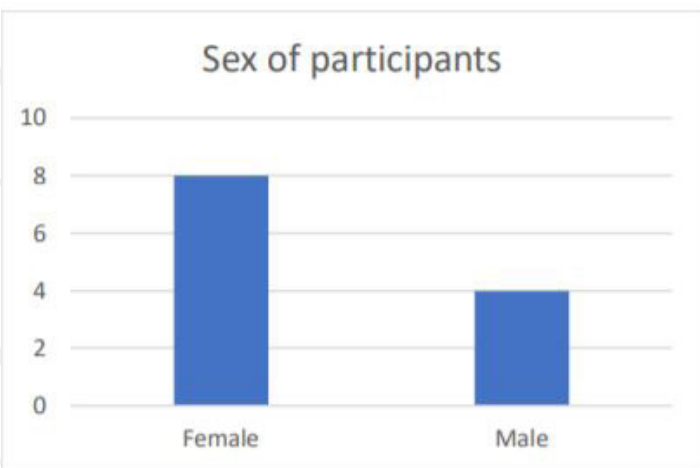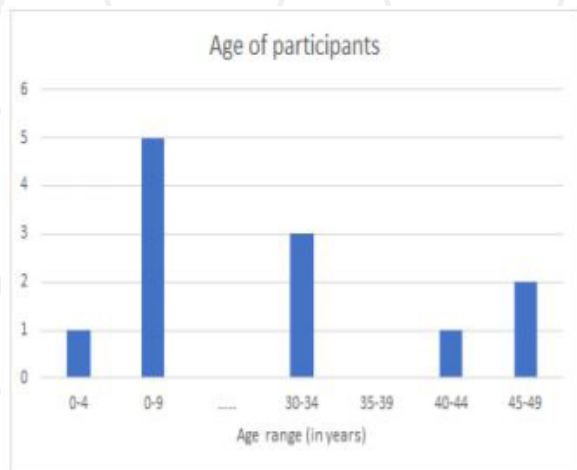| Person	Which age 'region' would use this product?	Would a voice recognition system be handy?	How much would you spend on this kind of product?
Nicole/Jip	0-10	Yes, otherwise you are busy with too many things.	50 euros for now, maybe if it has more features than a bit more
Dominique/ Xavi/ Sicco/ Siri	0-10	Yes	Preferably 30 to 50 euros, but they can imagine that it would cost 50 to 80 euros
Stefanie	2-8	Yes	She wants a sort of starter package before buying it, than she thinks about 80 to 100 euros
Bart/Wijnie	1-4/5 using animations, after that use text	If it works well	Wijnie first said couple hundred euros, after which bart told: no 150 is a lot. maybe between 80 and 100 euros.

Agathe/Bram	0-10	It could be cool to see where my mom reads. So: yes. If the option is possible it would be useful.	Max. 30-40 eu

Person	Still use the book or everything only from the beamer?	Which name would you give our product?
Nicole/Jip	Keep the book, still feels better reading out of a book to your child, better connection with the child.	/
Dominique/ Xavi/ Sicco/ Siri	Still use the book	StoryShine was cool, or a real name, something like Scotty
Stefanie	Still use the book	BeamBook
Bart/Wijnie	People can choose it themselves. This could also be the new book, so that you don't use the book anymore but only this. In couple years reading to children will be different. However small books will stay.	
Agathe/Bram	It is a bit much and expensive if you also have to buy the book. I also read a lot from my e-reader. Not having to use the real book could be very useful. Also for on a holiday.	leesliedje (Bram), story shine dekt de lading goed (Agathe)

Comment Stefanie: The purpose of reading changes a bit when children get older, watch out with that and maybe also adapt your animations on the age of children.

Comment Bart: It has to be light, but strong. The place for the on/off button would be better if it is in the middle between the other buttons. Multiple angles is nice. Zonder gleuf is more professional but less practical.

Results in graphs & important quotes

Age of participants

Sex of participants

Place where is read

App testing: Was very successful, everyone could fulfill the tasks, maybe only change the plus sign to a barcode sign

Design testing: Nicole/Jip: 'Would not want to work with a speaker, we believe that it would give too much of a movie effect and can be disturbing when reading'
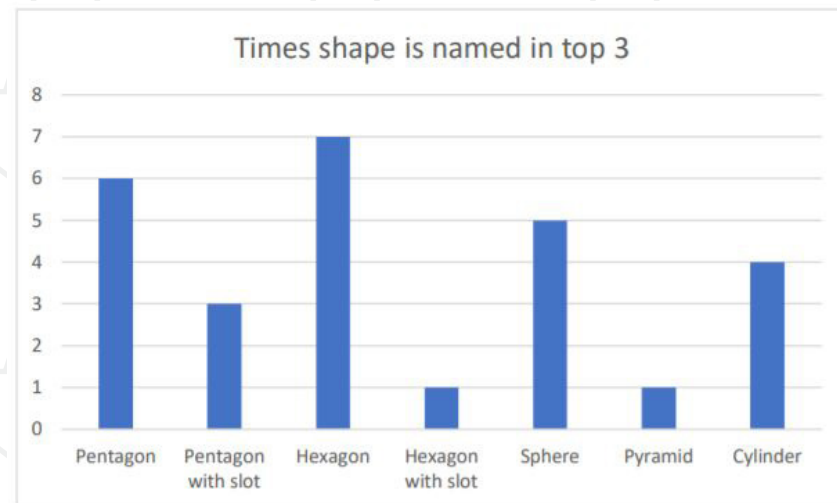
Times shape is named in top 3

Note: The hexagon is maybe more often mentioned in the top 3, but the pentagon was mentioned three times at first place and hexagon only once.

Times material is mentioned in top 3
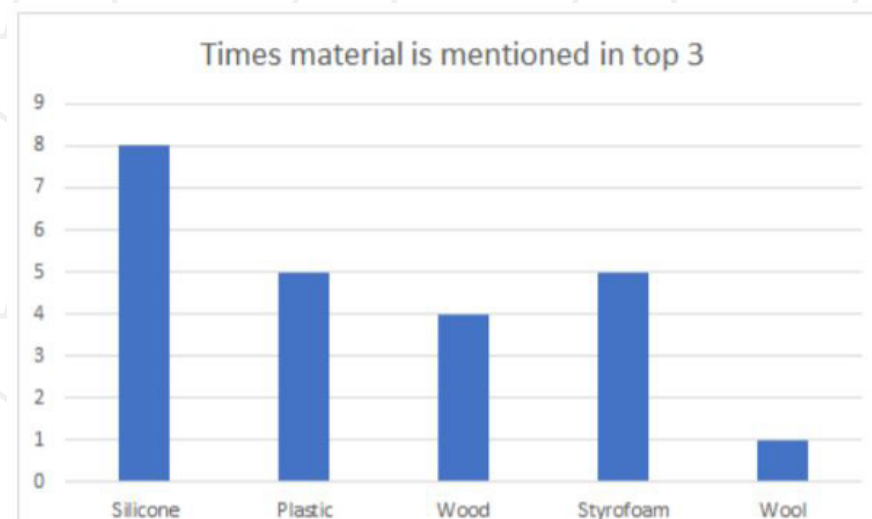
Note: The hexagon is maybe more often mentioned in the top 3, but the pentagon was mentioned three times at first place and hexagon only once.

Note: Bart/Wijnie: 'Would like some bumpers of rubber when the object is made out of plastic.' Stefanie: 'Use covers to make it more customisable or use the material from divers suits to make it water proof.'

Questions: Which position?: Everyone liked the idea of using it in different positions and that it would be able to shine upwards, sideways and diagonal .

How big?: Everyone preferred a smaller product, like the blue version we 3d printed, they preferred that one, because it was easier to take with them and to find a place to set it up.
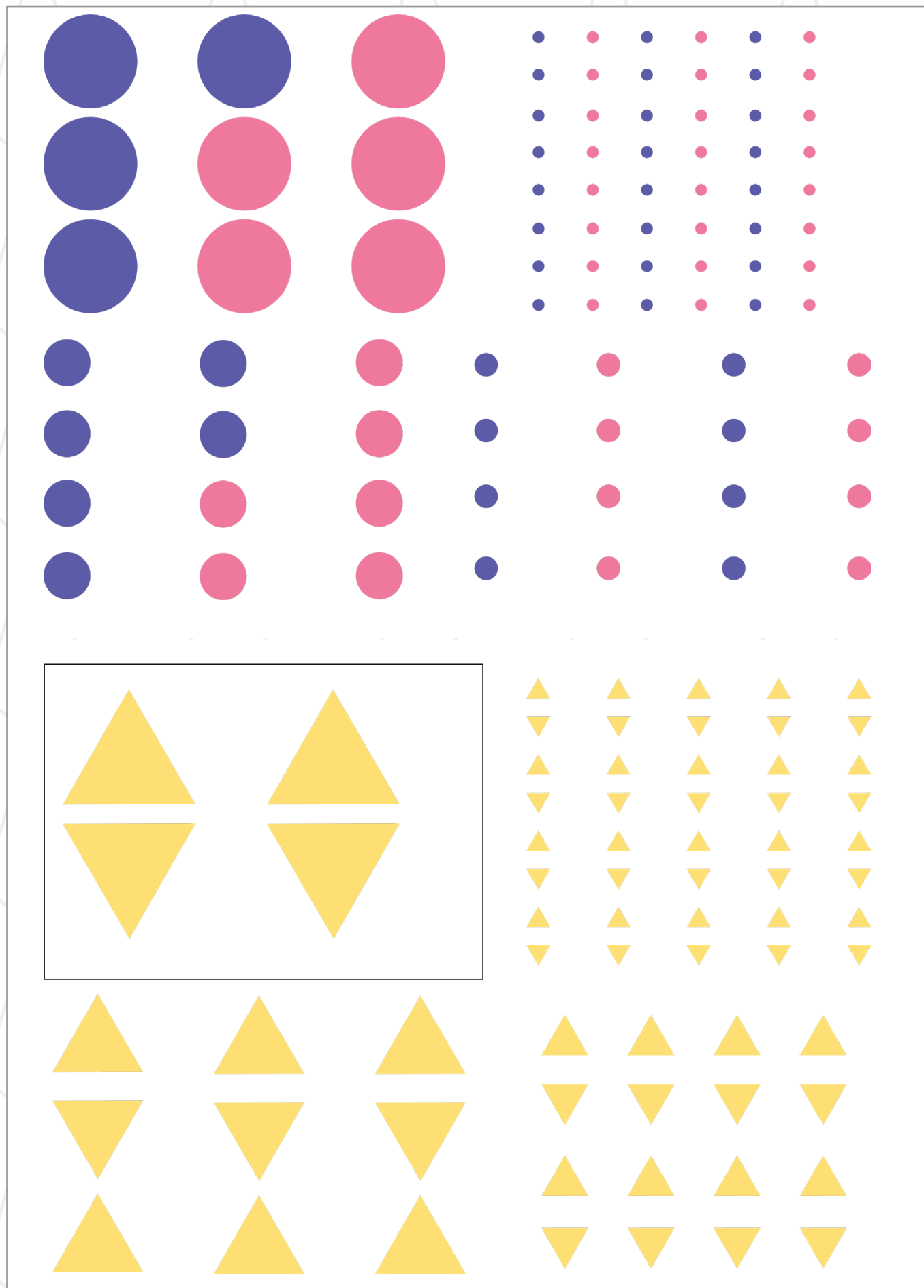
Which colour?: All kinds of different colours were mentioned, so that make us think about a way to customise it, so that everyone could get something they like.

Two versions or one?: In this age everything needs to be gender neutral or customisable
Still use the book or forget about it?: The reactions were a bit mixed about this, but most people would still want to use the book and see this as a nice addition, but who knows what the future brings us when everything is getting more digital.

Sticker Sheets

Package

Story shiney

"Once upon a wall..."

Make reading to your children more fun & educational
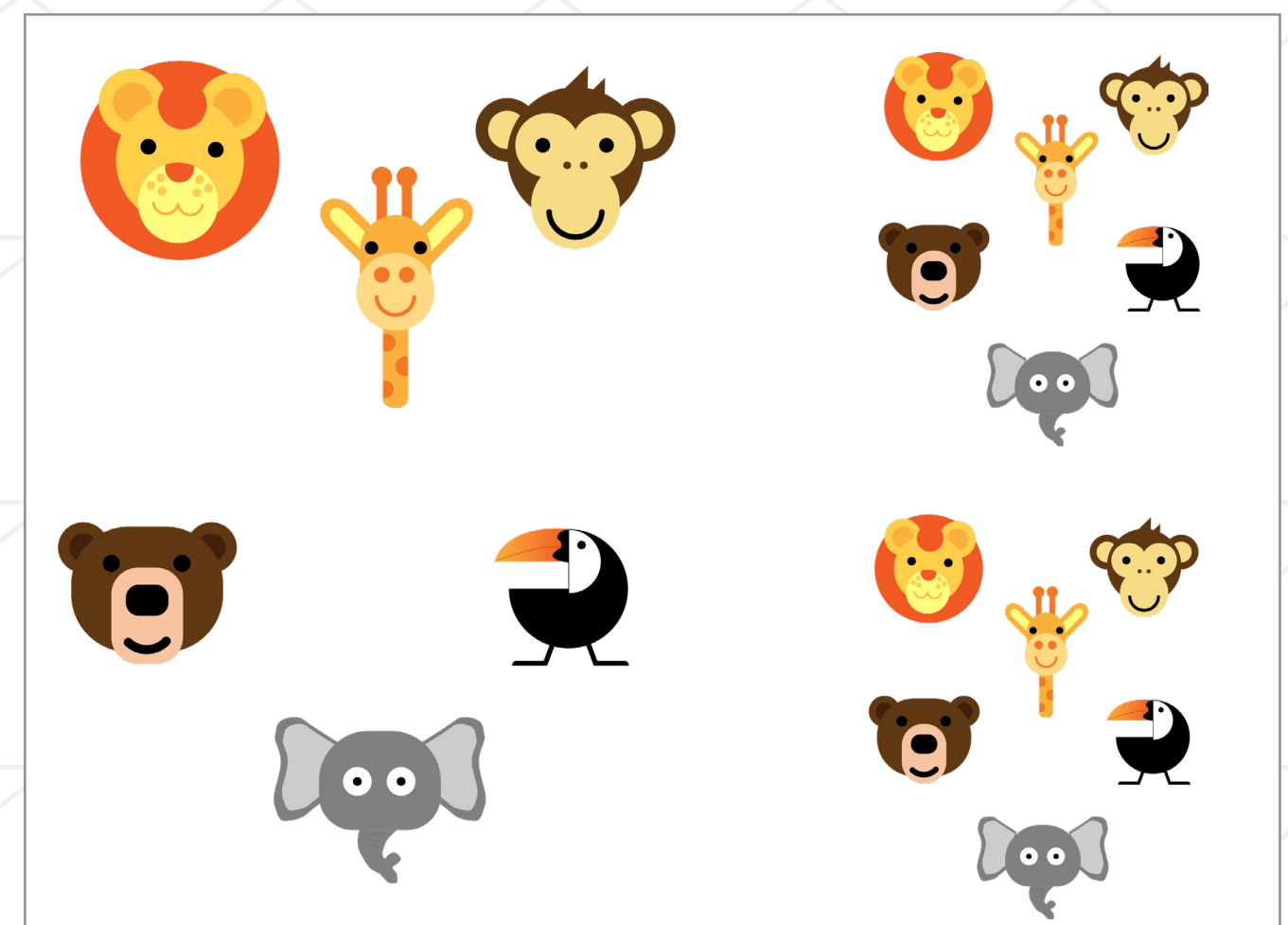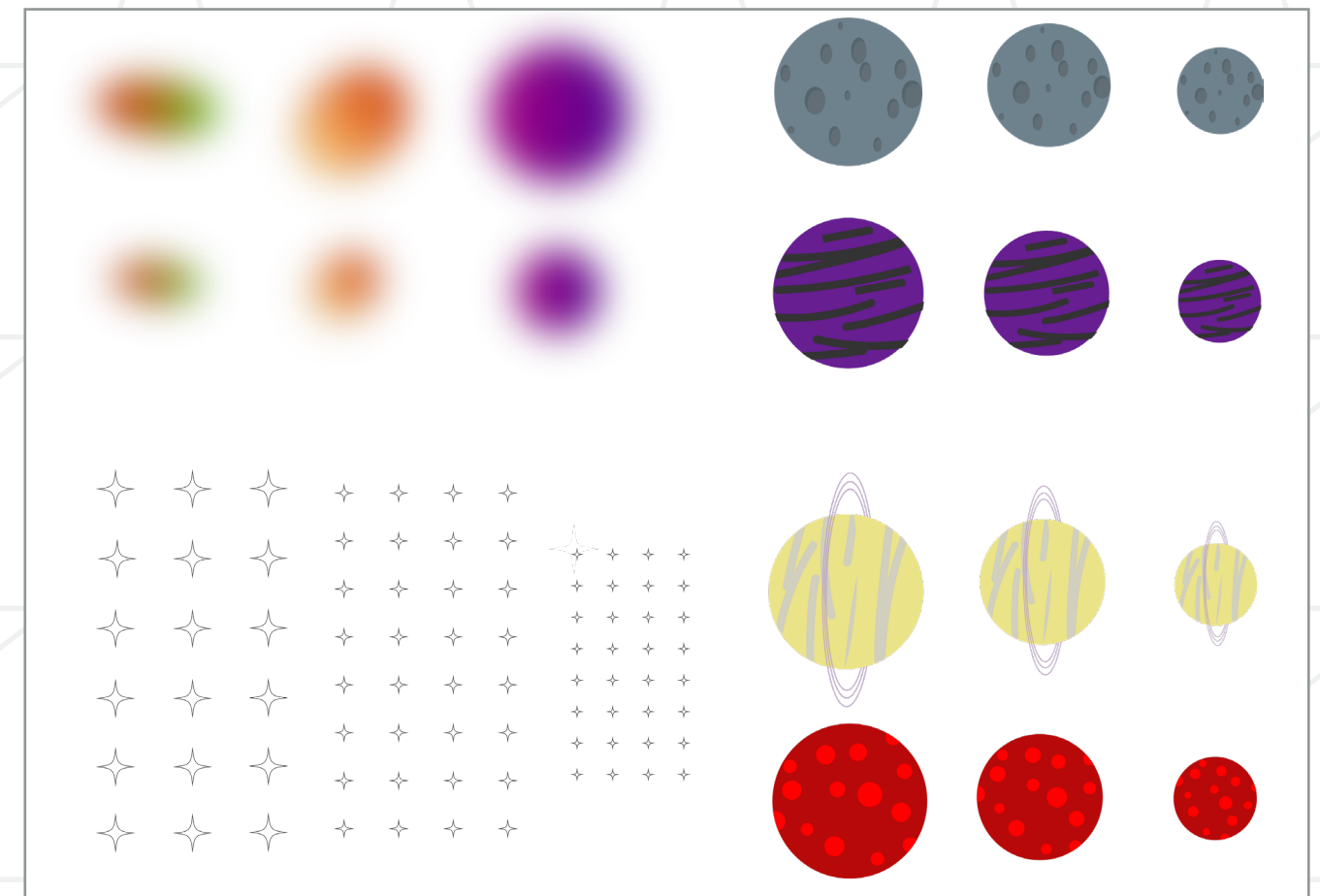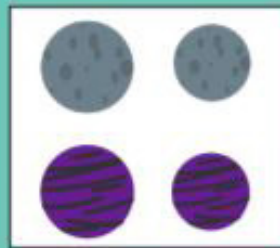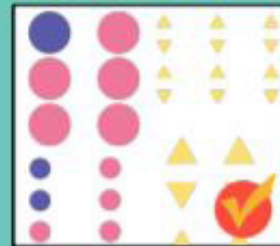
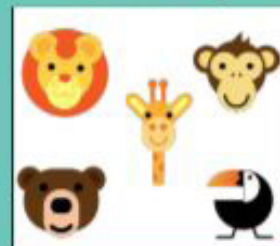# Customisable

COLOURS

Blue


Red

Yellow

+

STICKERS

Space

Geometry

Animals

Improve your
child's language skills

StoryShine

StoryShine is a projector which is meant to make reading to your children more educational. It projects the read words, combined with suiting animations and explaining fonts. Looking at this will improve children's language development. The shape of the device allows you to project on your walls or your ceiling. So, use StoryShine and shine a new light on your story!
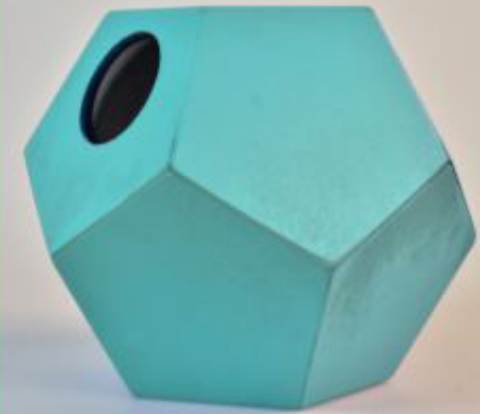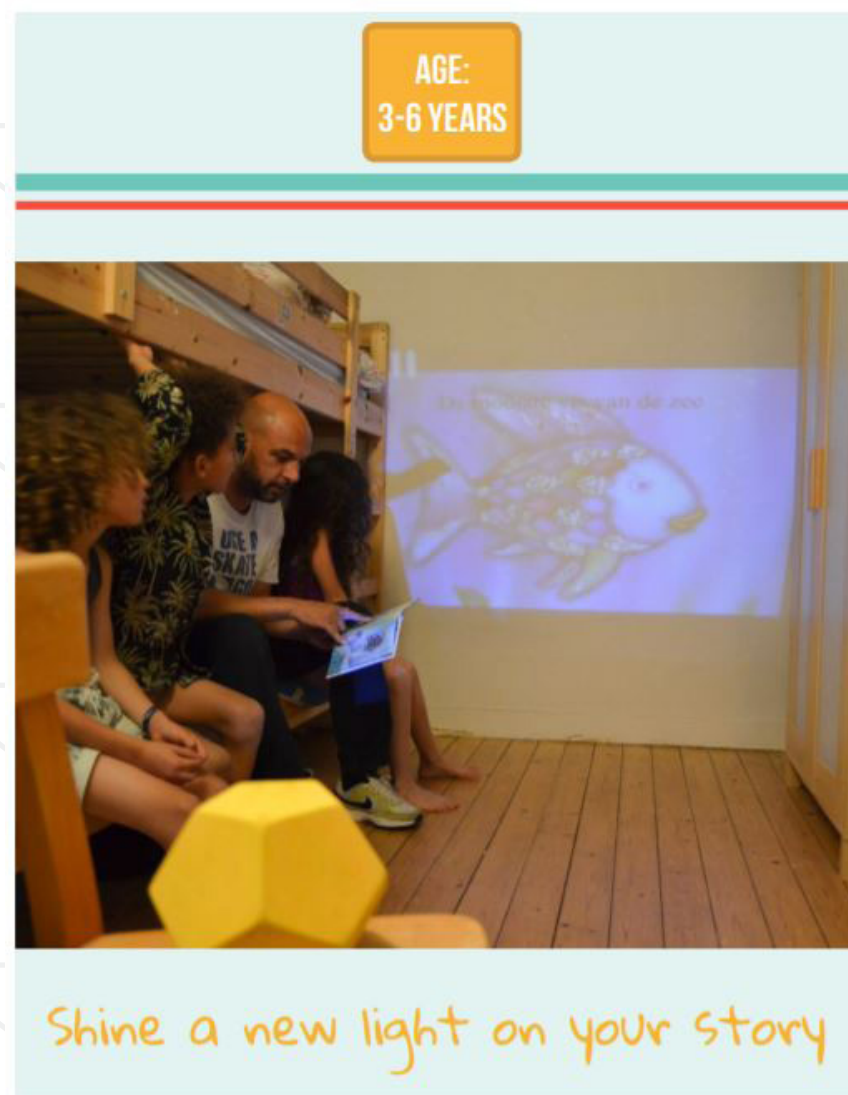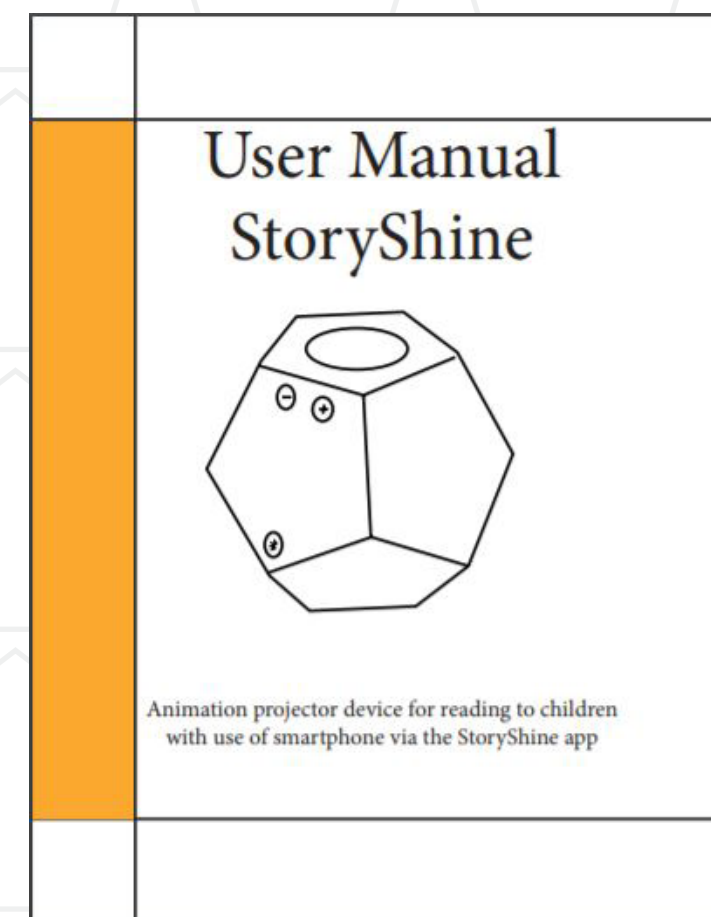

THIS PACKAGE CONTAINS:
- 1 StoryShine device
- 3 books
- 1 package of stickers
- 1 cover
- 1 micro-USB cable
- 1 user manual

AGE:
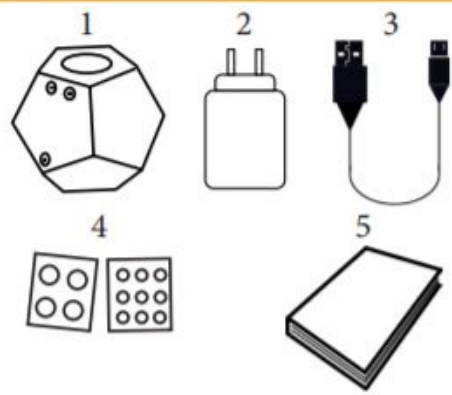3-6 YEARS
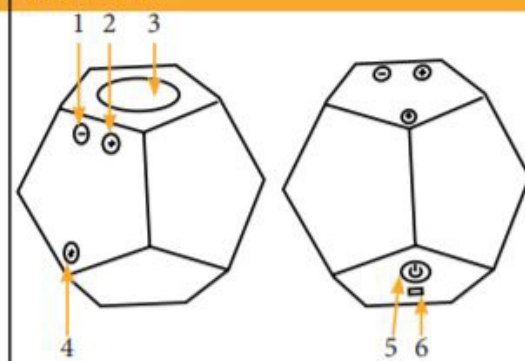
Shine a new light on your story

Story shine

"Once upon a wall..."

User Manual
StoryShine

Animation projector device for reading to children
with use of smartphone via the StoryShine app

User Manual StoryShine

Contents

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User Manual StoryShine

Content of box

1	StoryShine Device
2	Plug
3	Micro USB cable
4	Stickers
5	3 Children Books

http://clipart-library.com/book-outline.html
https://www.123rf.com/clipart-vector/micro_usb_cable.html?sti=nhtlt-wrgxz8jdfzxpo|

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User Manual StoryShine

Feautures

1. Adjust Projection/ Zoom out button
2. Adjust Projection/ Zoom in Button
3. Lens
4. Bluetooth Button
5. Power Button
6. Micro USB port

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User Manual StoryShine

User Guide

Device

First use

1. Be ensured that the StoryShine device (1.) battery is fully charged (No light when connected to USB cable).
2. Turn on the StoryShine by pressing the Power Button (5) once. The power button should indicate a green light.
3. Hold down the Bluetooth button (4) on StoryShine for 2 seconds until the led flashed red and blue.
4. Activate Bluetooth on your phone and set it to discover new devices. To do so:

- iPhone users click Settings > Bluetooth > On
- Android users click Settings > Wireless & Networks > Bluetooth: On > Scan for devices

5. Tap StoryShine to complete the pairing. When pairing is successful, the indicator light stops flashing.

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User Manual StoryShine

User Guide

Device

Further use

1. Turn on the StoryShine by pressing the Power Button (5) once. The power button should indicate a green light.
2. Be ensured that Bluetooth is turned on on your smartphone.
3. Wait until the Bluetooth connection is established.
4. Open the StoryShine app.
5. When Storyshine is projecting sharpen the image with use of the Adjustement Buttons (1 & 2)

Charge

1. Put the Micro USB cable inside the Micro USB port (6).
2. Put the USB cable (3.) inside the USB port of the plug (2.)
3. Put the plug in a wall socket. The Power button led should indicate a flashing red light.
4. Flashing stops when StoryShine battery is fully charged

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User Manual StoryShine

User Guide

App

1. Dowload the StoryShine App for Android or iOS.
2. Open the app
3. Do the tutorial.

Safety

1. Please read the manual carefully before operating with StoryShine
2. StoryShine should be kept away from flammable and explosive materials and from water and any other liquids.
3. Please do not disassemble StoryShine as this will invalidate the warranty service. To protect your eyes, do not stare directly at the lens when it is on.
4. If it does not work, please contact the authorized service agent.

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Final video

Play to learn Project 1

To get to know our target group better and know what the current situation is regarding reading aloud to children, we asked parents of children between 0 and 8 years old to fill in our questionnaire. We found out that parents read aloud to stimulate the language development of the child, as a ritual before sleeping and because it is cozy. Other interesting results that we gained regarding the research and the design are shown in the figures below.

Welk bedieningsmechanisme van ons design heeft uw voorkeur?

- Via een app
- Knopjes op het design
- Een afstandsbediening
- Idem
- Geen idee
- Spraakgestuurd

More than half, 51,9 percent, of the participants would prefer an app to control the design. That is why we designed an associated app.

Hoe leest u uw kind(eren) voor?

All of the participants read to children with a physical book, some participants use other methods as well. So the design is relevant for the current situation of reading aloud to children.

Welke manier om uw kinderboeken in ons design in te voeren heeft uw voorkeur?

Most of the participants, 63 percent, prefer to scan and upload the book once with the associated app. We included this function in the app.

Zou u het design willen kunnen verplaatsen?

Most participants would like to be able to move the design. 55,6 percent within the house and 40,7 percent outside of the house. The design enables the user to move it anywhere and place it at any angle.

Project 1 - Group 3E   Emile Smeets   Yorn Thijssen   Eileen Westerga   Nina Sandford   Talita Spijker

DESIGN DECISIONS

DESIGN

USER TEST RESULTS
Times shape is named in top 3

The 3D hexagon is more often mentioned in the top 3. However the 3D pentagon was mentioned three times at first place and the 3D hexagon only once. Therefore we have chosen for the 3D pentagon, officially called a *dodecahedron*.

"WITH THIS MODEL, YOU ARE COMBINING A ROBUST, TECHNOLOGICAL PART WITH A ROUND, CHILD-FRIENDLY PROTOTYPE, WHICH LOOKS A BIT ODD. IT COMBINES TWO VERSIONS, BUT USUALLY IT IS BETTER TO CHOOSE ONE."

~ CLAUDIA VAN HET PROJECT 1 COACH

ANIMATIONS

"IF YOU LOOK AT CHILDREN WHO ARE READ TO ALOT OVER A LONG PERIOD, YOU SEE THAT THEY CAN ALSO ANALYZE MORE TEXT ATTRIBUTES. READING ALOUD APPARENTLY HELPS THEM TO BECOME LITERATE BETTER. MAKING THE ENTIRE TEXT VISIBLE SEEMS TO ME TO BE IMPORTANT"

~ DR. T.M. SIKKEMA-DE JONG ASSOCIATE PROFESSOR AT LEIDEN UNIVERSITY

APP

Welk bedieningsmechanisme van ons design heeft uw voorkeur?

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USER TEST RESULTS

Person/Task	Task 1	Task 2	Task 3	Task 4	Task 5
1	3/3	1/1	4/2	2/2	4/4
2	3/3	1/1	5/2	4/2	4/4
3	3/3	1/1	4/2	2/2	4/4
4	3/3	1/1	3/2	2/2	4/4
5	3/3	3/1	2/2	2/2	4/4

The task done by users during the think aloud technique were relatively done well. Because of this we concluded that our app is efficient.

PLAY TO LEARN - PROJECT 1 - BY GROUP 3E: NINA SANDFORD   EMILE SMEETS   TALITA SPIJKER   YORN THIJSSEN   EILEEN WESTERGA

2019

Business Plan

StoryShine

SANDFORD, N. , THIJSSEN, Y. , SMEETS, E. , SPIJKER, T. , WESTERGA, E.

STORYSHINE | Project 1: Play to Learn

Introduction

This document is a business plan for our project 1 idea: StoryShine. The business plan is made according to the assignments of the course *DAB150 - Introduction to business design*. Not all bullet points of the assignments will be discussed due to irrelevance and repetition. These include e.g. the patent form and the branding video. Also the finance part of the business plan is missing since this assignment in the course was due after this deliverable.

Contents

1

User and Market

Introduction of the concept

Our concept is about finding a playful and fun way to learn. We focused on the target group children, particularly children between three and six years old, and on finding a way to make reading to children more fun and, more importantly, more educational. StoryShine, our product, is a nice way to make reading books to children more educational. The design projects the text on the wall together with short animations. Some words even have a different font to explain its meaning better. The child cannot only read along with the parent, but he can also see the meaning of certain words projected.

It is very easy to upload the books into the design. Just download the app, scan the barcode and press upload. With the Bluetooth connection the data will be transferred to the design.

The design is also great for the bond between the parent and the child, as they are reading together and watching the fun words and animations projected on the wall.

New and innovating

A product like ours has not made his way to the market before. There are products with a similar intention. For example, a concept called 'Moonlite' exists. Moonlite is a 'storybook projector'. The user can buy different story reels and slide it into the projector. The projector can be placed on the user's smart phone, in front of the flashlight. The light of the flashlight will project the images on the wall. Together with Moonlite comes an app on which the user can read along the text and which plays some sound effects. (Moonlite, 2019)

However, our concept is different and new for a couple reasons. Firstly, for our product, the user needs the physical book. This is important for the income of authors, but also for the bond between parent and child. To use Moonlite, your cellphone needs to be present all the time, but for StoryShine you only need to play the book from your phone and can then put it away. Also, our product focuses more on the language development of children. That is why the literal read text, with appropriate fonts, is projected as well. This way, our concept has an educational purpose, which similar products do not have.

Market Segment

Our product is marketed towards a certain group of people. We will market towards parents of children aged three to six years old, so the mother is probably between 30 and 45 years old. The parents should be young enough to be interested in our new technology. Reading to your children has been done for a long time, but our concept renews this tradition. Our market segment includes the people who are open towards this, which means they are relatively younger. However, they should be old enough to have a bit more money to spend. Our product is very useful and serves it purpose nicely, but it is not a necessity. If the parents are very young, it is likely that they have a relatively low income and would not have money to spend on extras like StoryShine.

Apart from their age and income, it is important that our market segment values his family. StoryShine is designed mostly to improve children's language skills, but also to improve the bond between parent and child.

Also, we are marketing towards Dutch parents. Currently, our animations and projected text are in Dutch. This is the case because we contacted Dutch publishers to possibly collaborate with us and gather information about the rights of the illustrations of the books.

User Segment

To illustrate our target customer, we will use a persona.

Name: Nicole van Schuijten
Age: 36 years old
Gender: Female
Education: Leiden University
Profession: Journalist for NRC Next
Family: A husband and two children
Location: Rotterdam
Hobbies: Reading and watching crime series, running and gardening

Quote: 'The development of my children is more important to me than my career.'

Personal profile
Nicole is a hard working mother with a tight daily life schedule. She lives with husband and her two children of 3 and 6 years old in Rotterdam. Her career is important to her, but she values her family even more. Setting a side time to bond with her children and husband apart from her work is of big importance to her.

Goals, needs and requirements
She is willing to pay for a product that actively contributes to the development of her children. The time it costs to use a product should be flexible, so she can adjust it to her schedule.

Design, Technology and Intellectual Property (IP)

Requesting IPR's

Trademark

For our product we are going to trademark 2 things which are the name and logo.

Name

The name of our product that we are going to Trademark is **Storyshine**.
This name has been trademarked before. However, the current status of this trademarks is 'Registration cancelled' (tmview.org). Therefore, we can trademark this name once again.
A registered trademark gives you the exclusive right to use your business name nationwide in connection with the goods and services you've identified in your registration (Haskins, J. N.D.). For us this means that we can use the name StoryShine in combination with the device and the app. It is important to trademark this so no other business can use our name.

Logo

This holds the same with the logo. Using a logo gives a potential user the ability to recognize an identify the company and distinguish It from competitors. The logo that we are going to trademark is:

Design right

Our product is in fact a small mini beamer, and those do already exist. However, to request a design right the outer appearance must be unique. Our design can be distinguished from other Projector designs since it has the shape of a dodecahedron. This geometric shape was chosen above other shapes since this shape can be placed in several ways. It can project to the ground, but more usual the wall and to the ceiling.
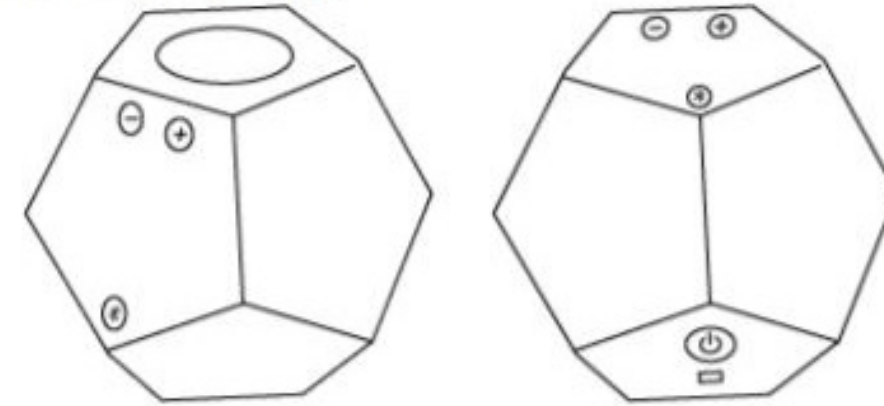
Conflicting IPR

Our design could conflict with one of the registered dodecahedron dices in the Global Design Database. These dices are registered in the class of *Games and toys* of the Locarno Classification. Therefore, to tackle this possible conflicting IPR we could register our IPR's in another class. The first idea is of course class 19: 19-07 TEACHING MATERIALS. However, a note is stated in this class:

(b) Not including audio-visual teaching aids (Cl. 14-01).

Therefore, we can register the StoryShine IPR's in class 14-01: 14-01 EQUIPMENT FOR THE RECORDING OR REPRODUCTION OF SOUNDS OR PICTURES.

Design and Branding

Value Propositions

To convince possible investors that our product has and brings value to users we have multiple value propositions.

- The main value proposition is that our product stimulates language development and helps children become literate. It does this by projecting the full text with pictures and/or animations. This leads to assumptions that the children will make.

- On top of that, the bond between parent and child will become stronger with the use of our product. Parents will have more motivation to read to their children. This will lead to more intensive and fun reading. Especially dads will become more motivated since they are using a piece of technology instead of just a book.

- Moreover, Storyshine is aesthetically pleasing and therefore blends in with the common children bedroom. Even in the living room the design is satisfying.

References

Belcher, L. (2019). 'Target market vs target customer.' Achieved on 09-06-2019, from: https://smallbusiness.chron.com/target-market-vs-target-customer-20674.html

Haskins, Jane (n.d) 'Should I Trademark My Business Name?' Achieved on 11/06/2019 from: https://www.legalzoom.com/articles/should-i-trademark-my-business-name

Moonlite (2019). 'A magical reading experience.' Achieved on 09-06-2019, from: https://mymoonlite.com/pages/how-it-works