

CHAPTER IV

CONCEPT AND IMPLEMENTATION DESIGN

4.1. Concept Formulation

4.1.1. Keyword Concept Formulation

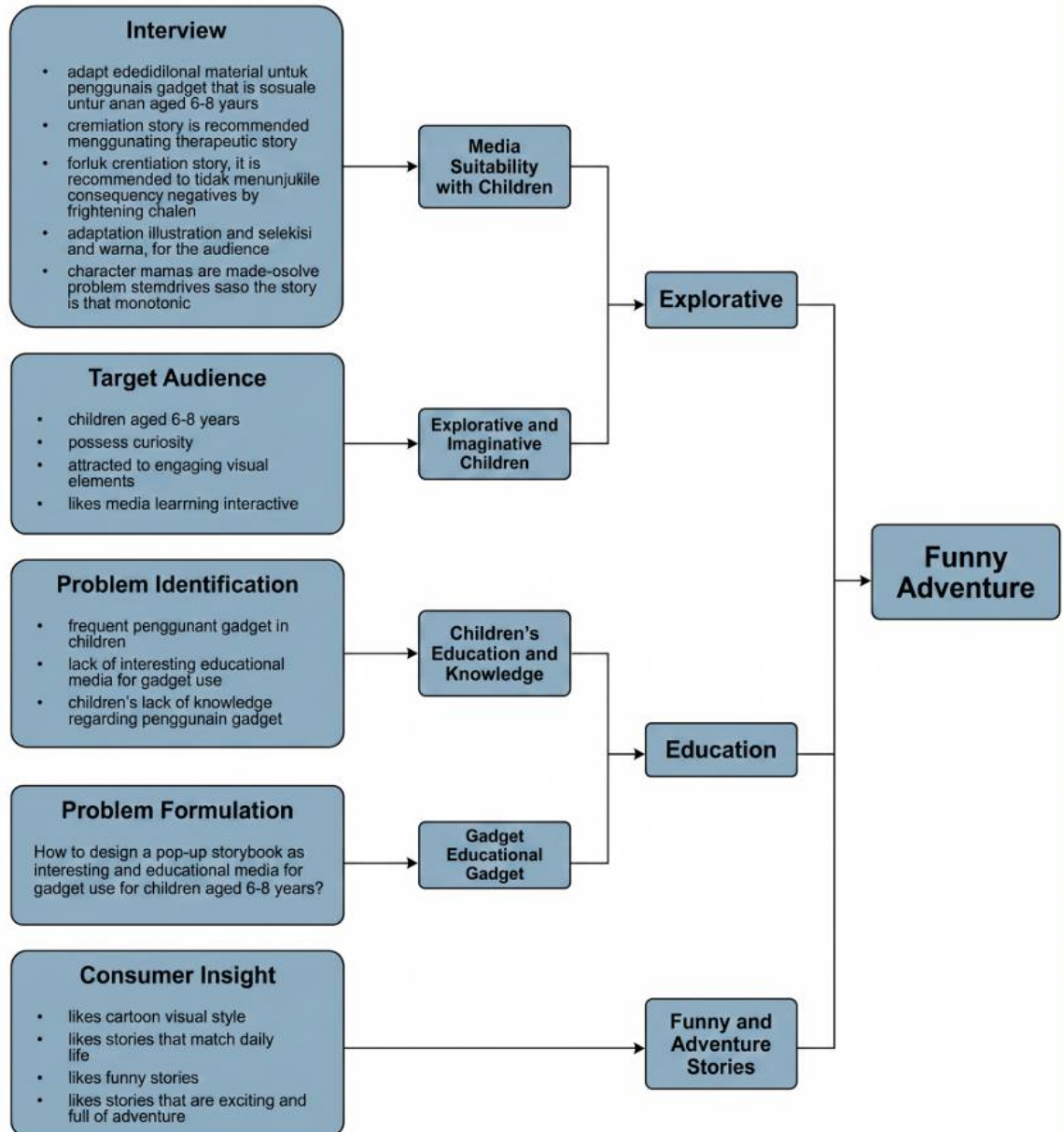


Figure 4.1 Keyword Formulation
(Source: Personal Document)

4.1.2. Keyword Definition

Based on the formulation of keyword concepts that have been carried out by the author, the results obtained for the design of the pop-up storybook in this design are: "Funny Adventures". The keywords are obtained from points that refer to problem identification, interviews, problem formulation, questionnaire results, consumer insight, and target audience characteristics.

4.1.3. Denotative Meaning

Denotative meaning refers to the meaning that corresponds to reality. The keyword "Funny Adventure" consists of two words:

1. Adventure

According to the KBBI (Big Indonesian Dictionary), the word "adventure" means going on an adventure. "Adventure" means wandering everywhere (without a fixed location).

2. Jokes

According to the KBBI (Big Indonesian Dictionary), the word "jenaka" means to arouse laughter; hilarious; amusing; and ridiculous.

4.1.4. Connotative Meaning

Connotative meaning refers to figurative meaning, meaning that is not a literal word and can have both positive and negative connotations. The keyword "Funny Adventure" signifies a process of exploration, curiosity, and a journey to discover new knowledge that is fun, cheerful, and full of humor.

4.1.5. Creative Concept

The pop-up Educational Storybook on Gadget Use is an educational medium that aims to provide education on the wise use of gadgets for children aged 6-8 years. The creative concept in this design includes the following:

- Media

In this design, the media used is a 21 cm x 21 cm picture storybook with interactive pop-up elements. The interactive pop-up elements aim to increase the book's appeal, making children more interested in reading and exploring each page.

- Story Content

The story is created based on the keyword "comedy adventure" which contains educational stories with comedic elements from the behavior of the characters and events in the story.

Educational material is conveyed implicitly within the story, rather than as advice to avoid sounding patronizing. Topics such as maintaining distance, limiting screen time, using gadgets for positive activities, and alternative activities are conveyed through the characters' experiences.

- Visual

Visual elements were created to align with the consumer journey captured in the previous questionnaire. The image style and colors were adapted to the visual reference, the chalk zone cartoon poster selected through the questionnaire. The images must also be faithful to the original form.

- Interactive

Interactive elements used in books include pop-ups to enhance their appeal. Techniques include v-folds, layered pop-up s, and pull-tabs, as well as combinations of these. The techniques used are tailored to specific moments in the story.

4.1.6. Verbal Concept

4.1.6.1 Book Title

The title of this book is based on the keyword "Funny Adventures," which contains educational lessons on gadget use, with a story filled with exploration and curiosity, both cheerful and humorous. The title used is "Pixel and the Talkative Pixie."

4.1.6.2 Book Synopsis

This pop-up storybook is designed for gadget education for children aged 6-8 years. The story presented in this book is designed to educate children to use

gadgets wisely. The story presented is made according to the keyword, namely a fictional story with elements of adventure and humor. The characters in this story are 8-year-old Raffi and his 7-year-old sister Sasa. And there are also AI assistant characters named Pixel and Pixie in an AI-based parental control application called Pixy 360. The material included in the story is made based on directions from interviews with psychologists, including the duration of gadget use, the distance between the screen and the eyes, using gadgets for positive things, and outdoor activities, so that children do not always play with gadgets.

This story tells of children named Raffi and Sasa who love playing with tablets, but they use them less well, such as looking too close to the screen and often losing track of time. One day, their tablet is installed with an application called Pixy 360. After opening it, characters named Pixel and Pixie appear, introducing themselves as new friends. Raffi and Sasa are very happy with this.

The next day, while playing on their tablet, Pixel and Pixie suddenly appear to warn them to keep their distance from the screen. When playtime is up, the game they're playing also closes itself. They try to trick the app, such as trying to coax Pixel and Pixie into changing the settings, but they unknowingly switch the settings to a rudimentary, super-serious mode, which makes Pixel and Pixie unstable.

Then their friends called for a game of hide-and-seek. Since they couldn't play with gadgets, Rafi and Sasa ended up joining Daffa, Raihan, and Zahra. Their various silly hiding places made them laugh, like Daffa hiding behind a meatball vendor's cart and Raffi hiding inside a rolled-up carpet. From that experience, they realized playing outside was just as fun.

When they got home, Pixel and Pixie became much more talkative. They wouldn't let them play any games, weren't allowed to go to the bathroom during class, and weren't allowed to open the YouTube app, even though it was for study materials. Hearing the commotion, Dad finally intervened. He discovered that the app was in "Super Serious Beta Mode" and returned it to normal mode.

Pixel and Pixie became cheerful again and helped Rafi and Sasa study and discover new hobbies like drawing and singing. From this experience, Rafi and Sasa learned that gadgets can be good friends, as long as they are used in moderation and for positive purposes.

4.1.6.3 Language Style

The language style presented in this book is casual and non-standard because it is adapted to the characteristics of the language style used by children in everyday life. According to book grading guidelines (Pusat Perbukuan et al., n.d.), the B1 reader level uses simple vocabulary and language that is familiar or familiar to B1 level readers. The choice of words used is only general words consisting of basic words and frequently used formed words. Then the vocabulary used only amounts to 25-40 words, which are frequently used by children.

4.1.6.4 Storyline

Text structure	Story Content
Title	The Chatty Pixel and Pixie
orientation	<p>Rafi and Sasa are siblings who enjoy using gadgets in their daily lives. However, they use them inappropriately, such as holding tablets too close to their eyes and using them continuously for long periods of time.</p> <p>One day, there was a new application on their tablet called Pixy 360. When opened, a cute robot-like character appeared on their tablet while introducing themselves, "My name is Pixel, and I am Pixie." They introduced themselves as digital assistants specifically for children, and they would become new friends. Rafi and Sasa were happy because of this.</p>
Complications	<p>The next day, when Raffi and Sasa were playing on the tablet together, Pixel and Pixie appeared and warned them, "Step back a little, keep an arm's length away from the screen!" This surprised them.</p>

Then, while they were playing, a notification popped up telling them to stop playing, but they ignored it. After playing for an hour, the game closed and locked itself. Pixel and Pixie appeared on their tablets, warning them that playtime was up. "It's time to stop! I told you three times... but you guys didn't hear!" A frowning face icon filled the screen, as if sulking.

This finally made Rafi and Sasa a bit annoyed, and they tried to trick the Pixy 360 app into letting them play again. Sasa tried to coax them by saying sweetly, "Pixie... can I play for a bit?" But Pixie just shook her head while posing firmly, "The next tablet game schedule is this afternoon." Then, they fiddled with the Pixy 360 app settings... without realizing that their digital friends, Pixel and Pixie, were now in a serious, imperfect mode.

In the end, their efforts were fruitless. Then they heard the voices of their friends outside, inviting them to play. Pixel and Pixie also asked Raffi and Sasa to play with their friends. Finally, Raffi and Sasa decided to play with their friends. Their friends invited Raffi and Sasa to play hide and seek in the park. They played with Daffa, Raihan, and Zahra.

The game begins... Sasa begins to close her eyes in the gazebo and starts counting down. The children begin to hide. Raihan hides behind a collection of flower pots, Zahra hides behind the wall fence, while Daffa hides behind a meatball seller's cart that has stopped near the park. Sasa begins to search; she peeks behind the pots, checks the bushes, and checks behind the fence.

One by one, they began to be discovered. Raihan and Zahra were successfully found. Then, when the meatball seller started pushing his cart, Daffa's hiding place was immediately exposed. He was caught while being laughed at by his friends. Now, only Raffi was left who had not been found. Daffa had searched the entire park, and finally he gave up while raising his hands. Then, they realized something strange in the Gazebo. A rolled carpet

	<p>was seen moving. When it was opened, it turned out that Raffi was hiding by covering his body with a carpet in the Gazebo while sleeping. Everyone laughed at this.</p> <p>Upon returning home, Pixel and Pixie became much more talkative. When Raffi opened a game, Pixel immediately closed it, even though she had said she could play again in the afternoon. While studying, Sasa wanted to stretch, Pixie immediately said, "It's not time for a break yet!" which surprised Sasa and made her fall. When Rafi wanted to go to the bathroom for a moment, Pixel warned him, "Where are you going? Study time isn't over yet!"</p> <p>After that, Sasa told Rafi that there was a learning video from the teacher. Raffi and Sasa wanted to watch the learning video the teacher sent, so they clicked on the video.</p> <p>It turns out that Pixel and Pixie immediately appeared and forbade them from opening YouTube.</p>
Resolution	<p>Hearing the commotion, Dad came over. He checked the tablet and found that Pixel and Pixie were in the imperfect Super Serious mode. He chuckled and said, "No wonder you guys are so noisy." Dad changed the settings on the Pixy 360 app, and Pixel and Pixie's expressions instantly brightened.</p>
Conclusion	<p>Pixel and Pixie were finally able to help Raffi and Sasa learn various subjects at school. Raffi and Sasa also used their tablets for new hobbies, beyond just playing games and watching YouTube videos. Sasa started learning to sing with Pixie's help, and tried singing her favorite songs. Raffi also started learning to draw on his tablet, and Pixel also taught him how to use drawing apps on his tablet.</p>

Table 3.1 Story Content

4.1.6.5 Anatomy of a Book

Book anatomy is the structural arrangement of a book's contents, such as the cover, shibboleth, copyright page, title page, contents, and so on. Children's storybooks generally have simpler anatomical arrangements than other books. According to (Ghozalli, 2020), the following is a common anatomical structure in children's books:

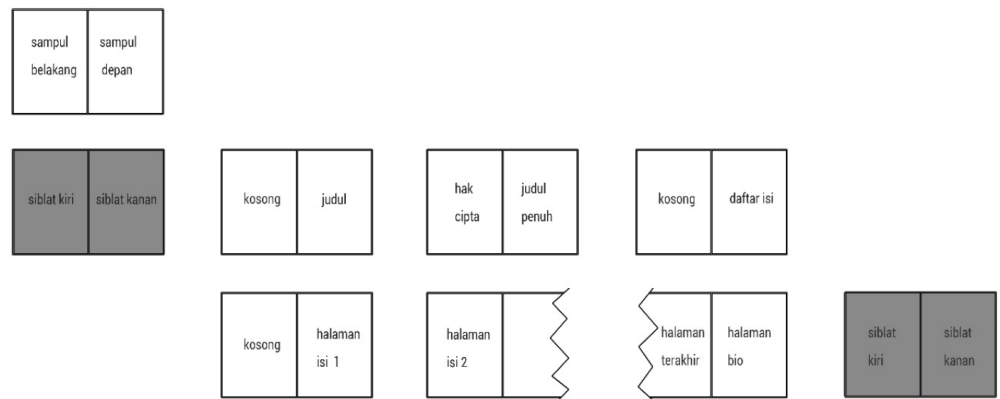


Figure 4.2 Anatomy of a Book

Source: (Ghozalli, 2020)

In this pop-up book design, the anatomy used is as follows:

- Front Cover
- Copyright Page
- Contents Page
- Author Bio Page
- Back Cover

This pop-up storybook has 32 pages, not including the cover, which will be customized to the author's specific anatomy. The book's content will then be structured according to that anatomy. Here's an explanation of the pagination concept for the pop-up book to be designed:

Anatomy Parts	Page	Concept Description	Page Type
Front Cover	-	There is a title, the name of the author and illustrator, and an illustration as a background.	Hardcover
Publisher Page	1-2	Information regarding copyright, such as author, illustrator, publisher, and editor	Regular page
Content	3	Introducing Raffi and Sasa, who love playing with gadgets.	Regular page
Content	4	Raffi and Sasa found a new application on their tablet, then they tried to open it.	Regular page
Content	5-6	Pixel and Pixie appear and introduce themselves.	pop-up Page
Content	7-8	The next day, while Raffi was playing on his tablet, Pixel appeared and warned him, "You're too close! Keep an arm's length away!"	Regular page
Content	9-10	After playing with the tablet for 1 hour, the tablet was locked. Pixel and Pixie appear on the tablet and warn that playtime is up.	Regular page
Content	11	Sasa tried to coax her by saying sweetly, "Pixie... can we play	Regular page

		again? Just for a moment..." But Pixie just made a no-go gesture.	
Content	12	Raffi then tried to fiddle with the Pixy 360 application settings, but he accidentally pressed an experimental button. Unbeknownst to their digital friends, Pixel and Pixie, they are now in Beta/experimental mode.	Regular page
Content	13	Then I heard the voices of my friends outside, inviting me to play hide and seek.	Regular page
Content	14	Finally, Raffi and Sasa decided to play hide-and-seek in the park. Now it was Sasa's turn to guard. They played hide-and-seek with Daffa, Raihan, and Zahra. And this time, Sasa was on guard.	Regular page
Content	15-16	The friends hide, and Sasa looks for them.	pop-up Page
Content	17	When the meatball seller started pushing his cart, Daffa's hiding place was finally revealed.	Interactive pop-up page
Content	18	Now, only Raffi has not been met Sasa has also given up. Suddenly, there was a sound from the rolled-up carpet. What is going on over there?	Regular page

Content	19	It turned out that Raffi was sleeping on a rolled-up carpet in the gazebo. Everyone laughed when they saw it.	pop-up page Pull-tab
Content	20	It's already evening Raffi and Sasa went home	Regular page
Content	21	When he got home, Raffi immediately opened the game, but Pixel immediately closed it, even though he had said he could play again in the afternoon.	Regular page
Content	22	While studying, Sasa wanted to stretch, Pixie immediately reprimanded her, "Don't relax, it's not time to rest yet!" which surprised Sasa.	Regular page
Content	23	When Rafi wanted to go to the bathroom for a moment, Pixel warned him, "Where are you going? Study time isn't over yet!"	Regular page
Content	24	After Raffi came back from the bathroom, Sasa told him that there was a learning video from the teacher. Raffi and Sasa want to watch the video	Regular page
Content	25-26	Pixel and Pixie immediately appeared and warned them. "Looks like they're broken?"	pop-up Page V-fold

Content	27	Because he heard there was a commotion, finally Dad came.	Regular page
Content	28	Dad checked the tablet and then checked it. He chuckled and said, "It's done! Don't mess with it anymore, okay?"	Regular page
Content	29-30	Finally, Pixel and Pixie are back to normal Now Pixel and Pixie can help you learn!	pop-up Page v-fold
Content	31	A few days later... Now Raffi has a new hobby Pixel teaches him to draw	Regular page
Content	32	Pixie also teaches Sasa to sing Now Raffi and Sasa not just playing games. They use tablets to learn new things.	Regular page
Content	33-34	But Pixel and Pixie are still chatty They said: "Play time is over!" "Time for a break!"	Regular page
Author Biodata	35	Contains the author's biodata	Biodata page
Cover Divider	36	Contains a seamless pattern with a gadget theme	Regular Page

Back cover	-	The back cover contains a synopsis and an illustration as a background.	Hardcover
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Table 3.2 Book Pagination

4.1.7. Visual Concept

4.1.7.1 Illustration Drawing Style

The drawing styles for the illustrations used in this design were obtained from a questionnaire conducted with children aged 6-8 years. The drawing style most frequently chosen by respondents was the style of the cartoon poster entitled Chalkzone. The drawing style on the poster uses a typical Western cartoon style with simple anatomy and approximately 3 heads tall. The lineart used is quite thick with simple strokes and uses warm colors. However, for a more original feel, the author will also combine it with his own drawing style.

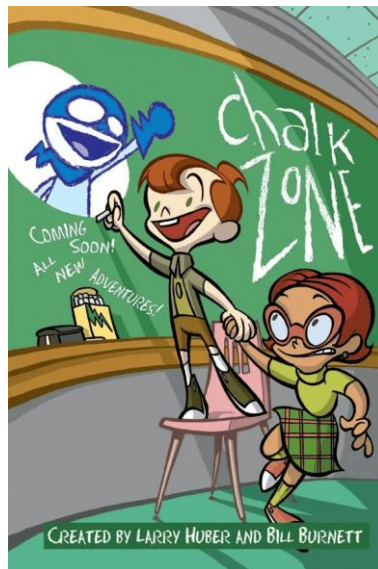


Figure 4.3 Chalk Zone Cartoon Poster

(source: <https://tvtropes.org/pmwiki/pmwiki.php/WesternAnimation/ChalkZone>)

4.1.7.2 Color

The color concept used in this design utilizes bright, warm tones. These tones were derived from a Chalkzone cartoon poster, which was used as a reference for

the previous image style. The colors used also align with the keyword "joking adventure," which has a cheerful and humorous atmosphere. Furthermore, bright colors were chosen because they are popular with children, especially those aged 6-8.



Figure 4.4 Normal / Cheerful color palette
(Source: <https://coolors.co/image-picker>)



Figure 4.5 Curious Color Concept Reference
(Source: <https://id.pinterest.com/pin/221028294205335795/>)



Figure 4.6 Curious Color Palette
(Source: <https://coolors.co/image-picker>)



Figure 4.7 Evening Color Concept Reference

(Source:

<https://ar.pinterest.com/pin/636907572285335005/>)

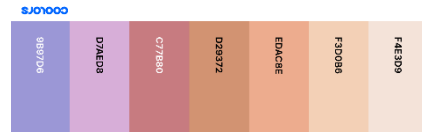


Figure 4.8 Afternoon Color Palette

(Source: <https://coolors.co/image-picker>)

4.1.7.3 Character Design

The character design in this design is tailored to the target audience, namely children aged 6-8 years with psychographics of children who like to use gadgets and have a high level of curiosity.

1. Raffi's Character Design

Raffi is a clever, curious, and solitary 8-year-old boy. He's actually a smart kid, easily grasping new things, but he loves playing games on his tablet to the point of losing track of time. Once he's focused on the screen, he's very difficult to talk to. Raffi has short, straight black hair with bangs, slightly slanted eyes, and light tan skin. He wears a faded blue polo shirt with black pants.



Figure 4.9 Raffi's Character Concept Reference



Figure 4.10 Raffi's Clothing Concept Reference

(Source:

<https://www.shutterstock.com>

(Image ID: 2265373131))

(Source:

<https://shopee.co.id/Woffi-Kaos-Anak-Polo-Owl-Basic-Colour-i.26966392.40875449905>)

2. Sasa Character Design

Sasa is a cheerful, mischievous, and naughty 7-year-old girl. Sasa often watches videos on YouTube. She also likes to imitate funny things from videos on YouTube. Sasa also likes playing games like Raffi. Sometimes they also play together. Sasa has wide eyes, an expressive face, and long black hair with straight bangs and twintails. Sasa wears a pink Kelly knit shirt with gray leggings.



Figure 4.11 Sasa Character Concept

Reference

(Source:

<https://www.orami.co.id/magazine/tahapan-perkembangan-anak-usia-8-tahun>)



Figure 4.12 Reference Concept for

Sasa Character's Clothes and

Hairstyle

(Source:

<https://shopee.co.id/Beeloft-Kaos-Anak-Perempuan-Kelly-Knit-i.142858318.25152866938>)

3. Pixel and Pixie Character Design

Pixel and Pixie are fictional characters who are avatars from the Pixy 360 – Kids Device Assistant app. They are designed as child-friendly companions, digital assistants, and parental controls. Pixel and Pixie have robot-like appearances with screens for their heads that display facial expressions. Pixel is

Raffi's avatar, while Pixie is Sasa's avatar. The visual references are retro handheld consoles and desktop PC monitors. Pixel and Pixie will have similar appearances, but with differences such as being twins—a boy and a girl.



Figure 4.13 Character concept

reference 1

(retro console)

(Source:

<https://www.ubuy.co.id/id/product/7SZ73H1FC-anbernic-rg353v-handheld-game-console-support-dual-os-android-11-linux-5g-wifi-4-2-bluetooth-rk3566>)



Figure 4.14 Character concept

reference 2

(monitor pc desktop)

(Source:

<https://www.wired.com/gallery/best-computer-monitors/>)

4. Father Character Design

Raffi and Sasa's father is a 36-year-old man. He is a disciplined, patient, responsible, and reliable person. He is also innovative and open to new things, so he often follows technological developments and finally decided to use an AI application to help his children be more disciplined and wise in using gadgets. He has slightly narrow eyes with a slightly plump body, with a center-parted haircut, and wears half-rim glasses with frames that only reach the top. He wears a blue shirt with a white t-shirt and brown pants.



Figure 4.15 Father Character Concept Reference
(Source: <https://www.shutterstock.com> (image ID: 2344659117))



Figure 4.16 Father's Clothing Concept Reference
(Source: <https://shopee.co.id/Kemeja-Uniqlo-Terlaris-Kemeja-Lengan-Panjang-Terbaru-Kemeja-Pria-i.219010982.22660182243>)



Figure 4.17 Dad Pants Concept Reference
(Source: <https://shopee.co.id/GOODETHICS-Celana-Bahan-Pria-Slim-fit-27-38-i.258266328.23890047067>)

5. Daffa

Daffa is a mischievous and playful 8-year-old boy. He's slightly taller than his peers and a bit chubby. He likes to wear a hat while playing and a gray and white striped polo shirt.

Raffi, Sasa, Daffa, Raihan, and Zahra are classmates who live nearby. They often play together, both at school and in the village.



Figure 4.18 Daffa's character concept reference

(Source: <https://www.shutterstock.com>
(Image ID: 2486528281))



Figure 4.19 Daffa's clothing concept reference

(Source: <https://shopee.co.id/Woffi-Kaos-Anak-Henley-Stripes-i.26966392.4040491172>)

6. Raihan

Raihan is a cheerful and brave 7-year-old. He has a haircut with thin bangs and slightly slanted eyes. He wears a white and cream shirt with blue pants.



Figure 4.20 Raihan's character concept reference

(Source: <https://www.shutterstock.com> (Image ID: 2422619561))

7. Zahra

Zahra is a calm and disciplined 7-year-old. She has wide eyes and a smile. She wears shoulder-length hair without bangs and wears two clips on the right side. She wears a purple shirt with a white undershirt.



Figure 4.21 Zahra's character concept reference
(Source: <https://www.shutterstock.com> (Image ID: 2314068893))

4.1.7.4 Background Design / Environment

1. Village

The story told in this pop-up book is set in a quaint village. Despite this, the village environment is quite modern, with smooth roads and houses featuring brick walls and tiled roofs, typical of modern homes.



Figure 4.22 Village Street Concept Reference
(Source: <https://maps.google.com/>)

2. House

Raffi and Sasa's house has a typical Indonesian rural style. It features brick walls, a pyramid-shaped roof with red clay tiles, and distinctive double doors with narrow windows beside them. The terrace is spacious, with sturdy pillars and simple ornamentation. The front yard is beautifully landscaped with numerous ornamental plants.



Figure 4.23 Home Concept Reference

(Source: <https://arsitekmasterpiece.co.id/model-rumah-minimalis-sederhana-di-kampung/>)

3. Study room

This is the setting that appears most frequently in the story. Raffi and Sasa's study room features a desk made of wood. Above the desk, a glass window will be installed, allowing for a view of the outside. The door to the study room is made of wood.



Figure 4.24 Study Table Concept Reference

(Source: <https://shopee.co.id/meja-kantor-meja-guru-meja-belajar-kayu-jati-produk-original-Jepara-i.718381456.17096369296>)



Figure 4.25 Door Concept Reference

(Source: <https://rumahmebel.id/product/pintu-kamar-minimalis-jati-sandesh/>)

4. Park / Playground

Raffi, Sasa, and their friends' park/playground is on the edge of a rice field, and there are lots of plants and flowers, with a gazebo in the middle of the park.



Figure 4.26 Park / Playground Concept Reference

(Source: <https://maps.google.com/>)

4.1.7.5 Typography

The typography for designing this book, apart from having to pay attention to legibility and readability, must also pay attention to the book grading guidelines for level B1, namely using a non-serif typeface or sans-serif with a minimum size of 20pt and adequate spacing.

1. Title Typography

The author will create the typography for the story title, featuring playful characters and a touch of gadgetry or technology. The objects used as references are as follows:



Figure 4.27 Typography Concept

Reference Title 1

(Source:

<https://www.freevector.com/vector/baloon>

)



Figure 4.28 Typography Concept

Reference Title 2

(Source: <https://retrocatalog.com/best-gaming-handhelds>)

2. Body Text Typography

The typography for the body text uses the "Comic Neue" typeface. This typeface was chosen because it is a sans-serif typeface, playful, and has rounded shapes suitable for children's stories. Furthermore, this typeface also offers good readability for narrative text.

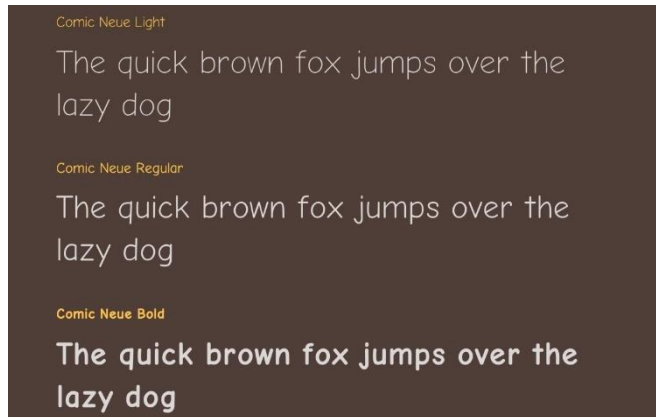


Figure 4.29 Typeface Comic Neue

(Source: <https://toolsandtoys.net/comic-neue/>)

4.1.7.6 Layout

In designing this pop-up storybook, it is necessary to arrange the elements in the book layout so that all elements in the book, such as text, illustrations, and pop-up sections, are neatly arranged and easy to read. The layouts used in this book include: spread, single page, and spot. The choice of layout is adjusted to the needs of the scene to be conveyed in the story to convey the message more effectively.



Figure 4.30 Full Spread Layout

(Source: (Ghozalli, 2020))

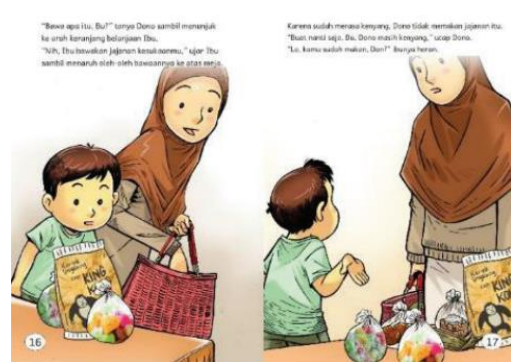


Figure 4.31 Single Page Layout

(Source: (Ghozalli, 2020))

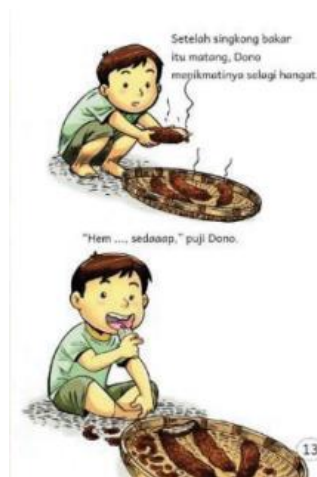


Figure 4.32 Spot Layout
(Source: (Ghozalli, 2020))

4.1.8. Media Concept

4.1.8.1 Main Media

The main media concept in planning this book will be as follows:

1. Book size 21 cm x 21 cm
2. The book is designed to have 32 content pages and 4 additional pages.
3. The title of the book is “Chatty Digital Friends”
4. The materials used for the book are 210 gsm artpaper and a laminated hard cover for the book cover.
5. This illustrated book tells the story of two siblings named Raffi and Sasa, who love using their tablets as they please. One day, a new app appears on their tablet called Pixy 360. When pressed, robot-like characters named Pixel and Pixie appear, acting as digital assistants to help Raffi and Sasa use their tablets more wisely.
6. The illustrations in the book are created in a cartoon style, adapting to consumer insights. The illustrations are also tailored to children aged 6–8.
7. The book is designed to have interactive elements in the form of pop-ups that will strengthen the message and emotions in the story, and make the book more interesting for children aged 6 – 8 years.

8. The back cover of the book contains a synopsis with supporting illustrations as a background.

4.1.8.2 Supporting Media

This supporting media concept was derived from the results of a consumer journey analysis. The following are supporting media for designing a pop-up storybook as an educational tool for children on gadget use:

1. Notebook

Notebooks are a great choice as a supporting medium because they're the most frequently used materials by elementary school children for note-taking, both at school and at home. Their wide, flat covers are perfect for showcasing the character designs and themes of storybooks.

2. Calendar

Calendars were chosen as a supporting medium because they are a medium that everyone sees every day, including children. Each month can have a different design.

3. Totebag

Tote bags have a large surface area, making them ideal for displaying illustrations from storybook themes. Children often carry these bags with them to tutoring or Quranic study sessions, making them ideal supporting media.

4. Drinking Bottle / Tumbler

Children often carry water bottles/tumblers to school, making them a suitable supporting medium. The curved body of this water bottle allows for a simple design.

5. Drinking Glass / Cup

Drinking glasses/cups are often used by children when eating at home. Their exteriors are perfect for displaying designs or illustrations from storybook themes.

6. Casing Handphone

Phone cases are a medium directly related to the main topic, namely, gadget usage. While they're not particularly large, they can showcase designs on the back.

7. Clock

Clocks were chosen as a supporting medium because they are frequently viewed throughout the day. Wall clocks have flat surfaces that are ideal for displaying designs.

8. Stationery

Stationery such as pencils, erasers, or rulers is small but frequently used. Their surfaces can feature simple visual elements such as patterns, distinctive colors, or mini-illustrations of characters.

9. Activity Book

Activity books were chosen as supporting media because they can keep children busy with coloring activities, thereby reducing the time children spend using gadgets.

4.2. Design Planning Process

4.2.1. Rough Design (Rough Sketch)

4.2.1.1 Book title

The typography for the book title was created manually by deforming the letters using reference images in the form of balloons and a handheld console. The following is the process of deforming the letters in the title typography:

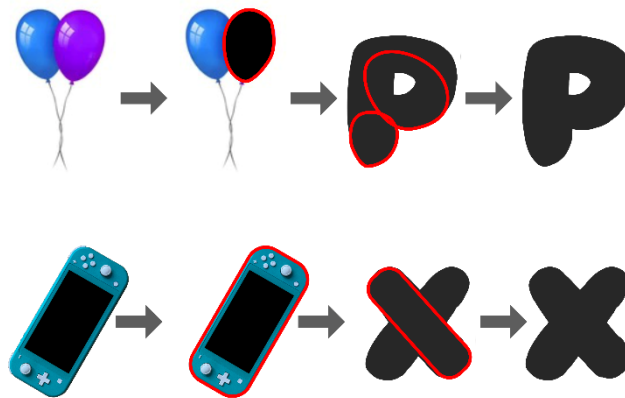


Figure 4.33 The Process of Letter Deformation in Book Title Typography
(Source: Personal Document)

There were five alternative sketches for the book title, but only three designs were selected for further development. The typographic design for the title uses balloon shapes and a handheld console as visual references. Here are the alternative title sketches:

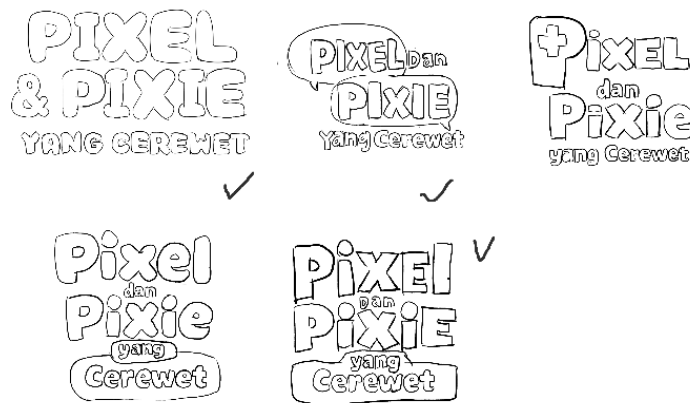


Figure 4.34 Alternative book title sketch
(Source: Personal Document)

4.2.1.2 Book Cover

There are three alternative book cover designs. A book cover should not only be attractive but also convey a sense of the book's story. Here are three alternative book covers:



Figure 4.35 Alternative Book Cover Title Sketch
(Source: Personal Document)

4.2.1.3 Character Design

There are three alternative designs for each character in the book. The alternative character designs are created in different drawing styles, except for Pixel and Pixie. Here are three alternative sketches for each character:

1. Pixel and Pixie

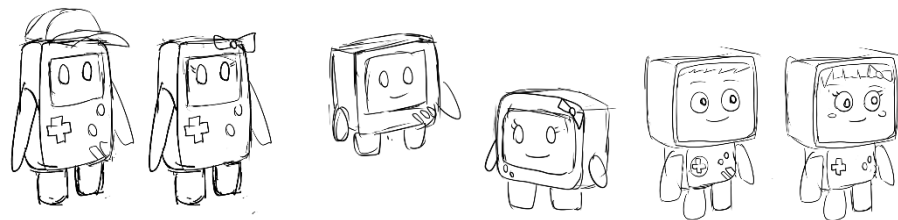


Figure 4.36 Pixel & Pixie Character Sketch Alternative
(Source: Personal Document)

2. Raffi



Figure 4.37 Alternative Raffi Character Sketch
(Source: Personal Document)

3. Now

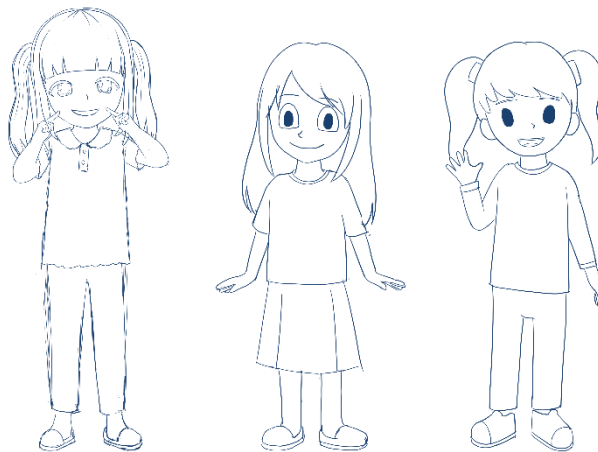


Figure 4.38 Sasa Character Sketch Alternative
(Source: Personal Document)

4. Dad



Figure 4.39 Alternative Father Character Sketch
(Source: Personal Document)

5. Daffa

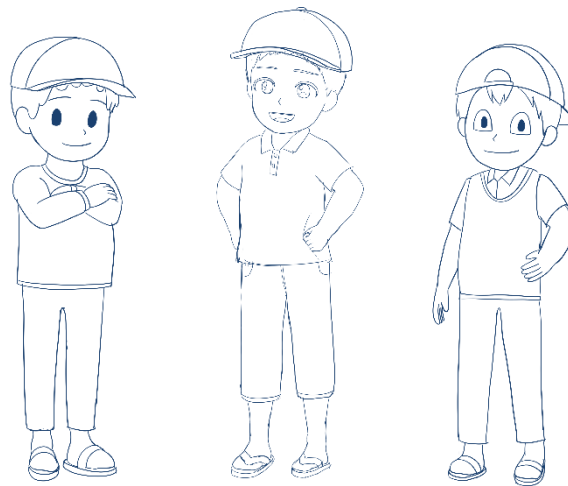


Figure 4.40 Daffa Character Sketch Alternative
(Source: Personal Document)

6. Raihan

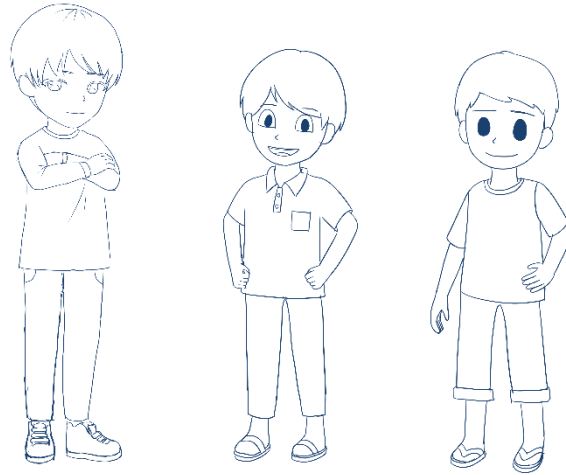


Figure 4.41 Raihan's Alternative Character Sketch
(Source: Personal Document)

7. Zahra

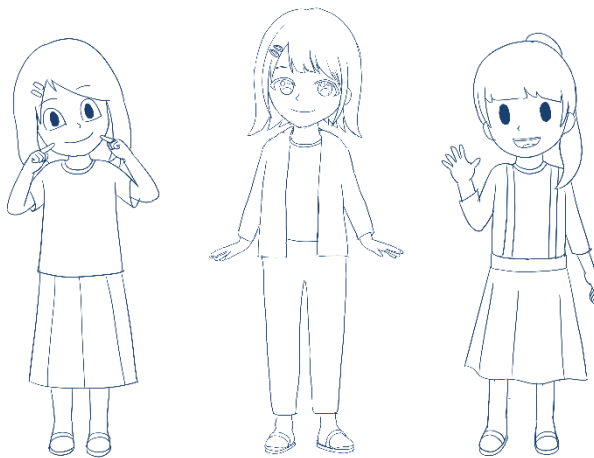


Figure 4.42 Zahra Character Sketch Alternative
(Source: Personal Document)

4.2.1.4 Page Pagination

In this design, there are 36 pages consisting of 32 pages of story and 4 additional pages consisting of introduction, copyright, and the author's biodata. The following is a sketch of the page pagination in this design:

kata pengantar & halaman penerbit							
				Biodata Penulis			

Halaman Interaktif
 Halaman Pop-up

Figure 4.43 Page Pagination Sketch
(Source: Personal Document)

4.2.1.5 Dummy pop-up and Interactive

In this design, 6 pop-up and interactive pages were created. The following are some of the results of the dummy pop-up and interactive designs that have been created:



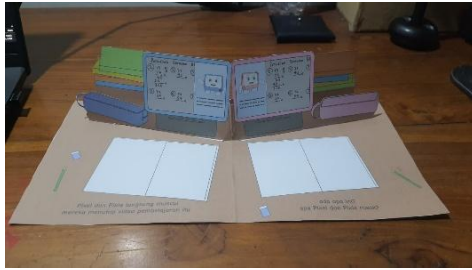


Figure 4.44 Dummy Page pop-up and interactive
(Source: Personal Document)

4.2.2. Comprehensive design

4.2.2.1 Book title

After the sketch, the design process moves on to the coloring stage. Here's the colored title design:



Figure 4.45 Alternative Book Title Designs
(Source: Personal Document)

4.2.2.2 Book Cover

Here is the colored cover design:

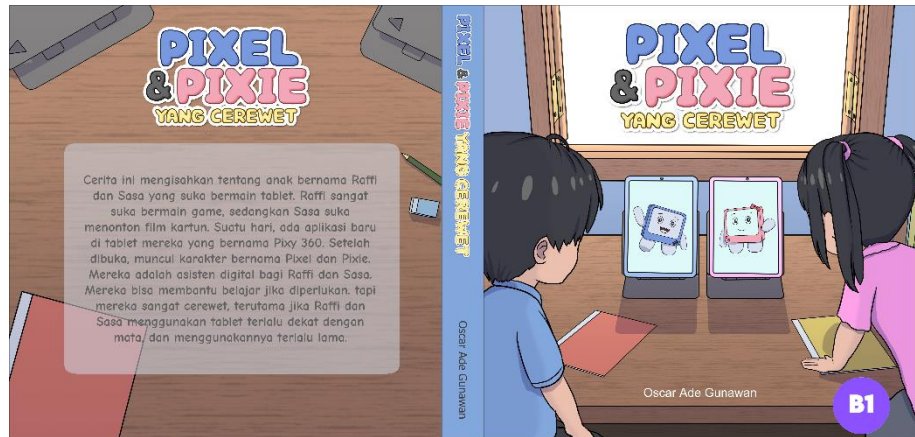


Figure 4.46 Alternative 1 Book Cover Design
(Source: Personal Document)



Figure 4.47 Alternative 2 Book Cover Designs
(Source: Personal Document)

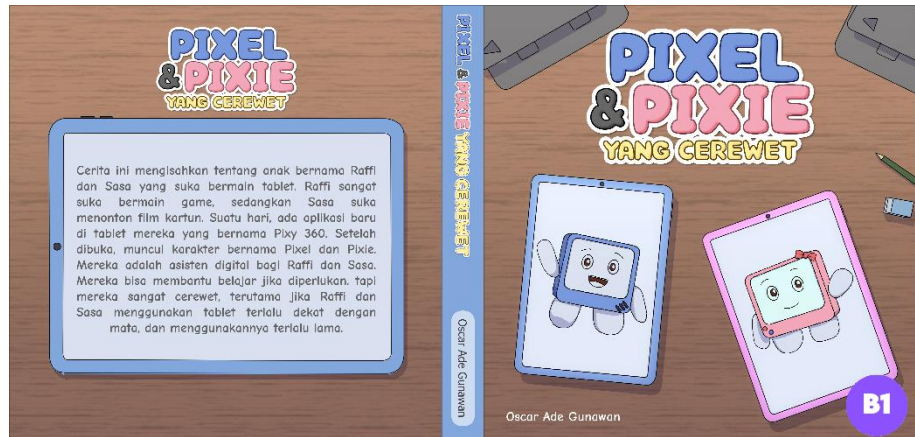


Figure 4.48 Alternative 3 Book Cover Designs
(Source: Personal Document)

4.2.2.3 Character Design

Here are the colored character designs:

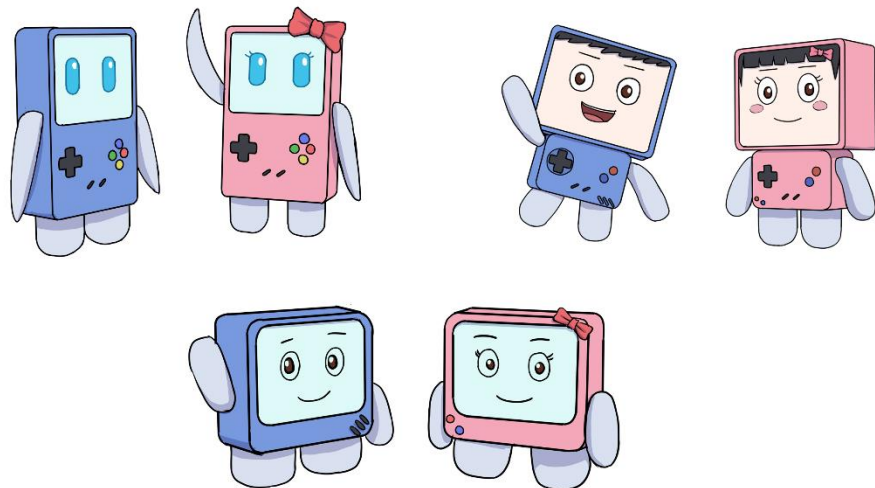


Figure 4.49 Pixel and Pixie Character Design Alternatives
(Source: Personal Document)

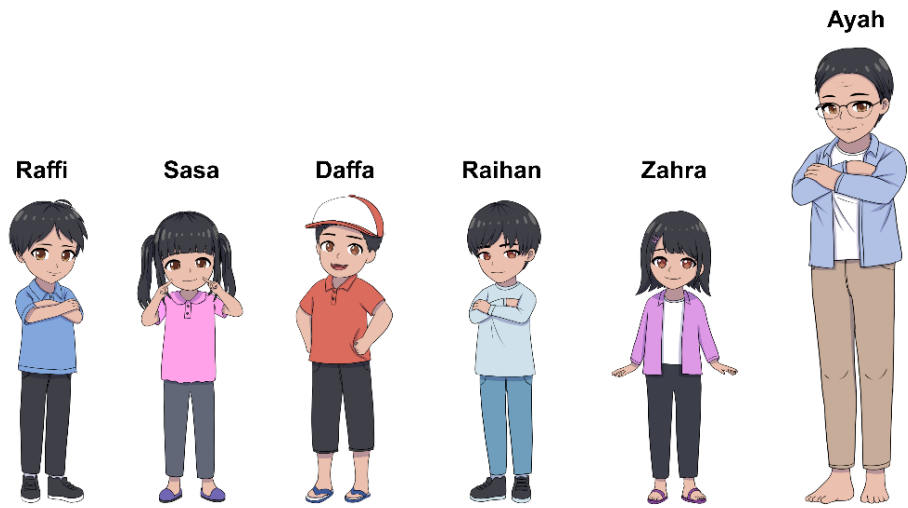


Figure 4.50 Alternative Human Character Set Design 1
(Source: Personal Document)

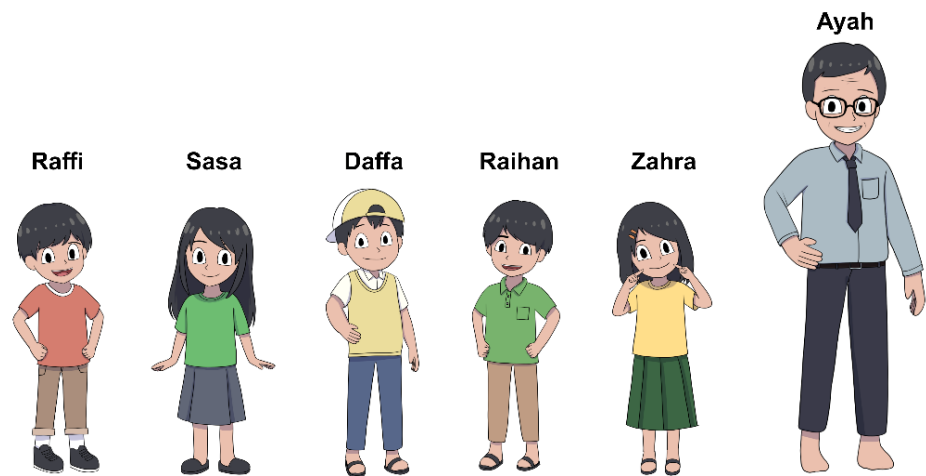


Figure 4.51 Alternative Character Design Set 2
(Source: Personal Document)

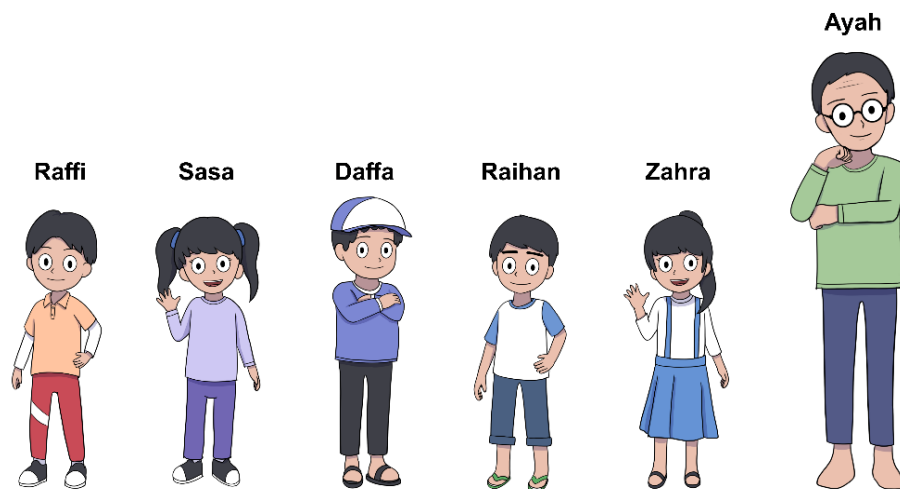


Figure 4.52 Alternative Character Design Set 3
(Source: Personal Document)

4.2.3. Design Validation

The design validation in this design was carried out through several processes, namely, based on questionnaires on the target audience and through suggestions by experts. The questionnaire was distributed to Tunas Bangsa Kindergarten and Sumbergondang Elementary School, grades 1 and 2. With a total of 50 respondents. Meanwhile, the experts involved in the validation process included Mahimma Romadhona as a supervising lecturer and Arif Riyanto as a children's book illustrator.

4.2.3.1 Book title

The book title design selected based on the questionnaire distributed to 50 respondents was the first design alternative, with a percentage of 74%.

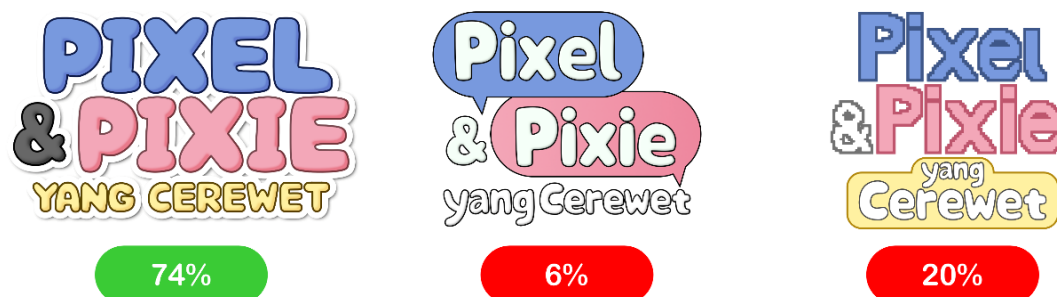


Figure 4.53 Percentage of Alternative Book Title Designs

(Source: Personal Document)

4.2.3.2 Character Design

The Pixel and Pixie character designs selected based on the questionnaire distributed to 50 respondents were the first design alternative, with a percentage of 40%.

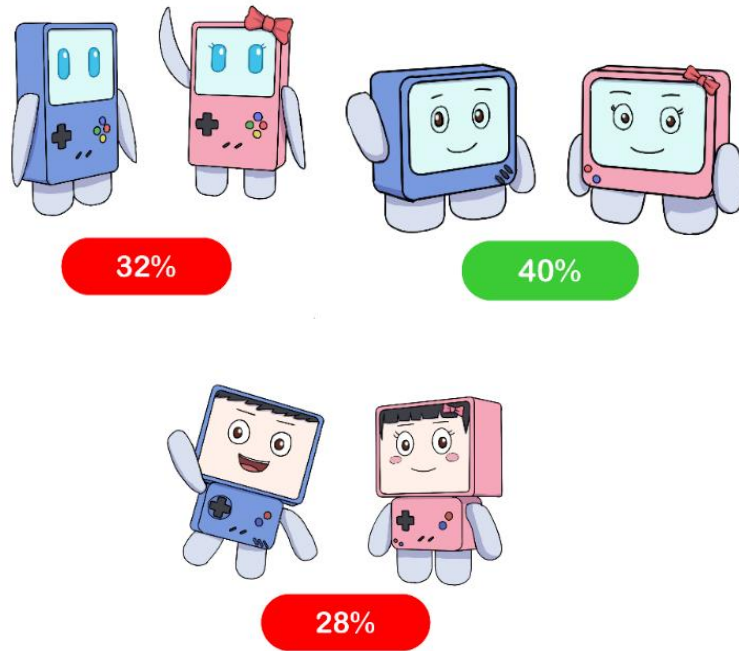


Figure 4.54 Percentage of Alternative Pixel and Pixie Character Designs
(Source: Personal Document)

Meanwhile, the human character design selected based on the questionnaire distributed to 50 respondents was the first design alternative, with a percentage of 60%.

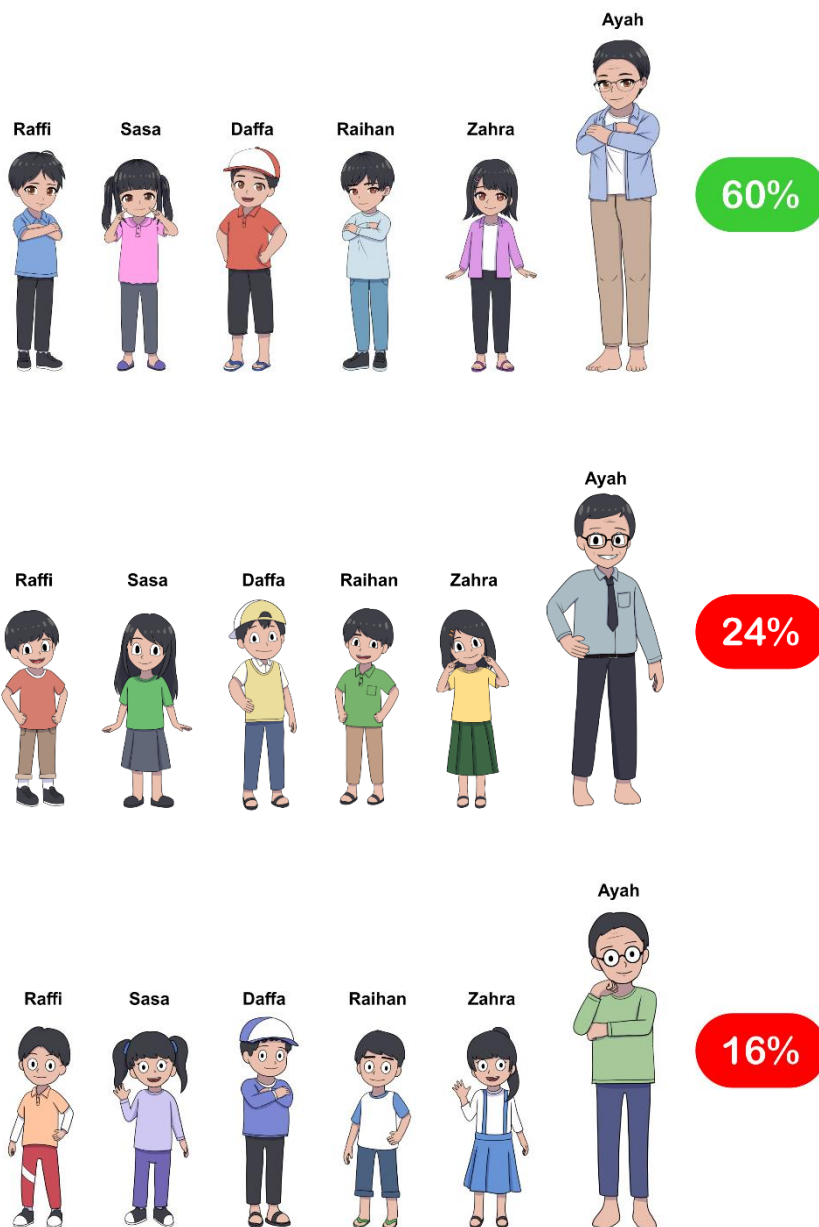


Figure 4.55 Percentage of Alternative Human Character Designs
(Source: Personal Document)

4.2.3.3 Book Cover Design

The book cover design for this project was chosen directly by the Supervisor. The selected alternative design was alternative design 3. This alternative was chosen because it featured Pixel and Pixie as the main objects.



Figure 4.56 Selected Alternative Book Cover Designs
(Source: Personal Document)

4.2.4. Final Design (Final Artwork)

4.2.4.1 Final Book Title Design

After the questionnaire results and expert opinions, the final design results for the Book Title were obtained. as follows:



Figure 4.57 Final Book Title Design
(Source: Personal Document)

4.2.4.2 Book Cover

The final book cover design featured revisions to line thickness and minor color adjustments. The university, faculty, and study program logos were also added.

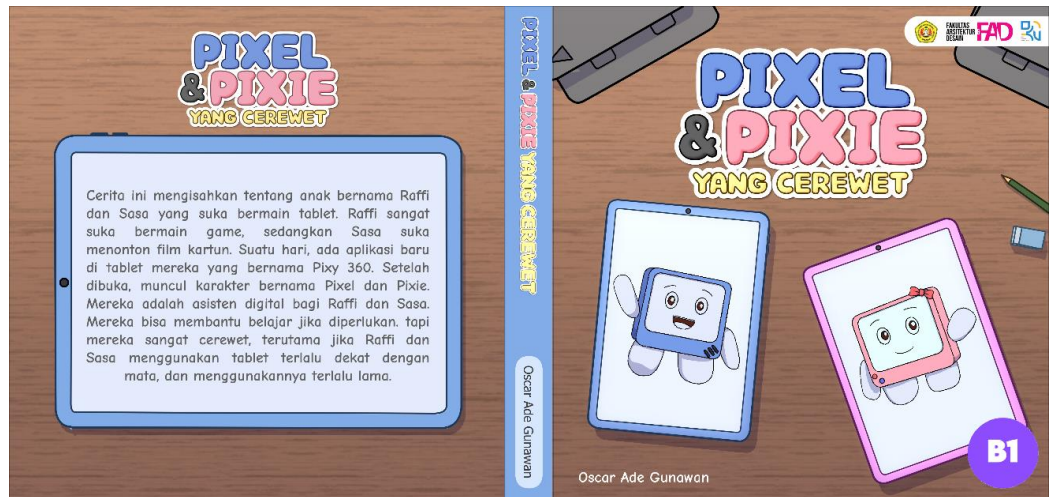


Figure 4.58 Final Book Cover Design

(Source: Personal Document)

4.2.4.3 Character Design

In the final character design, especially for the human character, there are revisions in the form of line thickness adjustments and slight color adjustments.



Figure 4.59 Final Character Design

(Source: Personal Document)

4.2.4.4 Final Design of Book Contents

After the sketching and pagination process, the design continues to Finalization stage of book content design. Here is the final design of the book content:



Figure 4.60 Final Design of Book Contents
(Source: Personal Document)

4.2.4.5 Final Design of Pop-Up and Interactive Framework

In this design, the pop-up frame is designed and calculated with greater precision, including the folds and the area where the pop-up will be attached to the book. This aims to ensure that the design of the pop-up book will remain consistent when printed. Here is the design of the pop-up frame and interactive book that has been digitized:

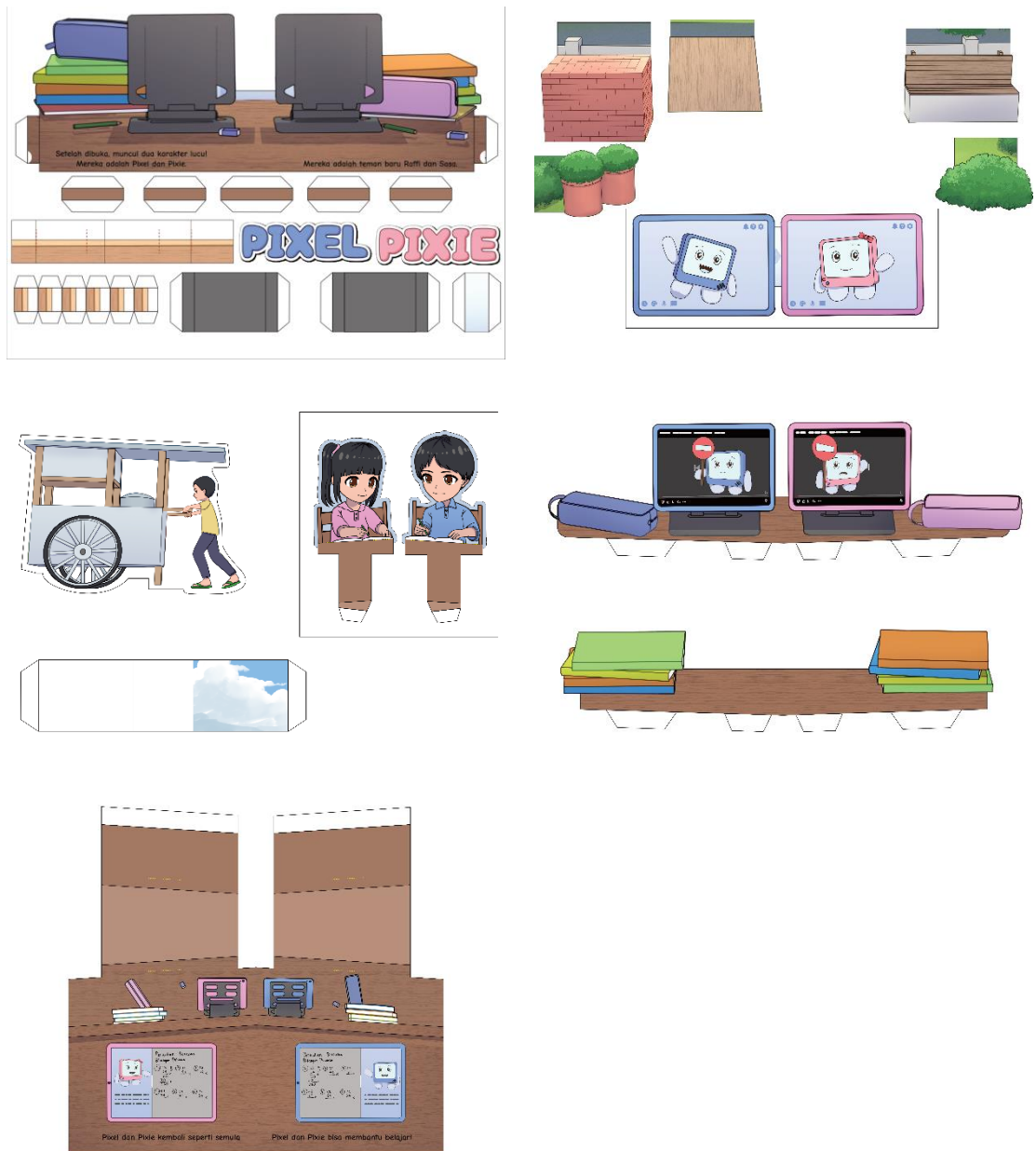


Figure 4.61 Final Design of Pop-Up and Interactive Framework
(Source: Personal Documentation)

4.3. Design Implementation

4.3.1. pop-up Storybook Main Media

After designing the final pop-up and interactive framework and compiling it into book media, the following is the main media result of the pop-up storybook that has been compiled:

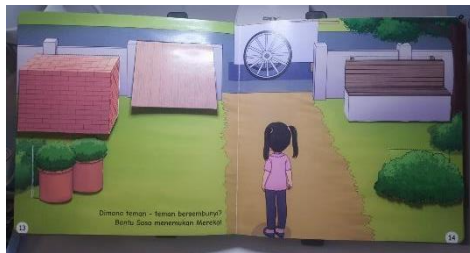


Figure 4.62 Main Media Implementation
(Source: Personal Documentation)

4.3.2. Supporting Media

In this design, supporting media in the form of merchandise is needed to support the main media, including the following:

1. Notebook



Figure 4.63 Supporting Media: Notebooks
(Source: Personal Documentation)

2. Calendar



Figure 4.64 Calendar Support Media
(Source: Personal Documentation)

3. Totebag



Figure 4.65 Supporting Media for Tote Bags
(Source: Personal Documentation)

4. Drinking Bottle / Tumbler



Figure 4.66 Supporting Media for Drinking Bottles / Tumblers
(Source: Personal Documentation)

5. Drinking Glass / Cup



Figure 4.67 Supporting Media for Drinking Glasses / Cups
(Source: Personal Documentation)

6. Casing Handphone



Figure 4.68 Supporting Media for Mobile Phone Casings
(Source: Personal Documentation)

7. Clock



Figure 4.69 Wall Clock Supporting Media
(Source: Personal Documentation)

8. Stationery



Figure 4.70 Supporting Media for Stationery
(Source: Personal Documentation)

9. Activity Book



Figure 4.71 Activity Book Supporting Media
(Source: Personal Documentation)

4.3.3. Exhibition Booth

The exhibition booth is part of the promotional tool for the main medium used in this design, the pop-up storybook. The exhibition is scheduled for May 5-6 at Balai Pemuda. Below is the booth design for the 2026 DKV final project exhibition.



Figure 4.72 Exhibition Booth Implementation
(Source: Personal Documentation)

4.4. Production Cost Budget

The budget spent in the process of designing primary and secondary media supporting costs up to printing costs are as follows:

4.4.1. Book Production Budget

The following is the budget for book production costs if printed individually.

Num.	Item Name	Unit Price	Quantity	Cost
1.	Print Artpaper A3 210 gsm 1 side	Rp. 4.000	18	Rp. 72.000
2.	Print Artpaper A3 210 gsm 2 side	Rp. 8.000	5	Rp. 40.000
3.	Hardcover	Rp. 50.000	1	Rp. 50.000
4.	White Fox Glue	Rp. 14.000	1	Rp. 14.000
5.	Double tip	Rp. 8.000	1	Rp. 8.000
Total Amount				Rp. 184.000

4.

Table 4.1 Book Production Budget

4.4.2. Merchandise Production Budget

The following is the budget for the costs incurred in making merchandise as a supporting medium for this design.

Num.	Item Name	Unit Price	Quantity	Cost
1.	Handphone Case	Rp. 16.500	1	Rp. 16.500
2.	Totebag	Rp. 12.500	2	Rp. 25.000
3.	Calendar	Rp. 27.500	1	Rp. 27.000
4.	Pencil Case	Rp. 27.000	2	Rp. 54.000
5.	Ruler	Rp. 13.000	2	Rp. 26.000
6.	Drinking Bottle	Rp. 57.500	1	Rp. 57.500
7.	Drinking Glass	Rp. 15.500	2	Rp. 31.000

8.	Pen	Rp. 6.500	2	Rp. 13.000
9.	Notebook	Rp. 12.000	2	Rp. 24.000
10.	Wall Clock	Rp. 33.000	1	Rp. 33.000
11.	Activity Book	Rp. 43.000	1	Rp. 43.000
Total Amount				Rp. 350.000

Table 4.2 Merchandise Production Budget

4.4.3. Designer Budget

Before determining the cost of large-scale production, it is necessary to determine the designer's rate for producing this book. The following is the budget for the designer's needs for this design project:

Num.	Item Name	Unit Price	Quantity	Cost
1.	Workplace	Rp. 6.000.000	1	Rp. 6.000.000
2.	Consumption Fee	Rp. 500.000	12	Rp. 6.000.000
3.	Working Tools Care	Rp. 50.000	12	Rp. 600.000
4.	Internet	Rp. 80.000	12	Rp. 960.000
5.	Education Cost	Rp. 24.000.000	1	Rp. 24.000.000
6.	Acomodation Cost	Rp. 100.000	12	Rp. 1.200.000
7.	Others	Rp. 600.000	1	Rp. 600.000
Total Amount				Rp. 39.360.000

Table 4.3 Designer Budget

After knowing the designer's expenses in a year, then determine the designer's daily fee and the designer's hourly fee after profit is the description.

1. Designer Fees Per hour before profit

$$\text{Designer fee per hour} = \frac{\text{Annual expenses}}{\text{Working hours per year}}$$

$$\text{Designer fee per hour} = \frac{\text{Rp. 39,360,000}}{1674}$$

Designer fee per hour = Rp. 23,512

So, the designer's hourly fee before profit is Rp. 23,512

2. Designer Fees Per Hour After Profit

Designer's hourly fee after profit = hourly fee + expected hourly profit

Designer's hourly fee after profit = Rp. 23,512 + Rp. 50,000

Designer's hourly fee after profit = Rp. 73,512

If rounded up, it becomes Rp. 74,000

So, the designer's hourly fee after profit is Rp. 74,000

4.4.4. Selling Price of a Single Book

The selling price of a book when printed individually can be determined by adding the production cost per unit to the hourly design cost after profit. The breakdown is as follows:

- Selling price of a single book = production cost of a single book + designer fee/hour after profit
- Selling price of a single book = Rp. 184,000 + Rp. 74,000
- Selling price per book = Rp. 258,000