

APPENDICES

Appendix 2. Permission Letter



KEMENTERIAN PENDIDIKAN TINGGI, SAINS,
DAN TEKNOLOGI
UNIVERSITAS PENDIDIKAN GANESHA
FAKULTAS BAHASA DAN SENI
Jalan A.Yani No. 67 Singaraja Bali Kode Pos 81116
Telepon (0362) 21541 Fax. (0362) 27561
Laman: fbs.undiksha.ac.id

Nomor : 5588/UN48.7.1/ TA.00.03/2025 3 Desember 2025
Lamp : -
Hal : Permohonan Izin Observasi Awal Proposal Skripsi

Yth.
Kepala SD Mutiara Singaraja
di Singaraja

Dalam rangka pengumpulan data awal penyusunan proposal skripsi, dengan hormat kami mohon bantuan Bapak/Ibu untuk mengizinkan mahasiswa di bawah ini mengumpulkan data yang diperlukan pada institusi yang Bapak/Ibu pimpin :

1. Gusti Lamang Dananjaya
NIM : 2212021057
2. Putu Andre Wiranatha
NIM : 2212021081
3. I Kadek Teddy Jaya Nugraha
NIM : 2212021083

Demikian kami sampaikan permohonan ini, atas perhatian dan bantuan Bapak/Ibu, kami ucapkan terima kasih.

a.n. Dekan,
Wakil Dekan I,



Ni Luh Putu Eka Sulistia Dewi
NIP. 198104192006042002

Tembusan :

1. Dekan FBS Undiksha Singaraja
2. Koorprodi Pendidikan Bahasa Inggris
3. Sub Bagian Akademik FBS

Appendix 3. Final Storyline

Gusti Lanang Dhananjaya

2212021057

Storyline Digital Storybook

Theme: SDG 2 Zero Hunger

Topic: Food Abundance and Socio functional of food (food sharing)

Title: The Farmer & The Rabbit

Characterization:

1. The Farmer

- Kind and hardworking
- Grows vegetables
- Shares food with others

2. The Rabbit

- Hungry
- Loves vegetables
- Learns not to steal

SYNOPSIS

A farmer plants vegetables in his garden. A hungry rabbit takes the vegetables because he has no food.

The farmer understands the rabbit's hunger and chooses to share food. They live peacefully together.

Page	Illustration	Draft Story
Cover	Scene focus: Garden and main characters Illustration detail: • A bright vegetable garden • The farmer standing with a watering can • A rabbit looking at vegetables happily • Sunny sky, green plants • Cartoon illustration style, bright colors	Title: The Farmer & The Rabbit Character asset: Farmer:  Rabbit:

		
Page 1	Scene focus: dry homeland Illustration detail: • Background of barren land	on a dry land and no plants grew there.
Page 2	Scene focus: rabbit walking Illustration detail: • Close up walking rabbit Character emotion: sad	There was a rabbit live in. and he left his place to look for food.
Page 3	Scene focus: Farmer prepares to plant seeds Illustration detail: • Farmer holding seed packets • Empty garden beds • Sun shining	One sunny morning, a farmer was ready to plant vegetable seeds in his garden.
Page 4	Scene focus: Introducing vegetable seeds Illustration detail: • Close-up of seeds • Carrot, cabbage, onion, and potato shown clearly Setting: Garden Character emotion: Cheerful	The farmer had four seeds: carrots, cabbages, onions, and potatoes.
Page 5	Scene focus: Planting and watering Illustration detail: • Farmer planting seeds • Watering can • Small sprouts in soil Setting: Garden soil beds Character emotion: Caring, patient	He planted the seeds carefully and watered them every day.
Page 6	Scene focus: Vegetables grow Illustration detail: • Big vegetables growing • Ready to harvest Setting: Garden Character emotion: Proud	Soon, the seeds grew into fresh and healthy vegetables.
Page 7	Scene focus: Hungry rabbit appears Illustration detail: • Rabbit holding its tummy • Vegetables in the background Setting: Garden Character emotion: Hungry, weak	One day, the rabbit came to the garden. His stomach was empty and very hungry.

Page 8	Scene focus: Rabbit takes vegetables Illustration detail: - Rabbit picking vegetables - Carrot, cabbage, onion, and potato Setting: Garden Character emotion: Desperate	The rabbit took some vegetables because he was very hungry and no one helped him.
Page 9	Scene focus: Farmer catches the rabbit Illustration detail: - Farmer surprised - Rabbit looking scared Setting: Garden Character emotion: Farmer: surprised but calm. Rabbit: scared	The farmer came and saw the rabbit with his vegetables.
Page 10	Scene focus: Rabbit explanation Illustration detail: Rabbit crying Setting: garden Character emotion: cried	The rabbit said, "I am sorry. I am hungry and I have no food."
Page 11	Scene focus: Sharing food Illustration detail: - Farmer yelling Rabbit listening - Vegetables between them Setting: garden Character emotion: kind, thankful	The farmer felt sorry for the rabbit. He shared the food instead of getting angry. And said "don't steal again"
Page 12	Scene focus: living together Illustration detail: - Rabbit helping water plants - Farmer smiling Setting: Garden Character emotion: Happy, peaceful	The farmer let the rabbit live in the garden and help take care of the vegetables.
Page 13	Scene focus: Happy ending Illustration detail: - Clean garden - Many vegetables - Farmer and rabbit smiling Setting: Garden Character emotion: joyful	From that day on, they lived together peacefully and shared food happily.
Blurb	What happens when a hungry rabbit meets a kind farmer? This story teaches children about hunger, sharing food, and caring for others	

Follow-up Activities;
Quiz

1. What vegetables did the farmer plant?
2. Why was the rabbit hungry?
3. What did the farmer do when he saw the rabbit?
4. What lesson can we learn from this story?

Fill the Blank:

			
CARROT	CABBAGE	ONION	POTATO



Appendix 4. Product Barcode



Appendix 5. Validation of Instrument from Expert 1

No	Aspect	Indicator	R	NR	Remarks
1	Necessities	Is there availability of reading materials and exercises related to Zero Hunger (SDG-2)?	✓	☐	
2	Necessities	Do students need guidance to stay focused while reading?	✓	☐	
3	Necessities	Do students need clear explanations of unfamiliar SDG-2 terms?	✓	☐	
4	Necessities	Is the story length appropriate to avoid cognitive overload?	✓	☐	
5	Necessities	Is the reading content aligned with students' cognitive level?	✓	☐	
6	Lack	Do students lack understanding of SDG-2 concepts?	✓	☐	
7	Lack	Do students lack strategies to interpret SDG-related content?	✓	☐	
8	Lack	Do students have limited prior knowledge to examples of Zero Hunger?	✓	☐	
9	Lack	Do students struggle to connect between story content and real-world issues?	✓	☐	
10	Lack	Do students show limited awareness of SDG-2 relevance to problem-solving?	✓	☐	
11	Wants	Do students prefer stories with themes related to Combating Hunger?	✓	☐	
12	Wants	Do students prefer visually appealing reading materials?	✓	☐	
13	Wants	Do students prefer characters that match their age or personality?	✓	☐	
14	Wants	Do students prefer stories connected to real-life situation?	✓	☐	
15	Wants	Do students engage with reading materials?	✓	☐	
16	Learning Needs	Do students need relatable characters to support engagement and comprehension?	✓	☐	
17	Learning Needs	Do students need guided questions to stay engaged during reading?	✓	☐	
18	Learning Needs	Do students need visual or interactive elements to support understanding?	✓	☐	

Validation of the Research Instrument for Observation Sheet

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating students' needs (Target Needs: Necessities, Lacks, Wants; and Learning Needs). Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria:

Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items:

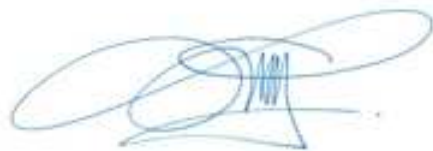
- Read each item thoroughly.
- Determine whether the item corresponds appropriately to the aspect being measured.
- Place a checkmark (✓) in either the R or NR column.
- Provide comments or recommended revisions in the Remarks column.
- Review all items systematically to ensure content validity.

19	Learning Needs	Do students prefer individual, pair, or group reading activates?	☒	☐	
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General Comment:

Date: 5 Januari 2026

Validator Instrument



Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.

NIP. 1128805172012122002

Validation of the Research Instrument for Interview Guide

This validation sheet is used by teachers to assess the clarity, relevance, and alignment of each item in the Interview Guide Instrument for SDG-2: Zero Hunger Integration in Reading Lessons. Validators are expected to review each interview item carefully and determine whether it accurately represents the construct it is intended to measure (Necessities, Lacks, Wants, or Learning Needs).

Rating Criteria:

Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each interview item thoroughly under the *Item/Indicator* column.
2. Determine whether the item aligns with the specific aspect being measured, such as Necessities, Lacks, Wants, Learning Preferences, Classroom Conditions, Teacher Support, or Material Requirements.
3. Place a checkmark (✓) in either the R (Relevant) or NR (Not Relevant) column.
4. If needed, provide comments, suggestions, or recommended revisions in the Remarks column.
5. Review all items consistently and systematically to help ensure the content validity and appropriateness of the interview instrument.

No	Category	Question /Items	R	NR	Remarks
20	Necessities	Do teachers understand the concept of Sustainable Development Goals (SDGs)?	✓	☐	
21	Necessities	Do teachers know which SDG 2 topics grade 5 students can understand easily?	✓	☐	
22	Necessities	Can teachers identify SDG-2 topics that are relevant to students' daily life?	✓	☐	
23	Necessities	Can teachers prioritize which SDG-2 topic should be introduced first to grade 5 students?	✓	☐	
24	Lacks	Do teachers understand their role in using the SDG-2 digital storybook in class?	✓	☐	
25	Lacks	Can teachers identify possible challenges in using the SDG-2 digital storybook?	✓	☐	
26	Lacks	Do teachers know what the best strategies to implement the SDG-2 digital storybook for student grade 5?	✓	☐	
27	Lacks	Do teachers know which aspects of SDG-2 are most difficult for students to understand?	✓	☐	
28	Wants	Do teachers know which SDG-2 subtopics are most suitable for English reading lessons?	✓	☐	
29	Wants	Do teachers understand whether students learn better individually or in groups?	✓	☐	
30	Wants	Do teachers understand which learning style such as individual or group is the best while implementing SDG-2 based digital storybook?	✓	☐	
31	Learning Preferences	Can teachers identify factors that support students' comprehension of SDG-2?	✓	☐	
32	Learning Preferences	Do teachers know what support students need to identify cause-effect relationships, main ideas, and supporting details related to SDG-2?	✓	☐	
33	Learning Preferences	Do teachers know which teaching activities are most effective when integrating SDG-2?	✓	☐	
34	Learning Preferences	Do teachers know which reading activities best help students understand SDG-2 such as shared reading, guided reading, or group reading?	✓	☐	
35	Classroom Conditions	Can teachers predict how students respond to interactive reading activities?	✓	☐	
36	Classroom Conditions	Do teachers know which classroom conditions help students stay engaged when reading activities?		☐	
37	Classroom Conditions	Can teachers identify students' preferred learning styles such as visual, auditory, or multimodal when reading SDG-2 stories?	✓	☐	

38	Teacher Support	Do teachers know what students benefit from supplementary aids such as pictures, audio, or animation?	✓	☐	
39	Teacher Support	Do teachers know which types of feedback help students understand story sequences and Food messages?	✓	☐	
40	Teacher Support	Do teachers know how long the story is most suitable for teaching SDG-2 to grade 5 students?	✓	☐	
41	Material Requirements	Do teachers know which types of characters are easiest for students to understand in SDG-2 stories?	✓	☐	
42	Material Requirements	Do teachers know which types of story content are most suitable for SDG-2 lessons?	✓	☐	
43	Material Requirements	Do teachers know what SDG-2 content can be effectively included in reading stories and how students respond to Food themes?	✓	☐	
44	Material Requirements	Do teachers know which SDG-2 themes are most engaging for grade 5 students?	✓	☐	
45	Material Requirements	Do teachers know what support or resources are needed to help them teach SDG-2 effectively?	✓	☐	

General Comment: -

Date: 5 Januari 2026

Validator Instrument

Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.

NIP. 1128805172012122002



Validation of the Research Instrument for the Criteria of the Digital Storybook Reading Content.

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating digital storybook reading content. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

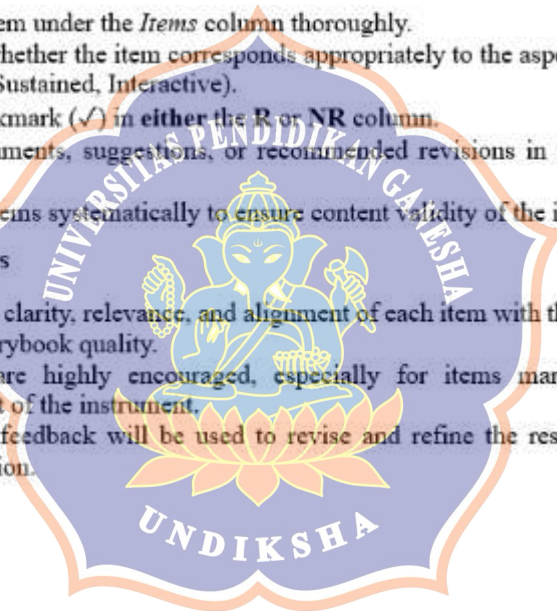
Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each item under the *Items* column thoroughly.
2. Determine whether the item corresponds appropriately to the aspect being measured (e.g., Purposeful, Sustained, Interactive).
3. Place a checkmark (✓) in either the **R** or **NR** column.
4. Provide comments, suggestions, or recommended revisions in the **Remarks** column if necessary.
5. Review all items systematically to ensure content validity of the instrument.

Notes for Validators

- Consider the clarity, relevance, and alignment of each item with the theoretical framework of digital storybook quality.
- Comments are highly encouraged, especially for items marked **NR**, to guide the improvement of the instrument.
- The overall feedback will be used to revise and refine the research instrument before implementation.



NO	Aspect	Items	R	NR	Remarks
1	Purposeful	The digital storybook has a clear learning goal and supports school-related learning content.	✓	☐	
2	Purposeful	The digital storybook multimedia features such as images, sound, and animation is chosen to strengthen the content of the story.	✓	☐	
3	Purposeful	The digital storybook content is presented concisely, not long, and does not require technical knowledge.	✓	☐	
4	Sustained	The digital storybook story and features keep the children engaged while reading until the end.	✓	☐	
5	Sustained	The digital storybook use cliffhangers, light conflicts, or curiosity that encourage children to continue reading.	✓	☐	
6	Sustained	The digital content in digital storybooks provides small variations that encourage curiosity every time they are opened.	✓	☐	
7	Intercultural	The language, names, or expressions in the story reflect the cultural realities depicted.	✓	☐	
8	Intercultural	There is no character in digital storybook is depicted as inferior/superior based on cultural background.	✓	☐	
9	Intercultural	The digital storybook story shows that cross-cultural cooperation strengthens shared values.	✓	☐	
10	Interactive	In the digital storybook there are no excessive visual or audio elements to confuse the child.	✓	☐	
11	Interactive	The digital storybook interaction helps children follow the story's progress gradually.	✓	☐	
12	Interactive	The digital storybook activating features provides additional information that deepens understanding.	✓	☐	
13	Child friendly	The digital storybook uses simple language that suits children's reading level.	✓	☐	
14	Child friendly	The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly.	✓	☐	
15	Child friendly	The visual elements in the digital storybook are not too crowded and there is no distracting music or sound.	✓	☐	
16	Accessible	The digital storybook includes helpful features like audio.	✓	☐	
17	Accessible	The digital storybook provides simple pop-up explanations for difficult words.		☐	

18	Accessible	The digital storybook uses basic animations that help children understand the meaning of the story.	✓	☐	
19	Personalizable	The digital storybook invites children to give a simple personal response at the end of the story.	✓	☐	
20	Personalizable	The digital storybook asks children to choose which character they would like to be.	✓	☐	
21	Personalizable	The digital storybook asks children to choose their favorite part of the story.	✓	☐	
22	Creative	The digital storybook uses imaginative visuals such as unique characters, settings, or objects	✓	☐	
23	Creative	The digital storybook uses sound effects or music that match the situation in the story for example calm music in peaceful scenes, lively sounds in action scenes	✓	☐	
24	Creative	The digital storybook includes creative animation effects such as simple movements or transitions that enhance the reading experience.	✓	☐	
25	Social	The digital storybook shows characters interacting in positive social ways for example helping and sharing	✓	☐	
26	Social	The digital storybook presents simple situations that illustrate social values such as empathy respect, or kindness	✓	☐	
27	Social	The digital storybook includes scenarios where characters work together to solve a problem, promoting teamwork and cooperation.	✓	☐	

General Comment:-

Date: 5 Januari 2026

Validator Instrument



Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.

NIP. 1128805172012122002

Validation of the Research Instrument for the Reading Behavioral Engagement based Reading Material

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating reading behavioral engagement-based reading material. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each item under the *Items* column thoroughly.
2. Determine whether the item corresponds appropriately to the aspect being measured (e.g., Purposeful, Sustained, Interactive).
3. Place a checkmark (✓) in either the **R** or **NR** column.
4. Provide comments, suggestions, or recommended revisions in the **Remarks** column if necessary.
5. Review all items systematically to ensure content validity of the instrument.

Notes for Validators

- Consider the clarity, relevance, and alignment of each item with the theoretical framework of digital storybook quality.
- Comments are highly encouraged, especially for items marked **NR**, to guide the improvement of the instrument.
- The overall feedback will be used to revise and refine the research instrument before implementation.

NO	Aspect	Items	VR	QR	Remarks
1	Effort	The Digital Storybook is able to encourage students to keep reading even when the story is difficult.	✓	☐	
2	Effort	The Digital Storybook is able to motivate students to try harder in understanding the story.	✓	☐	
3	Effort	The Digital Storybook is able to encourage students to reread parts of the story to improve their understanding.	✓	☐	
4	Persistence	The Digital Storybook is able to support students to finish the story until the end.	✓	☐	
5	Persistence	The Digital Storybook is able to help students continue reading even when they encounter difficult words.	✓	☐	
6	Persistence	The Digital Storybook is able to help students return to the story and continue reading after short breaks.	✓	☐	
7	Attention	The Digital Storybook is able to maintain students' attention during reading activities.	✓	☐	
8	Attention	The Digital Storybook is able to help students stay focused without being easily distracted.	✓	☐	
9	Attention	The Digital Storybook is able to keep students focused through features that maintain their engagement.	✓	☐	
10	Positive Conduct	The Digital Storybook is able to promote positive behavior during reading sessions.	✓	☐	
11	Positive Conduct	The Digital Storybook is able to reduce disruptive behavior while students are reading.	✓	☐	
12	Positive Conduct	The Digital Storybook is able to promote responsible use of digital tools during reading activities.	✓	☐	
13	Active Participation	The Digital Storybook is able to encourage students to participate actively in shared reading activities.	✓	☐	
14	Active Participation	The Digital Storybook is able to stimulate students to share their reading experiences with peers.	✓	☐	
15	Active Participation	The Digital Storybook is able to motivate students to join discussions related to the story.	✓	☐	
16	Reading Frequency	The Digital Storybook is able to increase how often students read storybooks at home or in school.	✓	☐	
17	Reading Frequency	The Digital Storybook is able to motivate students to borrow or choose more storybooks to read.		☐	

18	Reading Frequency	The Digital Storybook is able to encourage students to read storybooks more regularly.	✓	☐	
19	Interaction with Texts	The Digital Storybook is able to inspire students to explore more about the story they read.	✓	☐	
20	Interaction with Texts	The Digital Storybook is able to help students connect the story to their own experiences or knowledge.	✓	☐	
21	Interaction with Texts	The Digital Storybook is able to motivate students to explore other stories with similar themes.	✓	☐	

General Comment:-

Date: 5 Januari 2026

Validator Instrument

Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.

NIP. 1128805172012122002



Validation of the Research Instrument Expert Validation Checklist on SDG-2 Based Content

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating digital storybook SDG-2 related content. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

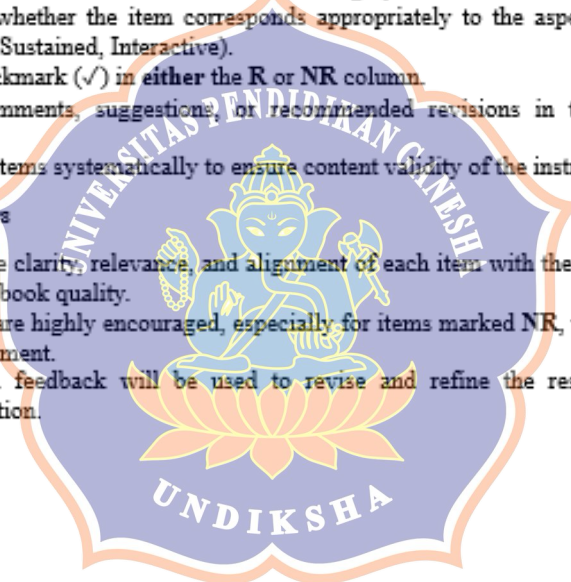
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Notes for Validators

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NO	Aspect	Items	R	NR	Remarks
1	Behavior in Food Sharing (socio-cultural functions of food)	The storybook explains how unequal access to food can cause hunger such as different food security caused by poverty, climate change, and food waste.	✓	☐	
2	Behavior in Food Sharing (socio-cultural functions of food)	The storybook illustrates how students can share food through simple, real life actions such as share snack, give food, and split meal.	✓	☐	
3	Behavior in Food Sharing (socio-cultural functions of food)	The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry, such as offering food to others.	✓	☐	
4	Behavior in Food Sharing (socio-cultural functions of food)	The storybook encourages students to critically reflect on their behavior toward sharing food with others.	✓	☐	
5	Behavior in Food Sharing (socio-cultural functions of food)	The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.	✓	☐	

General Comment:

Date: 5 Januari 2026

Validator Instrument

Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.

NIP. 1128805172012122002

Appendix 6. Validation of Instrument from Expert 2

Validation of the Research Instrument for Observation Sheet

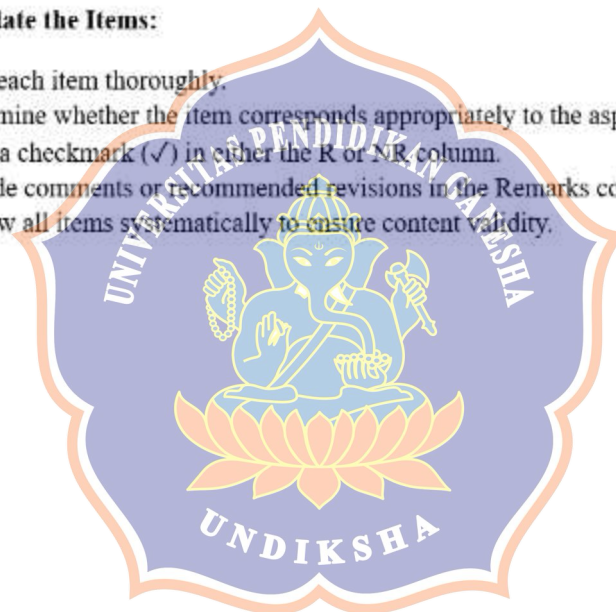
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No	Aspect	Indicator	R	NR	Remarks
1	Necessities	Is there availability of reading materials and exercises related to Zero Hunger (SDG-2)?	✓	☐	
2	Necessities	Do students need guidance to stay focused while reading?	✓	☐	
3	Necessities	Do students need clear explanations of unfamiliar SDG-2 terms?	✓	☐	
4	Necessities	Is the story length appropriate to avoid cognitive overload?	✓	☐	
5	Necessities	Is the reading content aligned with students' cognitive level?	✓	☐	
6	Lack	Do students lack understanding of SDG-2 concepts?	✓	☐	
7	Lack	Do students lack strategies to interpret SDG-related content?	✓	☐	
8	Lack	Do students have limited prior knowledge to examples of Zero Hunger?	✓	☐	
9	Lack	Do students struggle to connect between story content and real-world issues?	✓	☐	
10	Lack	Do students show limited awareness of SDG-2 relevance to problem-solving?	✓	☐	
11	Wants	Do students prefer stories with themes related to Combating Hunger?	✓	☐	
12	Wants	Do students prefer visually appealing reading materials?	✓	☐	
13	Wants	Do students prefer characters that match their age or personality?	✓	☐	
14	Wants	Do students prefer stories connected to real-life situation?	✓	☐	
15	Wants	Do students engage with reading materials?	✓	☐	
16	Learning Needs	Do students need relatable characters to support engagement and comprehension?	✓	☐	
17	Learning Needs	Do students need guided questions to stay engaged during reading?	✓	☐	
18	Learning Needs	Do students need visual or interactive elements to support understanding?	✓	☐	
19	Learning Needs	Do students prefer individual, pair, or group reading activates?	✓	☐	

General Comment: -

Date: 10 Januari 2026

Validator Instrument



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.

NIP. 198904082023212043

Validation of the Research Instrument for Interview Guide

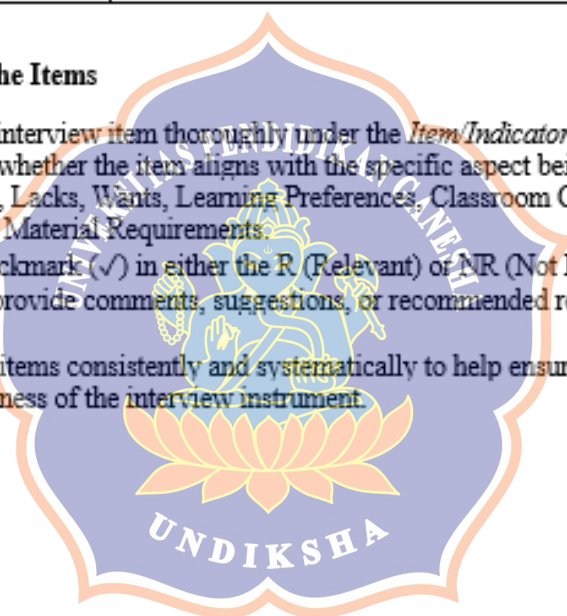
This validation sheet is used by teachers to assess the clarity, relevance, and alignment of each item in the Interview Guide Instrument for SDG-2: Zero Hunger Integration in Reading Lessons. Validators are expected to review each interview item carefully and determine whether it accurately represents the construct it is intended to measure (Necessities, Lacks, Wants, or Learning Needs).

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4. If needed, provide comments, suggestions, or recommended revisions in the Remarks column.
5. Review all items consistently and systematically to help ensure the content validity and appropriateness of the interview instrument.



No	Category	Question /Items	R	NR	Remarks
20	Necessities	Do teachers understand the concept of Sustainable Development Goals (SDGs)?	✓	☐	
21	Necessities	Do teachers know which SDG 2 topics grade 5 students can understand easily?	✓	☐	
22	Necessities	Can teachers identify SDG-2 topics that are relevant to students' daily life?	✓	☐	
23	Necessities	Can teachers prioritize which SDG-2 topic should be introduced first to grade 5 students?	✓	☐	
24	Lacks	Do teachers understand their role in using the SDG-2 digital storybook in class?	✓	☐	
25	Lacks	Can teachers identify possible challenges in using the SDG-2 digital storybook?	✓	☐	
26	Lacks	Do teachers know what the best strategies to implement the SDG-2 digital storybook for student grade 5?	✓	☐	
27	Lacks	Do teachers know which aspects of SDG-2 are most difficult for students to understand?	✓	☐	
28	Wants	Do teachers know which SDG-2 subtopics are most suitable for English reading lessons?	✓	☐	
29	Wants	Do teachers understand whether students learn better individually or in groups?	✓	☐	
30	Wants	Do teachers understand which learning style such as individual or group is the best while implementing SDG-2 based digital storybook?	✓	☐	
31	Learning Preferences	Can teachers identify factors that support students' comprehension of SDG-2?	✓	☐	
32	Learning Preferences	Do teachers know what support students need to identify cause-effect relationships, main ideas, and supporting details related to SDG-2?	✓	☐	
33	Learning Preferences	Do teachers know which teaching activities are most effective when integrating SDG-2?	✓	☐	
34	Learning Preferences	Do teachers know which reading activities best help students understand SDG-2 such as shared reading, guided reading, or group reading?	✓	☐	
35	Classroom Conditions	Can teachers predict how students respond to interactive reading activities?	✓	☐	
36	Classroom Conditions	Do teachers know which classroom conditions help students stay engaged when reading activities?		☐	
37	Classroom Conditions	Can teachers identify students' preferred learning styles such as visual, auditory, or multimodal when reading SDG-2 stories?	✓	☐	

38	Teacher Support	Do teachers know what students benefit from supplementary aids such as pictures, audio, or animation?	✓	☐	
39	Teacher Support	Do teachers know which types of feedback help students understand story sequences and Food messages?	✓	☐	
40	Teacher Support	Do teachers know how long the story is most suitable for teaching SDG-2 to grade 5 students?	✓	☐	
41	Material Requirements	Do teachers know which types of characters are easiest for students to understand in SDG-2 stories?	✓	☐	
42	Material Requirements	Do teachers know which types of story content are most suitable for SDG-2 lessons?	✓	☐	
43	Material Requirements	Do teachers know what SDG-2 content can be effectively included in reading stories and how students respond to Food themes?	✓	☐	
44	Material Requirements	Do teachers know which SDG-2 themes are most engaging for grade 5 students?	✓	☐	
45	Material Requirements	Do teachers know what support or resources are needed to help them teach SDG-2 effectively?	✓	☐	

General Comment: -

Date: 5 Januari 2026

Validator Instrument



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.

NIP. 198904082023212043



Validation of the Research Instrument for the Criteria of the Digital Storybook Reading Content.

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating digital storybook reading content. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

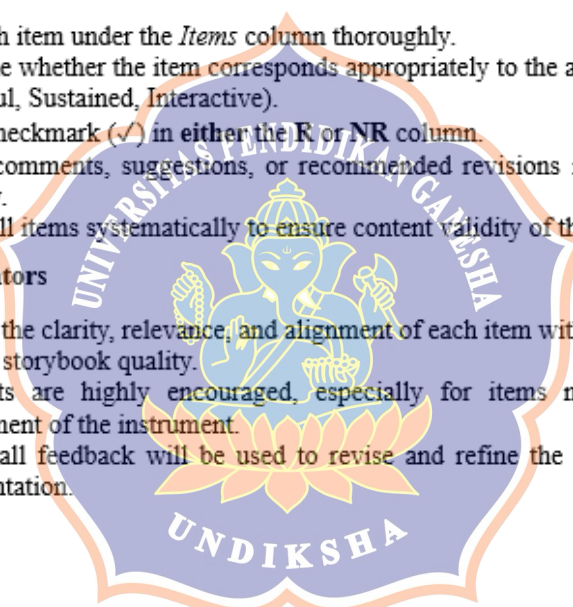
Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each item under the *Items* column thoroughly.
2. Determine whether the item corresponds appropriately to the aspect being measured (e.g., Purposeful, Sustained, Interactive).
3. Place a checkmark (✓) in either the **R** or **NR** column.
4. Provide comments, suggestions, or recommended revisions in the **Remarks** column if necessary.
5. Review all items systematically to ensure content validity of the instrument.

Notes for Validators

- Consider the clarity, relevance, and alignment of each item with the theoretical framework of digital storybook quality.
- Comments are highly encouraged, especially for items marked **NR**, to guide the improvement of the instrument.
- The overall feedback will be used to revise and refine the research instrument before implementation.



NO	Aspect	Items	R	NR	Remarks
1	Purposeful	The digital storybook has a clear learning goal and supports school-related learning content.	✓	☐	
2	Purposeful	The digital storybook multimedia features such as images, sound, and animation is chosen to strengthen the content of the story.	✓	☐	
3	Purposeful	The digital storybook content is presented concisely, not long, and does not require technical knowledge.	✓	☐	
4	Sustained	The digital storybook story and features keep the children engaged while reading until the end.	✓	☐	
5	Sustained	The digital storybook use cliffhangers, light conflicts, or curiosity that encourage children to continue reading.	✓	☐	
6	Sustained	The digital content in digital storybooks provides small variations that encourage curiosity every time they are opened.	✓	☐	
7	Intercultural	The language, names, or expressions in the story reflect the cultural realities depicted.	✓	☐	
8	Intercultural	There is no character in digital storybook is depicted as inferior/superior based on cultural background.	✓	☐	
9	Intercultural	The digital storybook story shows that cross-cultural cooperation strengthens shared values.	✓	☐	
10	Interactive	In the digital storybook there are no excessive visual or audio elements to confuse the child.	✓	☐	
11	Interactive	The digital storybook interaction helps children follow the story's progress gradually.	✓	☐	
12	Interactive	The digital storybook activating features provides additional information that deepens understanding.	✓	☐	
13	Child friendly	The digital storybook uses simple language that suits children's reading level.	✓	☐	
14	Child friendly	The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly.	✓	☐	
15	Child friendly	The visual elements in the digital storybook are not too crowded and there is no distracting music or sound.	✓	☐	
16	Accessible	The digital storybook includes helpful features like audio.	✓	☐	
17	Accessible	The digital storybook provides simple pop-up explanations for difficult words.		☐	

18	Accessible	The digital storybook uses basic animations that help children understand the meaning of the story.	✓	☐	
19	Personalizable	The digital storybook invites children to give a simple personal response at the end of the story.	✓	☐	
20	Personalizable	The digital storybook asks children to choose which character they would like to be.	✓	☐	
21	Personalizable	The digital storybook asks children to choose their favorite part of the story.	✓	☐	
22	Creative	The digital storybook uses imaginative visuals such as unique characters, settings, or objects	✓	☐	
23	Creative	The digital storybook uses sound effects or music that match the situation in the story for example calm music in peaceful scenes, lively sounds in action scenes	✓	☐	
24	Creative	The digital storybook includes creative animation effects such as simple movements or transitions that enhance the reading experience.	✓	☐	
25	Social	The digital storybook shows characters interacting in positive social ways for example helping and sharing.	✓	☐	
26	Social	The digital storybook presents simple situations that illustrate social values such as empathy respect, or kindness.	✓	☐	
27	Social	The digital storybook includes scenarios where characters work together to solve a problem, promoting teamwork and cooperation.	✓	☐	

General Comment:-

Date: 10 Januari 2026

Validator Instrument



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.

NIP. 198904082023212043

Validation of the Research Instrument for the Reading Behavioral Engagement based Reading Material

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating reading behavioral engagement-based reading material. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each item under the *Items* column thoroughly.
2. Determine whether the item corresponds appropriately to the aspect being measured (e.g., Purposeful, Sustained, Interactive).
3. Place a checkmark (✓) in **either** the **R** or **NR** column.
4. Provide comments, suggestions, or recommended revisions in the **Remarks** column if necessary.
5. Review all items systematically to ensure content validity of the instrument.

Notes for Validators

- Consider the clarity, relevance, and alignment of each item with the theoretical framework of digital storybook quality.
- Comments are highly encouraged, especially for items marked **NR**, to guide the improvement of the instrument.
- The overall feedback will be used to revise and refine the research instrument before implementation.

NO	Aspect	Items	VR	QR	Remarks
1	Effort	The Digital Storybook is able to encourage students to keep reading even when the story is difficult.	✓	☐	
2	Effort	The Digital Storybook is able to motivate students to try harder in understanding the story.	✓	☐	
3	Effort	The Digital Storybook is able to encourage students to reread parts of the story to improve their understanding.	✓	☐	
4	Persistence	The Digital Storybook is able to support students to finish the story until the end.	✓	☐	
5	Persistence	The Digital Storybook is able to help students continue reading even when they encounter difficult words.	✓	☐	
6	Persistence	The Digital Storybook is able to help students return to the story and continue reading after short breaks.	✓	☐	
7	Attention	The Digital Storybook is able to maintain students' attention during reading activities.	✓	☐	
8	Attention	The Digital Storybook is able to help students stay focused without being easily distracted.	✓	☐	
9	Attention	The Digital Storybook is able to keep students focused through features that maintain their engagement.	✓	☐	
10	Positive Conduct	The Digital Storybook is able to promote positive behavior during reading sessions.	✓	☐	
11	Positive Conduct	The Digital Storybook is able to reduce disruptive behavior while students are reading.	✓	☐	
12	Positive Conduct	The Digital Storybook is able to promote responsible use of digital tools during reading activities.	✓	☐	
13	Active Participation	The Digital Storybook is able to encourage students to participate actively in shared reading activities.	✓	☐	
14	Active Participation	The Digital Storybook is able to stimulate students to share their reading experiences with peers.	✓	☐	
15	Active Participation	The Digital Storybook is able to motivate students to join discussions related to the story.	✓	☐	
16	Reading Frequency	The Digital Storybook is able to increase how often students read storybooks at home or in school.	✓	☐	
17	Reading Frequency	The Digital Storybook is able to motivate students to borrow or choose more storybooks to read.		☐	

18	Reading Frequency	The Digital Storybook is able to encourage students to read storybooks more regularly.	✓	☐	
19	Interaction with Texts	The Digital Storybook is able to inspire students to explore more about the story they read.	✓	☐	
20	Interaction with Texts	The Digital Storybook is able to help students connect the story to their own experiences or knowledge.	✓	☐	
21	Interaction with Texts	The Digital Storybook is able to motivate students to explore other stories with similar themes.	✓	☐	

General Comment:-

Date: 10 Januari 2026

Validator Instrument



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.

NIP. 198904082023212043



Validation of the Research Instrument Expert Validation Checklist on SDG-2 Based Content

This validation sheet is used by expert validators to assess the relevance and clarity of each item in the research instrument for evaluating digital storybook SDG-2 related content. Validators are asked to review each item carefully and determine whether the item is appropriate, relevant, and aligned with the intended construct.

Rating Criteria

Validators should mark one of the following options for each item:

Score	Category
R (Relevant)	The item is appropriate, clearly stated, and accurately represents the intended aspect. No revision or only minor revision is needed.
NR (Not Relevant)	The item does not fit the intended aspect, is unclear, or requires major revision.

How to Validate the Items

1. Read each item under the *Items* column thoroughly.
2. Determine whether the item corresponds appropriately to the aspect being measured (e.g., Purposeful, Sustained, Interactive).
3. Place a checkmark (✓) in **either** the R or NR column.
4. Provide comments, suggestions, or recommended revisions in the **Remarks** column if necessary.
5. Review all items systematically to ensure content validity of the instrument.

Notes for Validators

- Consider the clarity, relevance, and alignment of each item with the theoretical framework of digital storybook quality.
- Comments are highly encouraged, especially for items marked NR, to guide the improvement of the instrument.
- The overall feedback will be used to revise and refine the research instrument before implementation.

NO	Aspect	Items	R	NR	Remarks
1	Behavior in Food Sharing (socio-cultural functions of food)	The storybook explains how unequal access to food can cause hunger such as different food security caused by poverty, climate change, and food waste.	✓	☐	
2	Behavior in Food Sharing (socio-cultural functions of food)	The storybook illustrates how students can share food through simple, real life actions such as share snack, give food, and split meal.	✓	☐	
3	Behavior in Food Sharing (socio-cultural functions of food)	The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry, such as offering food to others.	✓	☐	
4	Behavior in Food Sharing (socio-cultural functions of food)	The storybook encourages students to critically reflect on their behavior toward sharing food with others.	✓	☐	
5	Behavior in Food Sharing (socio-cultural functions of food)	The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.	✓	☐	

General Comment:

Date: 10 Januari 2026

Validator Instrument



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.

NIP. 198904082023212043



Appendix 7. Observation Result

Instrument for Observation Sheet

Instruction for Completing the Learners' Needs Observation Sheet (SDG-Based Reading Material Development)

This observation sheet is designed to identify students' needs related to SDG-based reading materials, specifically focusing on Zero Hunger (SDG-2). The instrument evaluates several aspects categorized into Target Needs (Necessities, Lacks, Wants) and Learning Needs.

Please read each item carefully and observe actual conditions during reading activities.

Rating Scale

Score	Category
A (Available)	The information, practice, or condition mentioned in the item is present or applicable in your teaching context.
NA (Not Available)	The information, practice, or condition is not present or does not apply to your teaching context.

How to Complete the Observation Sheet

1. Read each item in the indicator column carefully.
2. Observe students' behavior, reading materials, and classroom conditions.
3. Place a checkmark (✓) in **A** if the item is observed, or **NA** if it is not observed.
4. Provide brief notes or explanations in the Remarks column if needed.

Important Notes

- Observations should be based only on visible and measurable evidence during reading activities.
- If an item appears partially, inconsistently, or unclearly, please specify details in the Remarks column.
- This instrument may be used for observing one class or comparing needs across multiple classes.
- The findings from this instrument will support the development of a digital SDG-based storybook aligned with students' needs.

Observation date: 18 February 2025

No	Aspect	Indicator	A	NA	Remarks
1	Necessities	Is there availability of reading materials and exercises related to Zero Hunger (SDG-2)?	☐	☒	There are no reading materials and exercise related to Zero Hunger.
2	Necessities	Do students need guidance to stay focused while reading?	☒	☐	Students need visual aids like pictures and colorful tone
3	Necessities	Do students need clear explanations of unfamiliar SDG-2 terms?	☒	☐	While reading, Students need a clear explanation of certain difficult terms
4	Necessities	Is the story length appropriate to avoid cognitive overload?	☒	☐	The story should be compact and use easy words
5	Necessities	Is the reading content aligned with students' cognitive level?	☒	☐	The content of the story in the school is appropriate for the students' cognitive level
6	Lack	Do students lack understanding of SDG-2 concepts?	☐	☒	Some students still have less understanding of SGD-2
7	Lack	Do students lack strategies to interpret SDG-related content?	☒	☐	Students lack strategies to interpret SDG-related content
8	Lack	Do students have limited prior knowledge to examples of Zero Hunger?	☒	☐	Students have prior knowledge only about food
9	Lack	Do students struggle to connect between story content and real-world issues?	☒	☐	Students struggle to connect what they have read to the real-life context
10	Lack	Do students show limited awareness of SDG-2 relevance to problem-solving?	☒	☐	Students show limited awareness of SDG-2 relevance to problem-solving
11	Wants	Do students prefer stories with themes related to Food?	☒	☐	Students prefer stories that connect to their real-life situations
12	Wants	Do students prefer visually appealing reading materials?	☒	☐	Students prefer that the story has visually appealing elements, like a picture
13	Wants	Do students prefer characters that match their age or personality	☒	☐	Students prefer characters that match their age or personality
14	Wants	Do students prefer stories connected to real-life situation?	☒	☐	Students prefer stories that connect to their real-life situations
15	Wants	Do students engage with reading materials?	☒	☐	Students engage with the reading material, but they

					easily get bored and stop reading
16	Learning Needs	Do students need relatable characters to support engagement and comprehension?	✓	☐	Students need relatable characters to support engagement and comprehension
17	Learning Needs	Do students need guided questions to stay engaged during reading?	✓	☐	Students need guided questions to stay engaged during reading
18	Learning Needs	Do students need visual or interactive elements to support understanding?	✓	☐	Students need visual or interactive elements to support understanding
19	Learning Needs	Do students prefer individual, pair, or group reading activates?	✓	☐	Students prefer to read it individually first, and then they will share and talk with their friends about the reading materials



Appendix 8. Interview Result

Instrument of Interview Guide

Instruction for completing the SDG-2 needs analysis instrument

This instrument is designed to gather information about teachers' perceptions, challenges, preferences, and needs related to integrating SDG-2: Zero Hunger into English reading lessons at the elementary school level. The instrument consists of several categories, including Necessities, Lacks, Wants, Learning Preferences, Classroom Learning Conditions, Teacher Support, and Material Requirements.

Please read each item carefully and observe actual conditions during reading activities.

Rating Scale

Score	Category
A (Available)	The information, practice, or condition mentioned in the item is present or applicable in your teaching context.
NA (Not Available)	The information, practice, or condition is not present or does not apply to your teaching context.

How to Complete the Observation Sheet

1. Read each item in the indicator column carefully.
2. Observe students' behavior, reading materials, and classroom conditions.
3. Place a checkmark (✓) in A if the item is observed, or NA if it is not observed.
4. Provide brief notes or explanations in the Remarks column if needed.

How to Complete the Instrument

1. Read each item thoroughly in the Item/Indicator column.
2. Decide whether the information or condition described is available or not in your classroom, teaching experience, or understanding of SDG-2.
3. Place a checkmark (✓) in either the A (Available) or NA (Not Available) column.
4. If needed, write additional explanations, examples, or notes in the Remarks column.
5. Continue until you have completed all items across all categories.

Important Notes: Your responses should be based on your real teaching experience and actual classroom conditions.

Date: 19 February 2023

No	Category	Question /Items	A	NA	Remarks
20	Necessities	Do teachers understand the concept of Sustainable Development Goals (SDGs)?	☐	☒	Teachers do not understand the <i>Sustainable Development Goals</i> (SDGs)
21	Necessities	Do teachers know which SDG 2 topics grade 5 students can understand easily?	☒	☐	According to the teacher, the most relevant material for grade 5 students is related to topic about foods
22	Necessities	Can teachers identify SDG-2 topics that are relevant to students' daily life?	☒	☐	According to the teacher, the SDG-2 topic that is most suitable for students' daily lives is about food
23	Necessities	Can teachers prioritize which SDG-2 topic should be introduced first to grade 5 students?	☒	☐	It is better to introduce combating hunger that are related to daily school environment
24	Lacks	Do teachers understand their role in using the SDG-2 digital storybook in class?	☒	☐	If in grade 5 it is only a brief description and most of the teachers facilitate their students in reading
25	Lacks	Can teachers identify possible challenges in using the SDG-2 digital storybook?	☒	☐	In terms of facilities, it is very capable because there is already a projector, wifi and students also have smartphones on average. However, the problem can occur for students, where students may not understand what the content of the story is if there is no translation.
26	Lacks	Do teachers know what the best strategies to implement the SDG-2 digital storybook for student grade 5?	☒	☐	When implementing digital storybok , the group learning style is recommended to be used by the teacher
27	Lacks	Do teachers know which aspects of SDG-2 are most difficult for students to understand?	☒	☐	Maybe in addition to the theme, better around foods. It will be difficult to understand for 5th grade students if it is not familiar for them.
28	Wants	Do teachers know which SDG-2 subtopics are most suitable for English reading lessons?	☒	☐	According to the teacher, the SDG-2 topic that is most suitable for students' daily lives is about foods

29	Wants	Do teachers understand whether students learn better individually or in groups?	✓	☐	Students are better off learning individually, but there are times when students also enjoy learning in groups
30	Wants	Do teachers understand which learning style such as individual or group is the best while implementing SDG-2 based digital storybook?	✓	☐	When implementing digital storybook, the group learning style is recommended to be used by the teacher
31	Learning Preferences	Can teachers identify factors that support students' comprehension of SDG-2?	✓	☐	Learning hours are one of the challenges. Because if we want to implement a media that requires a projector, it will be very time-consuming and the material that we want to convey will be lacking.
32	Learning Preferences	Do teachers know what support students need to identify cause-effect relationships, main ideas, and supporting details related to SDG-2?	✓	☐	Students tend to enjoy learning if they use games. And must use simple language
33	Learning Preferences	Do teachers know which teaching activities are most effective when integrating SDG-2?	✓	☐	Students tend to enjoy learning if they use games
34	Learning Preferences	Do teachers know which reading activities best help students understand SDG-2 such as shared reading, guided reading, or group reading?	✓	☐	When implementing digital storybook, group reading activities are recommended to be used by the teacher
35	Classroom Conditions	Can teachers predict how students respond to interactive reading activities?	✓	☐	I predict that will be good because this is the first time they have used digital storybook media in learning
36	Classroom Conditions	Do teachers know which classroom conditions help students stay engaged when reading activities?		☐	Insert games in the story because students tend to really like to play
37	Classroom Conditions	Can teachers identify students' preferred learning styles such as visual, auditory, or multimodal when reading SDG-2 stories?	✓	☐	Students' learning styles are very diverse, all reading styles such as visual, auditory, or multimodal when reading stories

38	Teacher Support	Do teachers know what students benefit from supplementary aids such as pictures, audio, or animation?	✓	☐	Extras such as pictures, audio, or games will make students more interested in reading. The colors should also be bright
39	Teacher Support	Do teachers know which types of feedback help students understand story sequences and hunger messages?	✓	☐	Hold quizzes for students so that the message conveyed in the story can be better understood
40	Teacher Support	Do teachers know how long the story is most suitable for teaching SDG-2 to grade 5 students?	✓	☐	The number of pages for 5th grade is not very known. However, it is emphasized that it must use easy and simple language. and provide the translation No more than 10 pages and the sentences should be short
41	Material Requirements	Do teachers know which types of characters are easiest for students to understand in SDG-2 stories?	✓	☐	Characters are familiar with them. Maybe it could be a funny character
42	Material Requirements	Do teachers know which types of story content are most suitable for SDG-2 lessons?	✓	☐	According to the teacher, the SDG-2 topic that is most suitable for students' daily lives is about maintaining the cleanliness of the school environment
43	Material Requirements	Do teachers know what SDG-2 content can be effectively included in reading stories and how students respond to combating hunger themes?	✓	☐	According to the teacher, the SDG-2 topic that is most suitable for students' daily lives is about foods that are suitable for daily school lives
44	Material Requirements	Do teachers know which SDG-2 themes are most engaging for grade 5 students?	✓	☐	According to the teacher, the SDG-2 topic that is most suitable for students' daily lives is about around foods.
45	Material Requirements	Do teachers know what support or resources are needed to help them teach SDG-2 effectively?	✓	☐	Provide laptops and sound, children can also use smartphones in learning

Appendix 9. Checklist result from Expert 1

A. Researcher's Identity

Name : Gusti Lanang Dananjaya
NIM : 2212021057
Study Program : English Language Education
University : Universitas Pendidikan Ganesha
Thesis Title : DEVELOPMENT OF DIGITAL STORYBOOK ON SDG-2
TO FACILITATE READING BEHAVIOURAL ENGAGEMENT OF FIFTH GRADE
STUDENTS AT SD MUTIARA

B. Identity of the Product Being Evaluated

Title : The Farmer & The Rabbit
Theme : SDG-2 (Zero Hunger)
Grade : 5th
School : SD Mutiara
Type of Product : Digital Storybook
Product Link : <https://digital-storybook-farmer-and-rabbit.netlify.app/>

C. Expert's Identity

Name : Dr. Ni Wayan Surya Mahayanti, S.Pd., M.Pd.
NIP : 198805172012122002
Institution : Universitas Pendidikan Ganesha

CRITERIA OF DIGITAL STORYBOOK INSTRUMENT

Research Objective:

To evaluate the quality of the developed SDG-2 digital storybook, as assessed by experts, in terms of content, design, and relevance to literacy and sustainability education.

INSTRUMENT DEVELOPMENT BASIS

The development of this digital storybook evaluation instrument is based on the quality criteria proposed by Vackova et al. (2023), who identified nine key dimensions essential for ensuring meaningful, engaging, and developmentally appropriate digital reading experiences for young children. These dimensions include purposeful design, sustained engagement, intercultural representation, interactivity, and child-friendly usability, all of which reflect current theoretical and empirical understanding of effective digital literacy tools. Drawing on the literature on children's digital books, interactive multimodality, cognitive load theory, and inclusive design principles, each item in this instrument is structured to operationalize observable indicators that align with evidence-based characteristics of high-quality digital storybooks. The instrument aims to capture the pedagogical and experiential aspects of digital reading by assessing the clarity of learning objectives, the capacity to sustain children's attention, the cultural sensitivity of the content, the relevance of interactive features, and the appropriateness of the interface for young learners. Through this framework, the instrument ensures that digital storybook evaluation is systematic, reliable, and aligned with internationally recognized quality standards for children's digital media.

REFERENCES

- Vackova, P., Cermakova, A. L., & Kucirkova, N. I. (2023). Children's digital books: Development, testing and dissemination of quality criteria. In *Children's Digital Books: Development, Testing and Dissemination of Quality Criteria*. University in Stavanger. <https://doi.org/10.31265/usps>.

Blue Print Criteria of Digital Storybook

Answer Scale: 1. VR= Very Relevant; 2. QR= Quite Relevant; 3. SR= Somewhat Relevant; 4. NR= Not Relevant

Category	Aspects	Items	No Item
Quality of Digital Storybook	Purposeful	- The Digital Storybook has a clear learning goal and supports school-related learning content. - Multimedia such as images, sound, animation is chosen to strengthen the content of the story. - The information is presented concisely, not long, and does not require technical knowledge.	1-3
	Sustained	- The story and features of this digital storybook keep the children engaged in reading until the end. - Stories use cliffhangers, light conflicts, or curiosity that encourage children to continue reading. - Digital content provides small variations that encourage curiosity every time it is opened.	4-6
	Intercultural	- The language, names, or expressions in the story reflect the cultural realities depicted. - No character is depicted as inferior/superior based on cultural background. - The story shows that cross-cultural cooperation strengthens shared values.	7-9
	Interactive	- There are no excessive visual or audio elements to confuse the child. - Interaction helps children follow the story's progress gradually. - Activating features provides additional information that deepens understanding.	10-12
	Child friendly	- Use of simple and clear language appropriate for children's reading level - The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly. - The visual elements are not too crowded and there is no distracting music or sound.	13-15
	Accessible	- Availability of features that support children in reading like audio - Presence of simple explanations for difficult words - Use of visual or animated aids that help children understand the story	16-18

	<u>Personalizable</u>	- Opportunities for children to give a simple personal response at the end of the story - Availability of options for children to choose preferred characters - Opportunities for children to select their <u>favourite</u> part of the story	19-21
	Creative	- Use of imaginative visuals that attract children attention for example, unique characters or settings - Presence of sound effects or music that match the events in the story - Use of animation effects such as movement or transitions that enhance engagement and interest	22-24
	Social	- Presence of character interactions that model positive social <u>behavioural</u> like helping, sharing or cooperating - Inclusion of scenarios that illustrate social values such as empathy, respect, or kindness - Opportunities for characters to work together to solve problems, promoting teamwork	25-27



Instrument Criteria of Digital Storybook

Instruction For Completing the Digital Storybook Criteria Instrument

This instrument is designed to evaluate the quality of a digital storybook based on several aspects, including Purposeful, Sustained, Intercultural, Interactive, and Child-Friendly, Accessible, Personalizable, Creative, and Social. Please read each item carefully and assess how well the digital storybook meets the stated criteria.

Rating Scale

Use the following scale to indicate the level of relevance for each item:

Score	Category
4. VR (Very Relevant)	The item is highly relevant and fully aligns with the characteristics of the digital storybook.
3. QR (Quite Relevant)	The item is moderately relevant, though some elements may be less strong.
2. SR (Somewhat Relevant)	The item is slightly relevant and only partially reflected in the storybook.
1. NR (Not Relevant)	The item is not relevant or not observed in the digital storybook.

How to Complete the Instrument

1. Read each item in the *Items* column thoroughly.
2. Determine the extent to which the digital storybook fulfills the criterion.
3. Place a checkmark (✓) in **one** of the following columns: **VR, QR, SR, or NR**.
4. If needed, provide explanations or notes in the **Remarks** column.
5. Continue rating all items across all aspects.

Important Notes

- Evaluations should be based solely on observable features in the digital storybook.
- If an item is unclear, partially present, or difficult to assess, please include comments in the *Remarks* column.
- This instrument may be used to evaluate a single digital storybook or for comparing multiple storybooks.

NO	Aspect	Items	1 NR	2 SR	3 QR	4 VR	Remarks
1	Purposeful	The digital storybook has a clear learning goal and supports school-related learning content.	☐	☐	☐	✓	
2	Purposeful	The digital storybook multimedia features such as images, sound, and animation are chosen to strengthen the content of the story.	☐	☐	☐	✓	
3	Purposeful	The digital storybook content is presented concisely, not long, and does not require technical knowledge.	☐	☐	☐	✓	
4	Sustained	The digital storybook story and features keep the children engaged while reading until the end.	☐	☐	☐	✓	
5	Sustained	The digital storybook use cliffhangers, light conflicts, or curiosity that encourage children to continue reading.	☐	☐	☐	✓	
6	Sustained	The digital content in digital storybooks provides small variations that encourage curiosity every time they are opened.	☐	☐	☐	✓	
7	Intercultural	The language, names, or expressions in the story reflect the cultural realities depicted.	☐	☐	☐	✓	
8	Intercultural	There is no character in digital storybook is depicted as inferior/superior based on cultural background.	☐	☐	☐	✓	
9	Intercultural	The digital storybook story shows that cross-cultural cooperation strengthens shared values.	☐	☐	☐	✓	
10	Interactive	In the digital storybook there are no excessive visual or audio elements to confuse the child.	☐	☐	☐	✓	
11	Interactive	The digital storybook interaction helps children follow the story's progress gradually.	☐	☐	☐	✓	
12	Interactive	The digital storybook activating features provides additional information that deepens understanding.	☐	☐	☐	✓	

13	Child friendly	The digital storybook uses simple language that suits children's reading level.	☐	☐	☐	✓	
14	Child friendly	The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly.	☐	☐	☐	✓	
15	Child friendly	The visual elements in the digital storybook are not too crowded and there is no distracting music or sound.	☐	☐	☐	✓	
16	Accessible	The digital storybook includes helpful features like audio.	☐	☐	✓	☐	
17	Accessible	The digital storybook provides simple pop-up explanations for difficult words.	☐	☐	☐	✓	
18	Accessible	The digital storybook uses basic animations that help children understand the meaning of the story.	☐	☐	☐	✓	
19	<u>Personalizable</u>	The digital storybook invites children to give a simple personal response at the end of the story.	☐	☐	✓	☐	
20	<u>Personalizable</u>	The digital storybook asks children to choose which character they would like to be.	☐	☐	✓	☐	
21	<u>Personalizable</u>	The digital storybook asks children to choose their favorite part of the story.	☐	☐	☐	✓	
22	Creative	The digital storybook uses imaginative visuals such as unique characters, settings, or objects.	☐	☐	☐	✓	
23	Creative	The digital storybook uses sound effects or music that match the situation in the story for example calm music in peaceful scenes, lively sounds in action scenes.	☐	☐	☐	✓	
24	Creative	The digital storybook includes creative animation effects such as simple movements or transitions that enhance the reading experience.	☐	☐	✓	☐	
25	Social	The digital storybook shows characters interacting in positive social ways for example helping and sharing.	☐	☐	☐	✓	

26	Social	The digital storybook presents simple situations that illustrate social values such as empathy, respect, or kindness.	☐	☐	☐	✓	
27	Social	The digital storybook includes scenarios where characters work together to solve a problem, promoting teamwork and cooperation.	☐	☐	☐	✓	

SDG-2 LEARNING OBJECTIVE INSTRUMENT

Research Objective:

To evaluate the quality of the SDG-2 learning objectives integrated into the digital storybook, as assessed by experts, in terms of their accuracy, appropriateness, and alignment with sustainability education for young learners.

INSTRUMENT DEVELOPMENT BASIS

The development of this instrument is grounded in the theoretical and conceptual frameworks of Education for Sustainable Development (ESD), specifically the learning objectives outlined for Sustainable Development Goal 2 (Zero Hunger) by UNESCO (2017). SDG 2 emphasizes the need to cultivate learners' understanding, attitudes, and behaviours related to combat against hunger, food sharing, food security, nutrition and promoting sustainable agriculture. Accordingly, the instrument is designed to evaluate the extent to which a digital storybook integrates essential cognitive, socio-emotional, and behavioural learning components aligned with ESD principles.

From the behavioral dimension, the instrument incorporates action-oriented learning and real-world connection. UNESCO behavioral objectives emphasize the importance of empowering learners to practice sustainable behaviors, participate in meaningful decision-making, and apply sustainability principles in real-life contexts. Accordingly, the instrument includes indicators evaluating whether the storybook provides actionable prompts, models sustainable practices, and connects narrative events to children lived experiences and real-world environmental impacts. By integrating these three dimensions, the instrument ensures comprehensive alignment with SDG 2 learning objectives, enabling an accurate evaluation of how effectively a digital storybook in combating hunger in education. The resulting indicators are therefore theoretically grounded, developmentally appropriate for young learners, and directly linked to international standards for sustainability education.

References

UNESCO. (2017). Education for Sustainable Development Goals: Learning objectives. United Nations Educational, Scientific and Cultural Organization.

SDG 2 Zero Hunger based material through Digital Storybook.

Skala Jawaban: 4. VR= Very Relevant; 3. QR= Quite Relevant; 2. SR= Somewhat Relevant;
1. NR= Not Relevant

Category	Aspect	Indicators Specific	Nomor Butir
<u>Behavioural Learning Objective</u> SDG-2	Behavior in Food Sharing (socio-cultural functions of food)	- The storybook explains how unequal access to food can cause hunger. - The storybook illustrates how students can share food through simple, real life actions. - The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry. - The storybook encourages students to critically reflect on their behavior toward sharing food with others. The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.	1– 5

Instrument Expert Validation Checklist on SDG-2 Based Content

Instruction For Completing the Digital Storybook Criteria Instrument

This instrument is designed to evaluate the quality of a digital storybook based on SDG-2 Learning objective. Several aspects, including combat against hunger, food sharing, food security, nutrition and promoting sustainable agriculture. Please read each item carefully and assess how well the digital storybook meets the stated criteria.

Rating Scale

Use the following scale to indicate the level of relevance for each item:

Score	Category
4. VR (Very Relevant)	The item is highly relevant and fully aligns with the characteristics of the digital storybook.
3. QR (Quite Relevant)	The item is moderately relevant, though some elements may be less strong.
2. SR (Somewhat Relevant)	The item is slightly relevant and only partially reflected in the storybook.
1. NR (Not Relevant)	The item is not relevant or not observed in the digital storybook.

How to Complete the Instrument

1. Read each item in the *Items* column thoroughly.
2. Determine the extent to which the digital storybook fulfills the criterion.
3. Place a checkmark (✓) in one of the following columns: VR, QR, SR, or NR.
4. If needed, provide explanations or notes in the *Remarks* column.
5. Continue rating all items across all aspects.

Important Notes

- Evaluations should be based solely on observable features in the digital storybook.
- If an item is unclear, partially present, or difficult to assess, please include comments in the *Remarks* column.
- This instrument may be used to evaluate a single digital storybook or for comparing multiple storybooks.

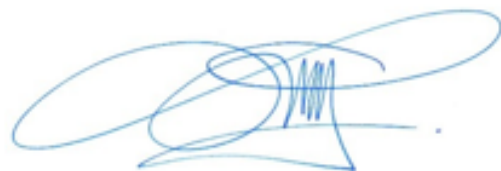
E. Instrument Expert Validation Checklist on SDG 2 Based Content							
NO	Aspect	Items	1 NR	2 SR	3 QR	4 VR	Remarks
1	Behavior in Food Sharing (socio-cultural)	The storybook explains how unequal access to food can cause hunger such as different food security caused by poverty, climate change, and food waste.	☐	☐	☐	☒	

	functions of food)						
2	Behavior in Food Sharing (socio-cultural functions of food)	The storybook illustrates how students can share food through simple, real life actions such as share snack, give food, and split meal.				✓	
3	Behavior in Food Sharing (socio-cultural functions of food)	The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry, such as offering food to others.				✓	
4	Behavior in Food Sharing (socio-cultural functions of food)	The storybook encourages students to critically reflect on their behavior toward sharing food with others.				✓	
5	Behavior in Food Sharing (socio-cultural functions of food)	The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.				✓	

General Comment: Good

Date: 11 May 2026

Expert



Dr. Ni Wawan Surya Mahavanti, S.Pd., M.Pd.
NIP. 198805172012122002

Appendix 10. Checklist result from Expert 2

A. Researcher's Identity

Name : Gusti Lanang Dananjaya
NIM : 2212021057
Study Program : English Language Education
University : Universitas Pendidikan Ganesha
Thesis Title : DEVELOPMENT OF DIGITAL STORYBOOK ON SDG-2 TO FACILITATE READING BEHAVIOURAL ENGAGEMENT OF FIFTH GRADE STUDENTS AT SD MUTIARA

B. Identity of the Product Being Evaluated

Title : The Farmer & The Rabbit
Theme : SDG-2 (Zero Hunger)
Grade : 5th
School : SD Mutiara
Type of Product : Digital Storybook
Product Link : <https://digital-storybook-farmer-and-rabbit.netlify.app/>

C. Expert's Identity

Name : Ni Luh Putu Era Adnyayanti, S.Pd.,M.Pd.
NIP : 198904082023212043
Institution : Universitas Pendidikan Ganesha

CRITERIA OF DIGITAL STORYBOOK INSTRUMENT

Research Objective:

To evaluate the quality of the developed SDG-2 digital storybook, as assessed by experts, in terms of content, design, and relevance to literacy and sustainability education.

INSTRUMENT DEVELOPMENT BASIS

The quality criteria stated by Vackova et al. (2023), who identified nine crucial elements necessary for providing meaningful, engaging, and developmentally appropriate digital reading experiences for young children, served as the foundation for the development of this digital storybook quality rating tool. The current theoretical and empirical knowledge of successful digital literacy tools is reflected in these qualities, which include intentional design, sustained engagement, intercultural representation, interactivity, and child-friendly usability. Each item in this instrument is designed to operationalize observable indicators that correspond with evidence-based features of high-quality digital storybooks, drawing on the literature on children's digital books, interactive multimodality, cognitive load theory, and inclusive design principles. By evaluating the clarity of learning objectives, the ability to hold children's attention, the cultural sensitivity of the content, the applicability of interactive features, and the suitability of the interface for younger learners, the instrument seeks to capture the pedagogical and experiential aspects of digital reading. By using this framework, this instrument guarantees that the evaluation of digital storybooks is systematic, trustworthy, and suitable with globally accepted quality criteria for children's digital media.

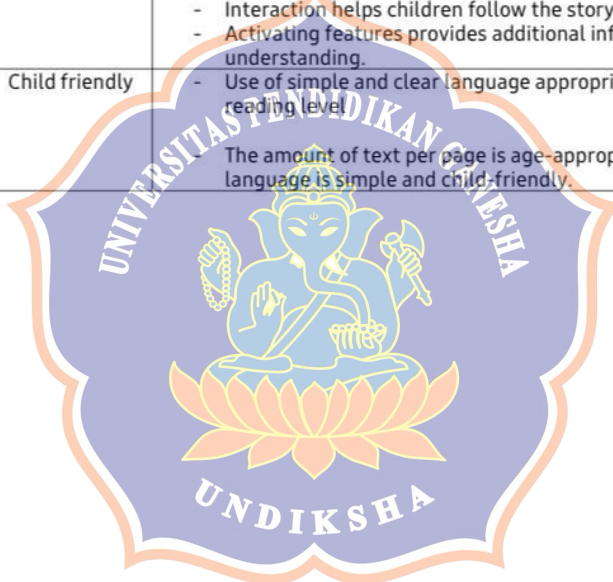
REFERENCES

Vackova, P., Cermakova, A. L., & Kucirkova, N. I. (2023). Children's digital books: Development, testing and dissemination of quality criteria. In *Children's Digital Books: Development, Testing and Dissemination of Quality Criteria*. University in Stavanger. <https://doi.org/10.31265/usps>.

Blue Print Criteria of Digital Storybook

Answer Scale: 1. VR= Very Relevant; 2. QR= Quite Relevant; 3. SR= Somewhat Relevant; 4. NR= Not Relevant

Category	Aspects	Items	No Item
Quality of Digital Storybook	Purposeful	- The Digital Storybook has a clear learning goal and supports school-related learning content. - Multimedia such as images, sound, animation is chosen to strengthen the content of the story. - The information is presented concisely, not long, and does not require technical knowledge.	1-3
	Sustained	- The story and features of this digital storybook keep the children engaged in reading until the end. - Stories use cliffhangers, light conflicts, or curiosity that encourage children to continue reading. - Digital content provides small variations that encourage curiosity every time it is opened.	4-6
	Intercultural	- The language, names, or expressions in the story reflect the cultural realities depicted. - No character is depicted as inferior/superior based on cultural background. - The story shows that cross-cultural cooperation strengthens shared values.	7-9
	Interactive	- There are no excessive visual or audio elements to confuse the child. - Interaction helps children follow the story's progress gradually. - Activating features provides additional information that deepens understanding.	10-12
	Child friendly	- Use of simple and clear language appropriate for children's reading level. The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly.	13-15



		- The visual elements are not too crowded and there is no distracting music or sound.	
	Accessible	- Availability of features that support children in reading like audio - Presence of simple explanations for difficult words - Use of visual or animated aids that help children understand the story	16-18
	Personalizable	- Opportunities for children to give a simple personal response at the end of the story - Availability of options for children to choose preferred characters - Opportunities for children to select their favourite part of the story	19-21
	Creative	- Use of imaginative visuals that attract children attention for example, unique characters or settings - Presence of sound effects or music that match the events in the story - Use of animation effects such as movement or transitions that enhance engagement and interest	22-24
	Social	- Presence of character interactions that model positive social behavioural like helping, sharing or cooperating - Inclusion of scenarios that illustrate social values such as empathy, respect, or kindness	25-27
		- Opportunities for characters to work together to solve problems, promoting teamwork	

Instrument Criteria of Digital Storybook

Instruction For Completing the Digital Storybook Criteria Instrument

This instrument is designed to evaluate the quality of a digital storybook based on several aspects, including Purposeful, Sustained, Intercultural, Interactive, and Child-Friendly, Accessible, Personalizable, Creative, and Social. Please read each item carefully and assess how well the digital storybook meets the stated criteria.

Rating Scale

Use the following scale to indicate the level of relevance for each item:

Score	Category
4. VR (Very Relevant)	The item is highly relevant and fully aligns with the characteristics of the digital storybook.
3. QR (Quite Relevant)	The item is moderately relevant, though some elements may be less strong.
2. SR (Somewhat Relevant)	The item is slightly relevant and only partially reflected in the storybook.
1. NR (Not Relevant)	The item is not relevant or not observed in the digital storybook.

How to Complete the Instrument

1. Read each item in the *Items* column thoroughly.
2. Determine the extent to which the digital storybook fulfills the criterion.
3. Place a checkmark (✓) in **one** of the following columns: VR, QR, SR, or NR.
4. If needed, provide explanations or notes in the **Remarks** column.
5. Continue rating all items across all aspects.

Important Notes

- Evaluations should be based solely on observable features in the digital storybook.
- If an item is unclear, partially present, or difficult to assess, please include comments in the *Remarks* column.
- This instrument may be used to evaluate a single digital storybook or for comparing multiple storybooks.

NO	Aspect	Items	1 NR	2 SR	3 QR	4 VR	Remarks
1	Purposeful	The digital storybook has a clear learning goal and supports school-related learning content.	☐	☐	☐	☒	
2	Purposeful	The digital storybook multimedia features such as images, sound, and animation are chosen to strengthen the content of the story.	☐	☐	☐	☒	
3	Purposeful	The digital storybook content is presented concisely, not long, and does not require technical knowledge.	☐	☐	☐	☒	
4	Sustained	The digital storybook story and features keep the children engaged while reading until the end.	☐	☐	☐	☒	
5	Sustained	The digital storybook use cliffhangers, light conflicts, or curiosity that encourage children to continue reading.	☐	☐	☐	☒	
6	Sustained	The digital content in digital storybooks provides small variations that encourage curiosity every time they are opened.	☐	☐	☐	☒	
7	Intercultural	The language, names, or expressions in the story reflect the cultural realities depicted.	☐	☐	☒	☐	
8	Intercultural	There is no character in digital storybook is depicted as inferior/superior based on cultural background.	☐	☐	☒	☐	
9	Intercultural	The digital storybook story shows that cross-cultural cooperation strengthens shared values.	☐	☐	☒	☐	
10	Interactive	In the digital storybook there are no excessive visual or audio elements to confuse the child.	☐	☐	☐	☒	
11	Interactive	The digital storybook interaction helps children follow	☐	☐	☐	☒	

		the story's progress gradually.	☐	☐	☐	☒	
12	Interactive	The digital storybook activating features provides additional information that deepens understanding.	☐	☐	☐	☒	
13	Child friendly	The digital storybook uses simple language that suits children's reading level.	☐	☐	☐	☒	
14	Child friendly	The amount of text per page is age-appropriate, and the narrative language is simple and child-friendly.	☐	☐	☐	☒	
15	Child friendly	The visual elements in the digital storybook are not too crowded and there is no distracting music or sound.	☐	☐	☐	☒	
16	Accessible	The digital storybook includes helpful features like audio.	☐	☐	☒	☐	
17	Accessible	The digital storybook provides simple pop-up explanations for difficult words.	☐	☐	☐	☒	
18	Accessible	The digital storybook uses basic animations that help children understand the meaning of the story.	☐	☐	☐	☒	
19	Personalizable	The digital storybook invites children to give a simple personal response at the end of the story.	☐	☐	☐	☒	
20	Personalizable	The digital storybook asks children to choose which character they would like to be.	☐	☐	☒	☐	
21	Personalizable	The digital storybook asks children to choose their favorite part of the story.	☐	☐	☒	☐	
22	Creative	The digital storybook uses imaginative visuals such as unique characters, settings, or objects	☐	☐	☐	☒	
23	Creative	The digital storybook uses sound effects or music that match the situation in the story for example calm music in peaceful scenes, lively sounds in action scenes	☐	☐	☐	☒	

24	Creative	The digital storybook includes creative animation effects such as simple movements or transitions that enhance the reading experience.	☐	☐	☐	☒	
25	Social	The digital storybook shows characters interacting in positive social ways for example helping and sharing.	☐	☐	☐	☒	
26	Social	The digital storybook presents simple situations that illustrate social values such as empathy respect, or kindness.	☐	☐	☐	☒	
27	Social	The digital storybook includes scenarios where characters work together to solve a problem, promoting teamwork and cooperation.	☐	☐	☐	☒	

SDG-2 LEARNING OBJECTIVE INSTRUMENT

Research Objective:

To evaluate the quality of the SDG-2 learning objectives integrated into the digital storybook, as assessed by experts, in terms of their accuracy, appropriateness, and alignment with sustainability education for young learners.

INSTRUMENT DEVELOPMENT BASIS

The development of this instrument is grounded in the theoretical and conceptual frameworks of Education for Sustainable Development (ESD), specifically the learning objectives outlined for Sustainable Development Goal 2 (Zero Hunger) by UNESCO (2017). SDG 2 emphasizes the need to cultivate learners' understanding, attitudes, and behaviours related to combat against hunger, food sharing, food security, nutrition and promoting sustainable agriculture. Accordingly, the instrument is designed to evaluate the extent to which a digital storybook integrates essential cognitive, socio-emotional, and behavioural learning components aligned with ESD principles.

From the behavioral dimension, the instrument incorporates action-oriented learning and real-world connection. UNESCO behavioral objectives emphasize the importance of empowering learners to practice sustainable behaviors, participate in meaningful decision-making, and apply sustainability principles in real-life contexts. Accordingly, the instrument includes indicators evaluating whether the storybook provides actionable prompts, models sustainable practices, and connects narrative events to children lived experiences and real-world environmental impacts. By integrating these three dimensions, the instrument ensures comprehensive alignment with SDG 2 learning objectives, enabling an accurate evaluation of how effectively a digital storybook supports responsible consumption education. The resulting indicators are therefore theoretically grounded, developmentally appropriate for young learners, and directly linked to international standards for sustainability education.

References

UNESCO. (2017). Education for Sustainable Development Goals: Learning objectives. United Nations Educational, Scientific and Cultural Organization.

SDG 2 Zero Hunger based material through Digital Storybook.

Skala Jawaban: 4. VR= Very Relevant; 3. QR= Quite Relevant; 2. SR= Somewhat Relevant; 1. NR= Not Relevant

Category	Aspect	Indicators Specific	Nomor Butir
Behavioural Learning Objective SDG -2	Behavior in Food Sharing (socio-cultural functions of food)	- The storybook explains how unequal access to food can cause hunger. - The storybook illustrates how students can share food through simple, real life actions. - The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry. - The storybook encourages students to critically reflect on their behavior toward sharing food with others. - The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.	1– 5

Instrument Expert Validation Checklist on SDG-2 Based Content

Instruction For Completing the Digital Storybook Criteria Instrument

This instrument is designed to evaluate the quality of a digital storybook based on SDG-2 Learning objective. Several aspects, including combat against hunger, food sharing, food security, nutrition and promoting sustainable agriculture. Please read each item carefully and assess how well the digital storybook meets the stated criteria.

Rating Scale

Use the following scale to indicate the level of relevance for each item:

Score	Category
4. VR (Very Relevant)	The item is highly relevant and fully aligns with the characteristics of the digital storybook.
3. QR (Quite Relevant)	The item is moderately relevant, though some elements may be less strong.
2. SR (Somewhat Relevant)	The item is slightly relevant and only partially reflected in the storybook.
1. NR (Not Relevant)	The item is not relevant or not observed in the digital storybook.

How to Complete the Instrument

1. Read each item in the *Items* column thoroughly.
2. Determine the extent to which the digital storybook fulfills the criterion.
3. Place a checkmark (✓) in one of the following columns: VR, QR, SR, or NR.
4. If needed, provide explanations or notes in the *Remarks* column.
5. Continue rating all items across all aspects.

Important Notes

- Evaluations should be based solely on observable features in the digital storybook.
- If an item is unclear, partially present, or difficult to assess, please include comments in the *Remarks* column.
- This instrument may be used to evaluate a single digital storybook or for comparing multiple storybooks.

E. Instrument Expert Validation Checklist on SDG 2 Based Content							
NO	Aspect	Items	1 NR	2 SR	3 QR	4 VR	Remarks
1	Behavior in Food Sharing (socio-cultural functions of food)	The storybook explains how unequal access to food can cause hunger such as different food security caused by poverty, climate change, and food waste.	☐	☐	☐	☒	
2	Behavior in	The storybook illustrates how students can share					

	Food Sharing (socio-cultural functions of food)	food through simple, real life actions such as share snack, give food, and split meal.				✓	
3	Behavior in Food Sharing (socio-cultural functions of food)	The storybook demonstrates how individual and collective responsibility play an important role in combating hunger by helping others who are hungry, such as offering food to others.				✓	
4	Behavior in Food Sharing (socio-cultural functions of food)	The storybook encourages students to critically reflect on their behavior toward sharing food with others.				✓	
5	Behavior in Food Sharing (socio-cultural functions of food)	The storybook promotes a culture of caring and sharing by showing kindness rather than ignore or reject others in need.					

General Comment:

Great!

Date:
Expert



Ni Luh Putu Era Adnyayanti, S.Pd., M.Pd.
NIP. 198904082023212043



Appendix 11. Checklist result from Teacher

READING BEHAVIOURAL ENGAGEMENT INSTRUMENT

Research Objective:

To evaluate the quality of the developed SDG-2 digital storybook, as assessed by teachers, in terms reading behavioral engagement.

INSTRUMENT DEVELOPMENT BASIS

The development of this instrument is based on the idea of reading behavioral engagement, which explains how students show their involvement in reading through clear and visible actions. According to Fredricks et al. (2004), Guthrie (2004), and McGeown & Smith (2024), reading behavioral engagement has seven important aspects: effort, persistence, attention, positive conduct, active participation, reading frequency, and interaction with texts. Each item in this instrument is designed to measure how students behave while reading. It looks at how much effort they give, how well they stay focused, how long they continue when the reading gets difficult, how actively they join reading activities, and how often they read. The instrument also observes how students interact with the text and how they show positive behavioral during reading. With this framework, the instrument provides a simple and clear way to understand students' reading involvement based on their real actions during reading activities.

REFERENCESS

- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109.
- Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 403–422). Lawrence Erlbaum.
- McGeown, S., & Smith, K. C. (2024). Reading Engagement Matters! A New Scale to Measure and Support Children's Engagement with Books. *Reading Teacher*, 77(4), 462–472. <https://doi.org/10.1002/trt.2267>

Blueprint of Reading Behavioral Engagement Validation

Answer Scale: 1. VR= Very Relevant; 2. QR= Quite Relevant; 3. SR= Somewhat Relevant; 4. NR= Not Relevant

Category	Aspect	Items	No Item
Reading Behavioural Engagement	Effort	- The Digital Storybook increases students' reading effort. - The Digital Storybook encourages students to try harder. - The Digital Storybook supports students in rereading difficult parts.	1-3
	Persistence	- The Digital Storybook helps students finish the story. - The Digital Storybook keeps students reading through challenges. - The Digital Storybook promotes consistent reading until completion.	4-6
	Attention	- The Digital Storybook maintains students' attention. - The Digital Storybook helps students stay focused. - The Digital Storybook reduces distraction during reading.	7-9
	Positive Conduct	- The Digital Storybook encourages positive reading behavioural. - The Digital Storybook supports orderly reading routines. - The Digital Storybook promotes responsible digital use.	10-12
	Active Participation	- The Digital Storybook encourages student participation. - The Digital Storybook stimulates sharing during reading. - The Digital Storybook increases involvement in reading activities.	13-15
	Reading Frequency	- The Digital Storybook increases reading frequency. - The Digital Storybook motivates students to read more. - The Digital Storybook encourages regular reading habits.	16-18
	Interaction with Texts	- The Digital Storybook encourages deeper story exploration. - The Digital Storybook promotes connections with the story. - The Digital Storybook motivates reading of similar texts.	19-21

Instrument Reading Behavioral Engagement

Instruction For Completing the Reading Behavioral Engagement Instrument

This instrument is designed to evaluate students' Reading Behavioural Engagement when using a digital storybook based on several aspects, including Effort, Persistence, Attention, Positive Conduct, Active Participation, Reading Frequency, and Interaction with Texts. Please read each item carefully and assess how well the digital storybook supports students' engagement in each area.

Rating Scale

Use the following scale to indicate the level of relevance for each item:

Score	Category
1. VR (Very Relevant)	The item is highly relevant and fully aligns with the characteristics of the digital storybook.
2. QR (Quite Relevant)	The item is moderately relevant, though some elements may be less strong.
3. SR (Somewhat Relevant)	The item is slightly relevant and only partially reflected in the storybook.
4. NR (Not Relevant)	The item is not relevant or not observed in the digital storybook.

How to Complete the Instrument

1. Read each item in the item's column thoroughly.
2. Determine the extent to which the digital storybook fulfils the criterion.
3. Place a checkmark (✓) in one of the following columns: VR, QR, SR, or NR.
4. If needed, provide explanations or notes in the Remarks column.
5. Continue rating all items across all aspects.

Important Notes

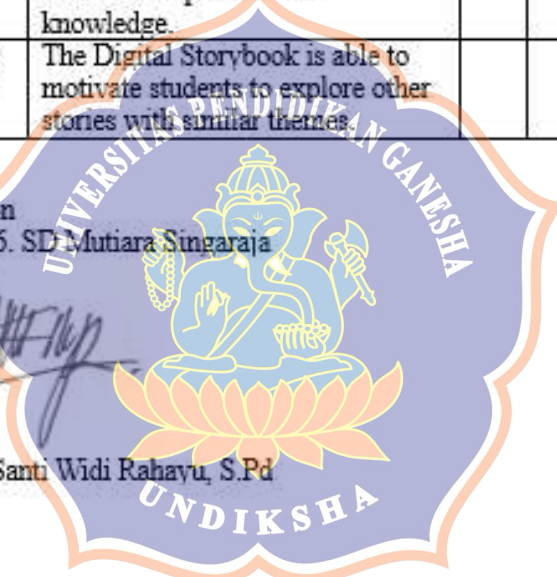
- Evaluations should be based on students' observable behaviours while using the digital storybook.
- If an item is unclear or difficult to assess, please provide additional explanation in the Remarks column.
- This instrument may be used to evaluate engagement with a single digital storybook or to compare students' engagement across multiple storybooks.

NO	Aspect	Items	1 NR	2 SR	3 QR	4 VR	Remarks
73	Effort	The Digital Storybook is able to encourage students to keep reading even when the story is difficult.				✓	
74	Effort	The Digital Storybook is able to motivate students to try harder in understanding the story.				✓	
75	Effort	The Digital Storybook is able to encourage students to reread parts of the story to improve their understanding.			✓		
76	Persistence	The Digital Storybook is able to support students to finish the story until the end.			✓		
77	Persistence	The Digital Storybook is able to help students continue reading even when they encounter difficult words.				✓	
78	Persistence	The Digital Storybook is able to help students return to the story and continue reading after short breaks.			✓		
79	Attention	The Digital Storybook is able to maintain students' attention during reading activities.				✓	
80	Attention	The Digital Storybook is able to help students stay focused without being easily distracted.				✓	
81	Attention	The Digital Storybook is able to keep students focused through features that maintain their engagement.				✓	
82	Positive Conduct	The Digital Storybook is able to promote positive behavior during reading sessions.				✓	
83	Positive Conduct	The Digital Storybook is able to reduce disruptive behavior while students are reading.			✓		
84	Positive Conduct	The Digital Storybook is able to promote responsible use of digital tools during reading activities.				✓	
85	Active Participation	The Digital Storybook is able to encourage students to participate actively in shared reading activities.			✓		
86	Active Participation	The Digital Storybook is able to stimulate students to share their reading experiences with peers.				✓	

87	Active Participation	The Digital Storybook is able to motivate students to join discussions related to the story.				✓	
88	Reading Frequency	The Digital Storybook is able to increase how often students read storybooks at home or in school.				✓	
89	Reading Frequency	The Digital Storybook is able to motivate students to borrow or choose more storybooks to read.			✓		
90	Reading Frequency	The Digital Storybook is able to encourage students to read storybooks more regularly.				✓	
91	Interaction with Texts	The Digital Storybook is able to inspire students to explore more about the story they read.				✓	
92	Interaction with Texts	The Digital Storybook is able to help students connect the story to their own experiences or knowledge.			✓		
93	Interaction with Texts	The Digital Storybook is able to motivate students to explore other stories with similar themes.				✓	

Teacher Validation
Rabu, 6 Mei 2026. SD Mutiara Singaraja

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NIP. -



RIWAYAT HIDUP



Gusti Lanang Dananjaya lahir di Sibanggede pada tanggal 30 September 2003. Penulis merupakan anak dari pasangan Gusti Made Umarjaya dan Gusti Ayu Putu Alit Ariani. Penulis berkewarganegaraan Indonesia dan beragama Hindu. Saat ini penulis tinggal di Desa Sibang Gede, Kecamatan Abuansemal, Kabupaten Badung, Provinsi Bali.

Penulis menyelesaikan pendidikan dasar di SD Negeri 4 Sibang Gede, kemudian melanjutkan pendidikan di SMP Negeri 3 Abiansemal dan lulus dari SMA Negeri 2 Abiansemal. Pada tahun 2022, penulis melanjutkan pendidikan tinggi di Program Studi S1 Pendidikan Bahasa Inggris, Jurusan Bahasa Asing, Fakultas Bahasa dan Seni, Universitas Pendidikan Ganesha. Pada tahun 2026, penulis menyelesaikan skripsi yang berjudul: “Development of Digital Storybook on SDG-2 to Facilitate Reading Behavioural Engagement of Fifth-grade Students at SD Mutiara” sebagai salah satu syarat untuk memperoleh gelar Sarjana Pendidikan (S.Pd.) pada Program Studi Pendidikan Bahasa Inggris, Universitas Pendidikan Ganesha.

