

## **I. READING SEGMENT**

**Emergent Language and Literacy** - The primary objective of the reading segment is to help children develop print awareness, listening comprehension, exposure to language (vocabulary, structure, phonology), and most importantly to cultivate a love for stories and an interest in learning how to read.

Simultaneous to testing the comprehension of individual reading segments within our target age group, the research team investigated what makes a successful, popular, and age-appropriate story in general. In order to identify the best practices for video storytelling, story structure, and audio/visual supports, the research team determined familiar story patterns of existing popular tales in both Swahili and English and assessed their effectivity based on participant interview responses. Below are the key findings of the most successful practices:

### **Storytelling Techniques:**

1. **Few Characters** – two or three primary characters is sufficient for an entertaining yet coherent story.
2. **Relatable characters and plots** – popular English tales often feature children or child-like protagonists with plots that reflect everyday events/experiences that children can relate to. This was exemplified in the *Elephant and Piggy* series: *Should I Share My Ice Cream; I Will Take a Nap; Can I Play Too?; Let's Go for a Drive*.
3. **Rhyming words and playing with sounds** – incorporating rhymes into the reading segments makes the story more fun/funny and draws attention. Furthermore, rhyming is an important pre-literacy skill as identified by BELA EL 2.2.
4. **Rhythm** – as a result of repetition and rhyme, the language develops a pattern and rhythm which helps children follow along with text. A subsidiary effect is an introduction to beats and music making.

### **Story Structure:**

1. **Story patterns** - Children can predict what comes next due to repetition and building up on the same words/actions. This repetition and predictability builds children's confidence as readers.
2. **Climax** – Repeated events build suspense, leading to a climactic moment of surprise which serves as a 'reward' to the readers
3. **Content** – The plots of popular children's stories are often either silly (i.e. big foot folktale) or suspenseful/surprising so that the children are intrigued to discover what happens next

#### **Audio/Visual Supports:**

1. **Repetition** - Repetition of a few key words and phrases helps children to learn/memorize words and enables them to actively participate in reading/storytelling because they can read along.
2. **Highlighting** – as the narrator reads the words, those words should be highlighted on the screen to form a link between visual and auditory learning
3. **Minimal text** – Anything more than one or two lines of text per page exceeds the reading capacity of our target group. The reading segment is attempting to expose children to new language and improve emergent literacy, thus it is important to place emphasis on the key words of the segment. This is achieved through short, simple sentences.
4. **Special effects** – character specific sounds (i.e. meow for cat) and different character voices with the same narrator is particularly effective
5. **Book Imagery** – by reinforcing book imagery, children will be prompted and drawn to real books as a source of entertainment. The reading segment could perhaps show the book being opened and closed at the beginning and end of the segment. Perhaps a visual or auditory supplement of the pages being turned could also be incorporated.

The above analysis was found to be almost always correlative to the positive and negative elements of the individual readings segments tested. The research procedures included pre and post test questions to determine comprehension and retention of the plot, pre and post test questions to determine preferred parts of the segment, and observation of attention to the

screen/parts where the children laughed. Future reading segments should attempt to follow these recommendations to maximize comprehension and entertainment value. Below are the research findings for isolated Akili and Me reading segments:

### **AK101R: What Do You Like to Do?**

*During some of these user testing sessions, the characters were adapted from Akili's regular friends to a duck, dog, and cat.*

#### **Findings:**

1. Sound effects, especially the duck's quack, were very effective and elicited a lot of laughter, however, they were not incorporated in the aired segment.
2. Children are able to easily identify basic common animals and the sounds they make by four years of age

**Common Misconceptions:** Based on user testing, this segment was easy to understand. Every child was able to accurately recall what happened in the segment without any noticeable misinterpretations.

#### **Successes:**

1. By the time the children from the user testing group watched this segment, they were already very familiar with the different characters of the show and were able to express before the narrator that "Bush Baby likes to draw" and "Happy Hippo likes to read" and "Little Lion likes to jump". This shows that Akili and Me is doing a great job at repetitive and relatable characterization!
2. Discovered that the kids were particularly attentive when there was a close up shot of Akili's face and they often tried to touch the screen

### **AK102R: My Mother's Birthday vs. Longhorn – Hare is Here**

*During this user testing session, both the audio of My Mother's Birthday and a recorded narration of Kenyan children's book Longhorn – Hare is Here were played and then comparative data was extracted.*

#### **Findings:**

1. Kids enjoyed the repetition of "Where is X?" "X is here!" and often pointed and laughed or answered the question for the narrator in the Longhorn story.

2. Even though there were lots of different animals in the longhorn story, children could remember most of them.
3. Compared to the Longhorn story, the secondary animal characters in My Mother's Birthday were not remembered well by the children – the dove especially was too difficult/obscure of a character to be recalled.
4. Because many Swahili stories have a rabbit paired with a hyena, one child thought there was a hyena in the story even though there wasn't. We should be aware of common animal coupling patterns in traditional Swahili folktales.
5. Further test conducted – watching the longhorn story with sound effects versus longhorn story without sound effects. Children were much more energetic and engaged watching the segment with sound effects

**Common misconceptions:**

1. Children thought “big as an ocean” line was supposed to be humorous. They did not understand the simile to be in reference to a mother's love.
2. Children thought the story was about “buying something as big as an ocean” suggesting that they interpreted the plot as comparing literal sizes rather than metaphorical worth.
3. In the post test, none of the children were able to identify that they should be giving their mama ‘love’ as a present. When the narrator says “Your love is bigger than the ocean, more beautiful than a flower, and sweeter than honey!”, it is not clear that this line is spoken by Akili's mother addressing Akili – hence the punchline/moral of the story is somewhat lost.

**AK103R: Five Chicks and a Mango**

**Findings:**

1. No children remembered the mosquito from the story. This character was unnecessary and overcomplicated the plot.

**Common misconceptions:**

1. When the children were asked to apply the basic moral/premise to their own lives with the question – “If you were trying to do something by yourself and couldn't, what would you do?”, a few children interpreted the premise of the story very literally

responding that they would ask baby chickens for help. Perhaps this literal interpretation can be avoided by including a line at the end of each reading segment which converts the story into a real life application such as “so readers, if you ever need help, you can always ask your friends.”

**Successes:**

1. In terms of entertainment, this was the most successful reading segment. During other user testing sessions, children often recall or mention the baby chicken story as being their favorite. The kids always laugh when the ladder of chicks falls to the ground. This kind of basic visual humor should be included in other episodes.
2. Young children probably identify with baby animals and have faced similar situations where they wanted something they couldn't reach because they were too small. This is a very relatable segment!
3. Many children were also able to identify that there were five chicks within the story suggesting that this episode triggered emergent math skills and encouraged basic counting. This could be made even more successful if large colorful numbers were coupled with each chick so that there was a corresponding visual component to the auditory counting within the reading segment.

**AK104R: My Marvelous Market**

**Findings:**

1. Kids said if they went to the market they would buy matembele, kisamvu, meat, rice, fish, cassava, potatoes, cabbage, mchicha – very ordinary meal items that they probably have seen their mothers buying. In future episodes, maybe this is the kind of food we should be using.
2. Children could not say how many of each fruit there were at the market. There should be numbers on the screen, or counting could be incorporated into the story in order to improve emergent math skills.

**Common misconceptions:**

1. Kids often thought that Happy Hippo bought bananas from the market
2. No kids remembered the avocado or the coconut – not a common fruit for people to be eating

**Successes:**

1. Rhyme was great and very engaging! However, we found out in earlier testing that kids sometimes struggle to understand the plot of stories when its rhymes because perhaps they are distracted by the musical element to the narration. Rhyme is most effective when attempting to strengthen the children's memorization processes and remember sequences like the alphabet or counting numbers.

**AK106R: Good Food to Make Me Strong****Findings:**

1. Primacy effect is prevalent here – giving examples of many types of food seemed to be too much information for the kids as they were only able to remember the first two foods accurately (eggs to make your hair grow and milk to make you strong).
2. Vitamins was too complex of a word to be used without providing a definition.

**AK107R: Akili and the River**

*During these user testing sessions, the story was adapted from Akili and the River to Zuri and the River, and the principal characters were Zuri, a cat, and a dog instead of Akili, Happy Hippo, and Little Lion. Some of the sessions were dedicated to testing whether the children were learning principal concepts and some sessions compared the same story with or without rhyming.*

**Findings:**

1. Most of the children expressed that they preferred stories about animals more than people
2. Children were amused when the narrator made character-specific sounds and laughed often at sound effects
3. Some children conveyed fear in the post test questions saying that the part they did not like was when “the cat and dog jumped and leave Zuri behind”. Some of the biggest fears for young children are isolation, separation, and being left alone and perhaps that was manifested within this segment.
4. Contrarily, older children later articulated in another post test that when Zuri was left by herself on one side of the river was their favorite part. There might be a significant

social emotional gap between the youngest viewers and the oldest viewers of this segment that should be addressed.

5. When comparing the same story with rhyming words versus without rhyming words it was discovered that children preferred the rhyming story and were more attentive but less able to recall the basic premise of the story afterwards.
6. Although children said that the person most likely to tell them stories is their mother, they expressed that they prefer a male narrator voice.

**Common misconceptions:**

1. Some children thought the trio of friends were playing in the water rather than trying to jump over it perhaps as a result of ambiguous animation.
2. Children also thought that the reason Zuri was afraid to jump was because she was competing with the dog and the cat about who could jump the highest and she was afraid to lose. We should try to avoid storylines and language that could be construed as competitive in the future.

**Successes:**

1. Repetition of phrases like “take two steps back” helped children remember the story. Most children used the same phrasing in their retellings.
2. When asked to recall the story, most children could accurately recall the basic premise and still wanted to watch it again.
3. Children changed their answers to the question “*What will you do if your friend is afraid to do something?*” from – “*I will bring him food*” and “*I will stop being his friend*” in the pre-test to “*I will encourage him*” and “*I will help him*” in the post-test suggesting positive social emotional progress.

**AK110R: A Doll for All**

**Common misconceptions:**

1. A couple of kids thought that Happy Hippo’s solution was to give everyone the same kind of doll that she had.

**Successes:**

1. For the most part, this was a very successful segment and the children were able to recall the plot accurately and express the intended message of sharing/playing together.

### **AK116R: Good Friends**

#### **Findings:**

1. The rhyme was not consistent throughout the video, hence it lost the children's attention toward the end.
2. Based on the answers in the post test, this episode was too focused on materialistic things – i.e. giving juice and cards is the only way to make people feel better. Children understood that in order to be good friend you have to buy them things.

#### **Common misconceptions:**

1. For some reason the kids thought that Akili and Happy Hippo were trying to give Bush Baby a horse to make him feel better. This could be the result of some external factor influencing their answers, completely unrelated to the segment.

### **AK121R: So Many Different Places**

#### **Findings:**

1. Children did not improve from the pre to the post test in being able to identify what the 'opposite' of certain words, like small, short, happy and slow, were. It is possible that the script did not stress enough the concept of opposition and a clear definition is needed.

#### **Successes:**

1. As seen in this episode as well as a previously tested reading segment "My Mother's Birthday", children are very attentive when the subject of the story is the ocean or other bodies of water. They frequently recall this as being their favorite parts of the show. The ocean should be incorporated into more Akili and Me segments.

### **AK123R: When I Grow Up**

*This segment was testing using the audio recording only.*

#### **Successes:**



1. Children were able to understand all the future professions expressed in this segment
2. After watching, some kids were inspired to expand their dreams from the pre-test i.e. carrying bricks changed to building skyscrapers

### **Can I Have a Ride?**

*The Ubongo team decided not to air this reading segment because it sends a negative message. The findings from the user testing research support this decision.*

#### **Findings:**

1. When asked “have you ever had a lift?”, children offered that their mothers/parents do not want them to take lifts because they are “dangerous”.

### **Who Broke My Shoe?**

*Based on user testing results, a collective decision was made to remove this show from the scheduled curriculum.*

#### **Findings:**

1. The children’s answers reflected their home environments. When asked what their mother would do if they tore her khanga, many of them answered that she would get very angry and beat them.
2. During this testing session, it was discovered that the kids focused on another episode which was perhaps more light-hearted or their favorite. Many of their answers were silly ones about Akili and the Chickens.