Visual interpretation of children aged 3–8 toward non-dialogue animated films: A study on the impact on language development and imagination

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ABSTRACT

The phenomenon of speech delay in early childhood in Indonesia is increasingly prevalent, with estimates ranging from 5% to 8% among preschool-aged children, according to the Indonesian Pediatric Society (IDAI). One environmental factor under scrutiny is children's exposure to non-dialogue animated films, which are widely broadcast on Indonesian television, such as Larva, Shaun the Sheep, and Masha and the Bear. These shows rely heavily on visual storytelling and character expressions without spoken dialogue, raising concerns about their impact on children's language development. This study aims to analyze how children aged 3 to 8 interpret non-dialogue animated films through a visual semiotic lens. Roland Barthes' semiotic theory is employed to examine the denotative and connotative meanings of visual signs, while Charles Sanders Peirce's model is used to classify signs into icons, indices, and symbols. Using a qualitative descriptive method, this study analyzes visual texts and observes children's interpretive responses. The findings indicate that although children can grasp basic narrative messages through visual cues, the absence of verbal language input may hinder vocabulary growth and expressive language development, particularly in the absence of adult interaction. This study contributes to a deeper understanding of the relationship between non-verbal media consumption and the risk of speech delay in early childhood in Indonesia.

INTRODUCTION

Language development in early childhood is a critical aspect of a child's overall growth, influencing not only communication abilities but also cognitive processes, learning capacity, and social interaction (Ernita and Mayar, 2023). Language serves as a foundational element in shaping both cognitive and social skills. During the early years particularly between the ages of 0 and 8 children experience a "golden age" of language acquisition, a period when the brain is highly receptive to verbal and non-verbal stimuli from the environment (Tatlilioğlu and Senchylo-Tatlilioglu, 2021). A lack of adequate language stimulation during this sensitive phase can hinder language acquisition and potentially lead to developmental delays.

The phenomenon of speech delay has gained increasing attention in recent years. Speech delay refers to a condition in which a child fails to reach age-appropriate language milestones, such as uttering their first word, combining words, or following simple verbal instructions. According to the Indonesian Pediatric Society (IDAI), the prevalence of speech delay among preschool-aged children in Indonesia is estimated to range between 5% and 8% (IDAI - ANTARA News 2023 n.d.).

The causes are multifactorial, encompassing neurological conditions (such as hearing impairment, autism spectrum disorders, or minor brain dysfunctions), inadequate verbal stimulation within the home environment, and excessive media consumption without reciprocal interaction.

A media report (FK-KMK UGM 2023 n.d.) Dr. Retno Sutomo from Universitas Gadjah Mada (UGM)**,** FK-KMK UGM 2023 highlights growing concerns regarding speech delay among Indonesian children. According to her, an estimated 5–10% of children in Indonesia experience speech delay.

These figures underscore the significant prevalence of language development disorders in early childhood and the need for greater awareness, early detection, and appropriate interventions (Lestari, 2024)

Table 1. Summary Of Speech Delay Prevalence In Indonesia

No	Source/Report	Group & Location	Prevalence
1.	IDAI (2023)	National preschool children	5-8%
2.	Ministry of Health (2010) & national study	National toddlers	11.5%
3.	OHND Survey in 7 Provinces (2014)	Toddlers in 7 provinces	3-10%
4.	Bali study (Child Development Clinic)	Toddlers at clinical setting (Bali)	51%
5.	Tasikmalaya Study (2023)	Urban Toddlers	8.35%
6.	Media & Dr Retno Sutomo (2024)	National toddlers	5-10%

In parallel with the rapid development of digital technology and visual culture, children are increasingly exposed to digital media from an early age (Lodhi et al. 2018). One of the most commonly consumed forms of content is animated programming. In Indonesia, non-verbal animated series such as *Larva*, *Shaun the Sheep*, and *Masha and the Bear* have gained significant popularity among young viewers. These shows are characterized by their reliance on visual narratives, expressive gestures, and non-linguistic sound effects instead of spoken dialogue. While these types of animation can effectively stimulate imagination and visual literacy, concerns have been raised about their limited exposure to spoken language, which is essential for optimal language development during early childhood.

Table 2. Summary Of Animated Film Segmentation

No.	Title	Target Audience Age	Dialogue Type	Source
1.	Larva	3-7 Years	Non verbal	IMDb, Rotten Tomatoes, Plugged In
2.	Shaun the Sheep	4-7 Years	Non verbal	Australia CMA, IMDb, ChristianAnswers, Wikipedia
3.	Masha and the Bear	3 – 8 Years	Minimal verbal	Wikipedia, Autumn's Mummy, Amazon Buku

Larva is a South Korean animated series produced by TUBA Entertainment. The show features two main larva characters—Red and Yellow—who communicate using non-verbal sounds such as grunts, laughter, and exaggerated physical expressions. Its appeal lies primarily in slapstick humor and absurd comedic situations. With a short-format structure of approximately 2–3 minutes per episode, *Larva* is easily accessible and frequently rewatched by young children.

Figure 1. Larva Animation Movie Poster
Source: Google Play

The animated series *Larva* began airing in Indonesia around 2018 on the television station RCTI occupying a Friday afternoon slot at 4:30 PM and weekend morning slots, before moving to MNC TV (Tuban Larva animation, 2018 n.d.). The show focuses on two larva characters—Red and Yellow—who communicate without verbal dialogue, relying instead on expressive sounds and visual effects, with humor based primarily on slapstick. As a form of visual entertainment, Larva stimulates children's imagination and visual interpretation skills. However, the lack of verbal dialogue results in limited

exposure to new vocabulary, which is essential for early language development. Additionally, the show includes elements of cartoon violence (such as exaggerated bodily harm), which children may imitate, potentially influencing their social interactions.

Meanwhile, *Shaun the Sheep* is an animated series produced by Aardman Animations in the United Kingdom, utilizing stop-motion animation. The series features no spoken dialogue; characters communicate through sheep-like sounds, gestures, and facial expressions. Known for its lighthearted storytelling and visual humor, *Shaun the Sheep* has gained widespread popularity since its debut in 2007, leading to the production of numerous episodes. In Indonesia, the series has been broadcast on TVRI, MNCTV, and other children's television networks.

Figure 2. Shaun the Sheep Poster
Source: Google Play

The animation relies heavily on visual narrative and sound effects, with characters expressing themselves through body language and animal noises. A study conducted by Winda Setya Rini (2016) at SD Negeri 189 Pekanbaru found that watching *Shaun the Sheep* had an impact on students' behavior, with a regression coefficient of 0.002 and an R^2 value of 10.2%, suggesting that approximately 10.2% of behavioral variation could be attributed to viewing habits (Lani et al. 2021). The non-verbal nature of the series encourages children to develop visual interpretation skills by decoding facial expressions, body movements, and situational cues, thus fostering imagination, creativity, and empathy. However, due to the absence of spoken language, such content may offer limited support for vocabulary acquisition and language development unless supplemented with adult interaction and verbal reinforcement.

Masha and the Bear is a Russian animated series that portrays the relationship between an energetic young girl named Masha and a patient bear. Although Masha occasionally speaks in Russian, the series relies more heavily on facial expressions, sound effects, and gestures than on verbal dialogue.

Figure 3. Masha and The Bear Poster
Source: IMDb

The show is widely appreciated for conveying positive moral values such as friendship, courage, and responsibility, which can serve as examples for children. However, the limited use of spoken language results in minimal exposure to new vocabulary, particularly when children watch the show without adult guidance or verbal interaction.

Early childhood communication encompasses not only the ability to speak but also the understanding of symbols, gestures, and the social meanings embedded in messages. According to Jerome Bruner's language acquisition theory (1983), children require *scaffolding*—that is, social and linguistic guidance from adults to effectively develop communicative abilities(Vallotton and Ayoub

2010). When children are exposed solely to visual messages without sufficient verbal context, they may lack the necessary stimulation to support the development of phonology, morphology, and syntax.

In this regard, non-dialogue animated films present both opportunities and challenges. On one hand, they serve as a source of entertainment that can enrich visual imagination and train non-verbal interpretation skills such as understanding facial expressions and situational cues. On the other hand, these shows may reduce the frequency of exposure to new vocabulary, sentence structures, and active dialogue, which are critical for language development in children aged 3 to 8 years. At this developmental stage—often referred to as the "golden age" of language acquisition children need rich linguistic input to support the growth of their verbal expression. Overexposure to media lacking in spoken language may hinder the internalization of linguistic structures (Kucker, Perry, and Barr 2024).

To explore this issue further, the study will examine how children interpret non-dialogue animated films using a visual semiotics approach. Roland Barthes (1977) proposed that signs carry meaning on two levels: denotative (literal meaning) and connotative (cultural or symbolic meaning). In the context of children's media consumption, interpretations of character gestures or humorous scenes can be analyzed through connotative lenses, shaped by cultural background and personal experiences. Additionally, Charles Sanders Peirce categorized signs into three types: icons (based on resemblance), indices (based on cause-effect relationships), and symbols (based on social conventions) (Maulidiyah 2021). These frameworks can be used to trace how children identify and derive meaning from different types of visual signs in animation.

This research aims to explore how children aged 3 to 8 interpret non-dialogue animated films through visual semiotic analysis and to examine the connection between their interpretations and potential impacts on language development and imagination. The findings are expected to contribute to children's media literacy, the development of educational content, and the creation of more contextually relevant strategies to prevent speech delay in Indonesia.

METHOD

This study employs a descriptive qualitative method to explore and understand how children interpret non-dialogue animated films. This approach is suitable for examining subjective experiences and meaning-making processes that cannot be fully captured through quantitative data. The research focuses on children aged 3–8 years and their responses to three popular non-verbal animated series: *Larva*, *Shaun the Sheep*, and *Masha and the Bear*. These shows were selected due to their strong visual narratives and popularity among early childhood audiences in Indonesia.

The analysis is conducted using a visual semiotic approach, drawing on the theories of Roland Barthes and Charles Sanders Peirce. Barthes distinguishes between two levels of meaning in signs: denotative (literal meaning) and connotative (cultural or symbolic meaning). Meanwhile, Peirce categorizes signs into icons (based on resemblance), indexes (cause-effect relationships), and symbols (based on social conventions). By applying these frameworks, the study aims to identify the types of visual signs children recognize and interpret, and to examine how these interpretations relate to their language development and imagination. This approach is expected to contribute to children's media literacy and provide insights for educational content design that supports early language acquisition.

FINDINGS AND DISCUSSION

In this discussion section, each selected non-verbal animated film *Larva*, *Shaun the Sheep*, and *Masha and the Bear* will be analyzed to explore how young children interpret their content. The analysis focuses on the most popular episode from each series, determined by viewership and media exposure in Indonesia. These episodes are considered representative due to their widespread appeal and distinctive visual storytelling. A narrative description and visual breakdown of each episode will be provided to establish context prior to the analytical phase.

The analysis applies a visual semiotics approach based on the theories of Roland Barthes and Charles Sanders Peirce. Barthes divides meaning into two levels: denotative (literal meaning) and connotative (symbolic or cultural meaning), while Peirce categorizes signs into icons, indexes, and symbols. Using this framework, each visual element such as character expressions, body movements, color use, and comedic situations is examined as a sign that children might interpret. The main goal of

this analysis is to understand how children construct meaning from non-verbal media and how this visual interpretation process relates to their language development and cognitive growth.

Larva Animated Series – Episode "Aquarium"

Episode Title	: *Aquarium*
Duration	: 2 minutes 15 seconds
Release Date on YouTube	: Nov 23, 2017
Platform	: YouTube (*Larva TUBA* channel)
View Count (as of June 2025)	: 72 million views
Format	: Non-dialogue animation, Slapstick humor, expressive visual and sound based storytelling

Figure 4. Larva Animation Series-Aquarium
Source: LARVA TUBA

Synopsis

In this episode, Red and Yellow find a fish trapped inside a leaking plastic bag filled with water. They comically attempt to save the fish using various exaggerated methods, such as sucking up the water and spraying it back. In the end, their good intentions are ironically met with failure as the fish ends up in a dirty tin can (Larva 2016).

Roland Barthes Denotation & Connotation
Denotative

The episode literally portrays two larvae trying to rescue a fish from a leaking bag. Their actions involve humorous physical efforts and visual gags.

Figure 5. Larva Animation Movie Aquarium
Source: LARVA TUBA

Connotative (Cultural/Symbolic Meaning)

The leaking water symbolizes urgency or crisis, Helping the fish connotes empathy and concern for others, The slapstick and chaotic rescue attempts represent spontaneous collaboration, albeit unstructured, The final scene—where the fish ends up in a filthy tin can—suggests the irony that good intentions can fail without careful consideration, adding a layer of moral reflection.

Charles Sanders Peirce's Semiotic Theory: Icon, Index, Symbol
Icon (Sign by Resemblance)

Objects such as the fish, water, and plastic bag visually resemble their real world counterparts, Facial expressions of the larvae (wide eyes, panic) iconically represent human emotions.

Index (Sign by Direct Connection)

Leaking water fish gasping: an index that water is essential for the fish's survival, Larva inflating after sucking water squirting it back: a humorous but logical index of rescue, Sweat and frantic movement index the emotional state of urgency and panic.

Symbol (Sign by Convention)

The tin can is symbolically a container, but in this case, it signifies a poor rescue outcome, The cooperation between the larva symbolizes friendship and teamwork, The fish symbolically represents a vulnerable figure in need of help.

The *Aquarium* episode from the *Larva* animated series presents a story without any verbal dialogue, yet it effectively conveys meaning through visual expressions and comedic situations. Using the semiotic approaches of Roland Barthes and Charles Peirce, the episode demonstrates how visual signs—such as body movements, facial expressions, and contextual cues—can communicate messages of empathy, cooperation, and responsibility. While the show stimulates children's visual cognition, such as imagination and situational interpretation, the absence of verbal interaction limits their exposure to new vocabulary and sentence structures. Without adult guidance or verbal reinforcement, repeated exposure to non-verbal media like this may contribute to delayed language development or *speech delay*.

Shaun The Sheep Animated Series – Episode "The Rounders Match"

Episode Title	: *The Rounders Match*
Duration	: 6 minutes 54 seconds
Release Date on YouTube	: Oct 13, 2017
Platform	: YouTube (*Shaun The Sheep* channel)
View Count (as of June 2025)	: 2,1million views
Format	: Non-dialogue animation, humor, expressive visual and sound based storytelling.

Figure 6. Shaun The Sheep Animation Series-The Rounders Match
Source: Shaun The Sheep Channel

Synopsis

"The Rounders Match" **i**s one of the popular episodes from Season 3 of *Shaun the Sheep*, showcasing a simple yet meaningful story. In this episode, Shaun and the flock play a game of rounders a traditional British bat-and-ball game on the farmyard field. The tension rises when the mischievous pigs begin cheating to win the game. Although there is no verbal dialogue throughout the episode, the narrative is clearly conveyed through expressive facial gestures, body movements, and sound effects (Shaun the Sheep Official 2017).

Roland Barthes Denotation & Connotation
Denotative

This episode shows a group of sheep playing rounders while facing cheating behaviour from the pigs in the pen. Although there is no spoken dialogue, communication is effectively conveyed through facial expressions, body gestures, and sound effects.

Figure 7. Sheep playing rounders
Source: Shaun The Sheep Channel

Connotative

Emerges through the symbolic representation of the rounders game, which reflects children's social interactions in everyday contexts, such as playing at school or in their neighborhoods. The pigs' cheating behavior represents injustice and selfishness, while Shaun and his friends' responses reflect values of sportsmanship, solidarity, and the courage to confront unfairness. The characters' expressions and reactions convey messages about ethical play, team responsibility, and nonviolent conflict resolution.

Charles Sanders Peirce's Semiotic Theory: Icon, Index, Symbol
Icon (Sign by Resemblance)

The characters—sheep, pigs, and the farm setting—are portrayed humorously but still resemble their real-world counterparts. Objects such as the bat, ball, and playing field serveas recognizable icons for children, representing the real world.

Index (Sign by Direct Connection)

The action of hitting the ball leading to chaos illustrates a direct causal relationship. The characters' angry or disappointed facial expressions function as indices that signify emotional tension and conflict.

Symbol (Sign by Convention)

The rounders game itself is a symbol of social competition governed by unspoken rules. Shaun's team ultimately winning despite the pigs' cheating symbolizes the triumph of honesty and fairness over deceit.

Through Barthes' and Peirce's semiotic frameworks, this episode communicates moral and educational messages that children can grasp even without verbal dialogue. Themes of honesty, cooperation, and conflict resolution are transmitted visually and emotionally. However, the lack of verbal language input remains a critical concern. Without adult interaction or verbal scaffolding, such non-verbal media may not sufficiently support the development of children's vocabulary and sentence structure, which are essential in early language acquisition.

Masha and the Bear Animated Series – Episode "Recipe for Disaster"

Episode Title   : *Recipe For Disaster*
Duration   : 6 minutes 42 seconds
Release Date on YouTube   : Aug 14, 2015
Platform   : YouTube (*Masha and The Bear* channel)
View Count (as of June 2025)   : 708 million views
Format   : Minim dialogue animation, expressive visual and sound based
                                           storytelling.

Figure 8. Masha and The Bear Animation Series-The Rounders Match
Source: Masha and The Bear Channel

Synopsis

Masha sees the Bear cooking in his kitchen. After the Bear steps out briefly, Masha attempts to mimic his cooking. However, lacking any real knowledge or control, she recklessly throws all the ingredients into a large pot. The kitchen descends into chaos—explosions, spills, and total mess. Meanwhile, the Bear, who was hoping to relax with some tea and a delicious meal, returns to find his kitchen in ruins. Although visibly frustrated, he remains calm and patient as he deals with the aftermath of Masha's antics. In the end, the Bear tries to restore order while maintaining his warm and caring relationship with Masha (Masha and The Bear 2015).

Roland Barthes Denotation & Connotation

Denotative

Masha observes the Bear cooking in the kitchen and attempts to do it herself after he leaves. She mixes random ingredients without understanding how to cook, leading to a mess. When the Bear returns, he finds his kitchen in chaos but responds with patience rather than anger.
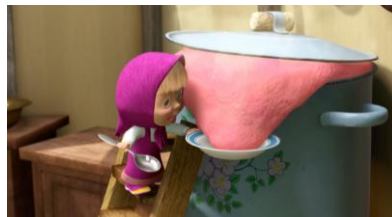
Figure 9. Masha holds food The Rounders Match
Source: Masha and The Bear Channel

Connotative

Masha's behavior symbolizes a child's natural curiosity and tendency to explore the adult world without fully grasping consequences. The disarray in the kitchen signifies the disruption children may cause in structured adult spaces, while also representing a critical learning process. The Bear's calm demeanor is symbolic of ideal adult guidance—emphasizing patience, nurturing, and non-punitive discipline. The overall connotation of the episode promotes values such as responsibility, learning from mistakes, and emotional resilience in both children and adults.

Charles Sanders Peirce's Semiotic Theory: Icon, Index, Symbol

Icon (Sign by Resemblance)

The characters—Masha, the Bear, the kitchen, and the cooking utensils—are depicted with realistic and familiar forms, making them easily recognizable for children. These visual representations allow immediate association with real-world situations.

Index (Sign by Direct Connection)

Masha's chaotic mixing of random ingredients leads to an explosion and mess in the kitchen. The Bear's frustrated facial expression and Masha's fearful reaction serve as indices of the emotional dynamics and relationship between the characters.

Symbol (Sign by Convention)

Cooking functions as a symbolic activity representing responsibility and independence. The kitchen disaster symbolizes a child's learning process, in which making mistakes is a natural part of growth and development. Meanwhile, the Bear's calm response symbolizes an empathetic parenting approach—one that favors understanding and patience over punishment.

Recipe for Disaster features Masha engaging in risky behavior, such as cooking unsupervised and causing chaos. While it conveys messages about learning from mistakes and taking responsibility, the lack of verbal dialogue limits language exposure for children aged 3–8. Without adult guidance, the show is less effective in supporting vocabulary development, speaking skills, and overall cognitive growth.

CONCLUSION

The three non-dialogue animated films — *Larva*, *Shaun the Sheep*, and *Masha and the Bear* — effectively convey moral and social values through visual narratives, analyzed using Roland Barthes' and Charles Sanders Peirce's semiotic frameworks. Barthes' theory highlights both the literal (denotative) meanings portrayed in daily activities and the symbolic (connotative) meanings related to cooperation, responsibility, and conflict resolution. Peirce's semiotics classifies signs into icons, indexes, and symbols, revealing how visual cues represent emotions, actions, and cultural conventions.

However, from a developmental perspective for children aged 3–8, the lack of verbal dialogue in these animations raises concerns about their cognitive and linguistic growth. Limited linguistic input results in reduced exposure to new vocabulary, sentence structures, and expressive language use. Without active verbal interaction from adults, excessive consumption of such media can hinder verbal imagination and language internalization. This may contribute to the growing prevalence of speech delays among children in Indonesia, as indicated by recent national studies and pediatric health reports.

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