

# THE IMPACT OF SRI LANKAN TRADITIONAL TOY DESIGN ON CHILD DEVELOPMENT

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**Abstract:** Toys are one of the most rooted memories in every child's life. From early childhood to teenage ages children used to play with different toys. Sometimes this bond lasts long for the rest of the life. Sri Lanka, enriched with different traditions and values, has a special place for toys as well. This study explores the significant role of Sri Lankan traditional toys when it comes to child development. Sri Lankan traditional toys have different material variations, colors, and assembly processes. The study utilizes 6 unique cases of Sri Lankan traditional toys such as wooden toys, game boards, and toy guns. The study further evaluates cognitive skills, emotional development, physical development, social development, and creative thinking parameters based on a rating scale. The results revealed that gameplay with these toys fosters emotional and problem-solving abilities. Through group play toys foster emotional and social development. This research highlights the influence of traditional toys on child physical, cognitive, and social development.

**Keywords:** *Toy Design, Traditional Sri Lankan toys, Child development*

## 1. Introduction

Play is essential for children's development and helps to develop cognitive, social, emotional, and physical well-being. When it comes to playing toys act as one of the primary mediums (Subham Moharana1, 2024). Toys and games help to develop the child's development in different aspects. social development, emotional development, physical development, cognitive development problem solving, and creative thinking are some of these main aspects.

Toys and play influence children to develop verbal and nonverbal communication methods. Trying to gain access to ongoing play, cheering up others and game planning are a few ways that help the child to develop social skills (Spodek & Saracho, 1988). Active play always allows children to develop their gross motor development and body awareness as they actively use their bodies, these active physical movements help to avoid joint muscular illnesses, such as juvenile rheumatoid arthritis and multiple sclerosis. children do not like to engage in repeated strenuous exercises; they can, however, engage in active play. Active play helps them build or maintain energy, joint flexibility, and muscular strength. Side benefits of active play for these children include the development of social skills and an increasing ability to endure stressful situations (Hall, 2010).

Sri Lanka, a country that highly values traditions and cultures, also reflects its traditions with toys. Sri Lankan traditional toys play a significant role in children's childhoods. However, with the technological development of the toy industries, these conventional toys are fading away from the urban communities without knowing the real value of designs. This study explores the influence of these traditional toys on various aspects of child development, including cognitive, social, emotional, creative, and physical growth. by examining traditional toys in different parameters such as materials, designs, and cultural significance this research shows the potential of integrating these conventional toys into modern child development practices.

The main question for this research would be,  
 Does Sri Lankan traditional toys influence the process of fostering child development?  
 What are the parameters of traditional toy play in child development?  
 Therefore, the following objectives will be considered when conducting the research.

- To identify the role of toys in child development.
- To identify the influence of traditional toys on fostering child development
- To identify the functional and aesthetical aspects of traditional toys.

## 2. Literature review

Child development can be defined under different parameters. Out of the several clarifications, child development with age can be considered as one of the clearest classifications. It indicates how the physical, cognitive, emotional, and social development of a child varies through growth.

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## 2.1. CHILD DEVELOPMENT BY AGE

There are four main child development stages according to the age. The early period of birth to 2 years is considered as infancy stage, from 2 years to 6 years known as early childhood development period and middle childhood is the age between 6 years to 12 years. From 12 years to 18 years is considered as Adolescence.

## 2.2. THE INFANCY STAGE OF CHILD DEVELOPMENT (0 TO 2 YEARS)

During the infancy stage, the physical development of a child rapidly happens and an increase in weight height, and motor skills like crawling, sitting, standing, and walking can be seen. As fine motor skill development Grasping objects, and pincer grip can be noticed. The sensorimotor stage of cognitive development also can be seen in children, they are capable of learning through the sensory experience and manipulating objects. In the emotional development of the infancy stage emotional development towards the caregivers and emotions like joy, anger fear can be identified. In terms of social development imitating and social smiles can be seen in a child's behaviour's (Berk ,2018).

## 2.3. EARLY CHILDHOOD DEVELOPMENT (2 YEARS TO 6 YEARS)

In early childhood development, the development of physical growth gets a little slower, but it remains steady through the years. A clear development of fine motor and gross motor abilities can be identified. The development of Fine motor skills like drawing, using utensils, and dressing, and gross motor skills like running, jumping, and climbing can be seen. from the perspective of cognitive development, the use of language, symbolic thinking, and the development of memory and imagination play major roles.

During the period of early childhood, children start to identify themselves as separate from others. They understand how to express their emotions appropriately. The parallel play turns to cooperative play and they begin to form simple friendships (J. Piaget, *The Origins of Intelligence in Children*,1952).

## 2.4. MIDDLE CHILDHOOD DEVELOPMENT (6 YEARS TO 12 YEARS)

In the period of 6 years to 12 years, steady physical growth can be seen, with the refinement of motor skills and active participation and engagement in sports and physical activities. They start to think logically and understanding conservation, classification, and seriation are the main cognitive developments. In terms of emotions, children get a better understanding and management of emotions while they gather more friends and peer groups. Socially children learn to cooperate, negotiate, and manage conflicts.

## 2.5. THE ADOLESCENCE STAGE OF DEVELOPMENT (12 YEARS TO 18 YEARS)

By the time of age 12 to 18 rapid changes in physical development can be seen including physical growth, sexual maturation, and increase in height and weight. In cognitive development, children start to think critically and hypothetically, and they start to understand abstract ideas. The development of advanced problem-solving and planning skills development also can be taken as cognitive development. Also, within the adolescence stage children are capable of handling complex emotions and they develop personal identities. The influence of peer pressure happens within this period. Also, they increase social relationships and social communication abilities rapidly within the adolescence period of development (Erikson,1968).

## 2.6. TOYS AND THEIR ROLE

Toys can be identified as objects that are designed to play, from the child to adult toys can be a medium of play. Toys can be simple objects such as balls or even it can be a complicated technological object such as robots. Also, they can be made, designed, and used to serve different purposes such as entertainment purposes, education, stimulating imagination, encouraging social interaction, and encouraging physical and cognitive development (Frost, J. L, Wortham, S. C, & Reifel, S,2008).

## 2.7. CATEGORIZATION OF TOYS

According to their design, purpose, and influence of the toy, they can be categorized into several main categories. Educational toys, physical activity toys, social toys, creative toys, emotional toys, and technological toys.

### 2.7.1 Educational toys

Educational toys are the key toys that are mostly seen in early childhood education. They either contain shapes, colors, numbers, or letters or they can foster creative thinking, logical thinking, cognitive skills, problem-solving, and memory. Most educational toys come in the form of puzzles, board games, building blocks, and number games (Ginsburg ,2007).

### 2.7.2 Physical toys

Physical toys can foster physical movements, and they help the development of gross motor skills, coordination, and overall balance of the users. Most of the physical toys act as open-ended toys by giving the user to play creatively. balls, bicycles, rope ladders, and toys are examples of physical toys (Pellegrini, A. D., & Smith, P. K, 1998).

### 2.7.3 Social toys

The toys that help to encourage social interaction, cooperation, sharing, and develop non-verbal and verbal communication can be identified as social toys. They usually promote group play and board games, role play sets, figures and dolls, musical instruments, and puppets are a few examples of social toys (Vygotsky, L. S, & Cole, M,1978).

### 2.7.4 Creative toys

These creative toys promote creative thinking, artistic expression, and innovative ideas. they mostly act as open-ended toys and give the freedom to customize and innovative plays. Craft kits, color sets, clay, Lego bricks, musical instruments, hand puppets, and puzzles are some famous creative toys.

### 2.7.5 Emotional development toys

These emotional toys can develop an emotional bond with the user, and they help to express emotions through play. They provide comfort and provide a chance to role-play and help the user to understand the process of their feelings. Dolls, soft toys, sand trays, stuffed animals, and action figures can be taken as emotional development toys (J. Piaget, Play, Dreams and Imitation in Childhood,1951).

### 2.7.6 Technological toys

Technology-driven toys are integrated with modern simple and complex technologies. They come in both tangible toys and applications. these toys often incorporate coding, robotics, and digital interactions. These toys help to develop the user in the modern technology-driven world. LEGO minestrone, coding toys and kits, AR toys, tablets and applications, and mobile devices can be identified as technological toys in the modern world.

## 2.8. ROLE OF TOYS IN CHILD DEVELOPMENT

When it comes to child development each toy category plays an important role. Each toy has direct and indirect connections between different toys. Educational toys can address different aspects of child development. These toys help to improve learning abilities while promoting a love for learning from early childhood. Since they are designed by targeting specific skills it's easy to develop weaknesses in child education by custom applications. Once a child completes a task it boosts confidence and self-esteem of the child. They provide opportunities for parents to engage in their children's learning, strengthening the parent-child bond.

Physical toys always foster gross motor skills, coordination, balance, and overall physical health. As an example, a simple ball can develop hand and eye coordination, timing, and spatial awareness. Also, different play roles of the ball can develop different physical movements. kicking, throwing catching are a few of these movements that help to improve gross motor skills. Riding a bicycle helps to develop balance, coordination, and leg strength while on the other hand, it allows the child to explore the environment. A toy like a jumping rope can be an excellent toy to develop the rhythm in child development. Also, many physical toys promote group play which opens the windows for social interactions (Pellegrini, A. D, & Smith, P. K,1998).

Social toys like game boards, role-playing sets, puppets, and animals help to develop the social development of a child. Game boards teach children to take turns, follow rules, and social interaction. storytelling and role-playing encourage imaginative play, and children often engage in group play. Creating narrative and interaction between characters allows for the development of social and language skills. some of the social games are related to non-verbal communication methods. So, they allow the child to develop both verbal and non-verbal communication methods. Social play often involves negotiating roles, rules, and scenarios. This helps children learn conflict-resolution skills, such as compromise, negotiation, and problem-solving (Rubin, K. H, Bukowski, W, & Parker, J. G, 2006).

Creative toys always boost the development of the child. For example, paints, colors, or clay can be a creative medium to express the child's emotions and it helps to develop fine motor skills, hand-eye coordination, and color recognition. A set of wooden blocks can encourage spatial awareness, problem-solving, and architectural skills. children use their imagination to build various structures enhancing their cognitive development and creativity.

Emotional toys like soft toys, stuffed animals, and baby dolls, can foster the emotional development of a child. These toys facilitate emotional intelligence by providing safe and structured ways for children to explore their feelings, develop empathy, and build emotional resilience. Role-playing with dolls and stuffed animals allows children to express their emotions and practice caregiving, which enhances empathy and nurturing skills. Toys like sand trays, and magnetic sand help children to express their emotions through sensory play. Puppets and figurines encourage imaginative play and storytelling. Children can project their feelings onto these characters, which helps them explore and understand complex emotions and scenarios in a safe context. As an overall outcome, emotional toys help to develop empathy and social skills, self-regulation emotional resilience (Landy,2002).

The technological toys help to prepare the children for the modern technological world. Building and programming a robot, creating 3d objects, and designing games stimulate creativity and innovation.

Many technological toys are designed for collaborative play, where children work together to achieve common goals. This fosters teamwork, communication, and social skills (Resnick, M, & Robinson, K,2017).

### 2.9. SRI LANKAN TRADITIONAL TOYS

Like Sri Lanka's unique traditions and culture, Sri Lankan toys exhibit a delightful variation among themselves. Traditional toys in Sri Lanka, such as wooden figures, clay dolls, game boards, and woven items, are not just ordinary playthings; they are enriched with cultural and educational values. These toys often depict mythological characters, animals, and everyday life scenes. Since most of these toys are open-ended, they stimulate imagination, creativity, and storytelling in children.

These Sri Lankan toys have been passed down through generations as folk toys and games. Parents and grandparents used to manufacture them with their children or grandchildren, fostering a strong bond between them. Many Sri Lankan traditional toys require assembly, manipulation, and problem-solving skills, which help develop children's memory and logical thinking.

Although there are several famous traditional toys, the rise of modern technological toys has limited their prevalence, and most of these traditional toys are now primarily found in rural areas.

*"Kurumbatti machima", "kirilla thuwakkuwa(bata thuwakkuwa)", "beli babaraya"(pora diwul), "polpethi gona", "karakatiya", "kites", "pol kola girawa", "ottapalu bolaya", "pol katu boru kakul", "kakuna babraya" "una wedilla", "kaduru bonikka", "mada ala karaththaya , "puwak kola karaththaya" , "olida board", "takaya "kotta lee kraththaya" , "galpetti nanchakkuwa" , "angulama", "Pol kola naya", "koskola otunna", "runpetta" "koppa telephoneya",* are some of the famous traditional toys.

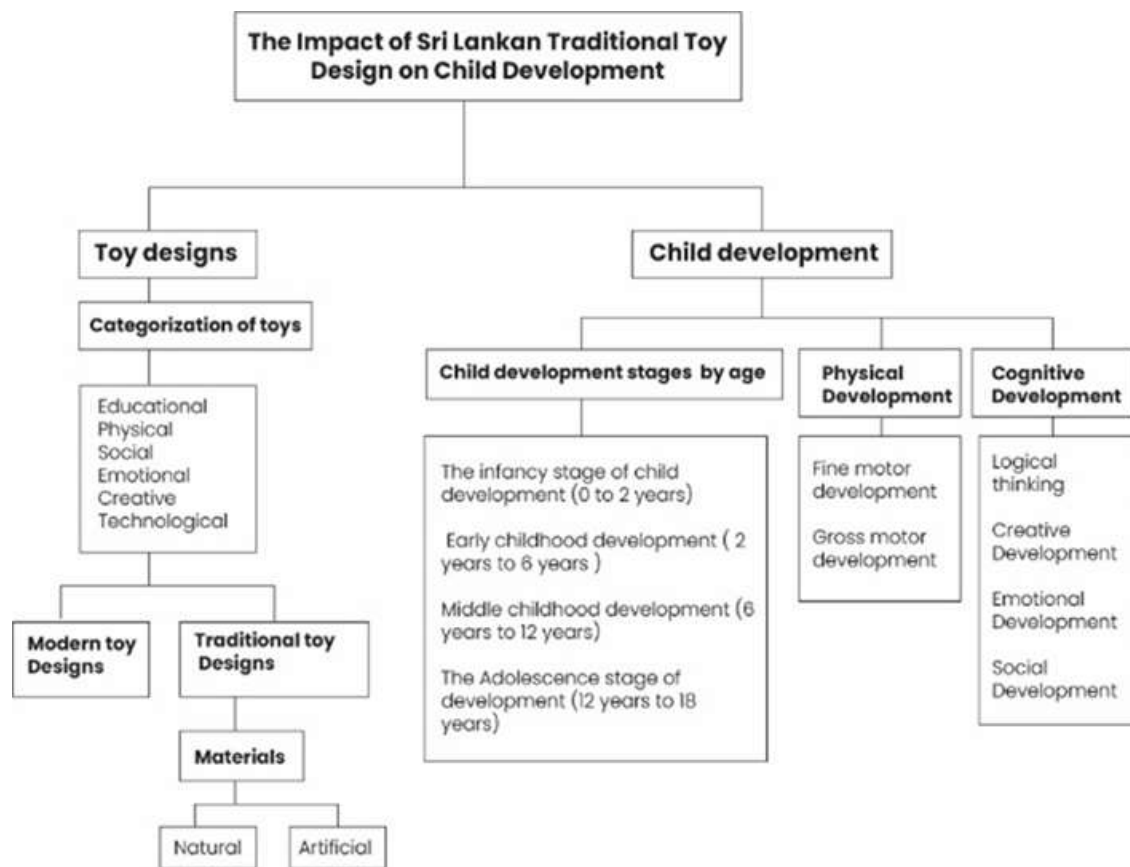


Figure 1, Theoretical framework of the study (Source: Author)

### 3. Methodology

Data collection methods include literature, visits to local museums and cultural centers to gather historical data, and visual documentation of traditional toys. Ethnographic fieldwork was conducted in several rural and urban areas across Sri Lanka to capture the diverse practices of toy making and usage. The snowball sampling technique was utilized to gather data. Semi-structured interviews were held with artisans who have inherited and mastered the skills of traditional toy making. Further information was gathered from specific users such as children, parents, and caretakers who use and make these toys.

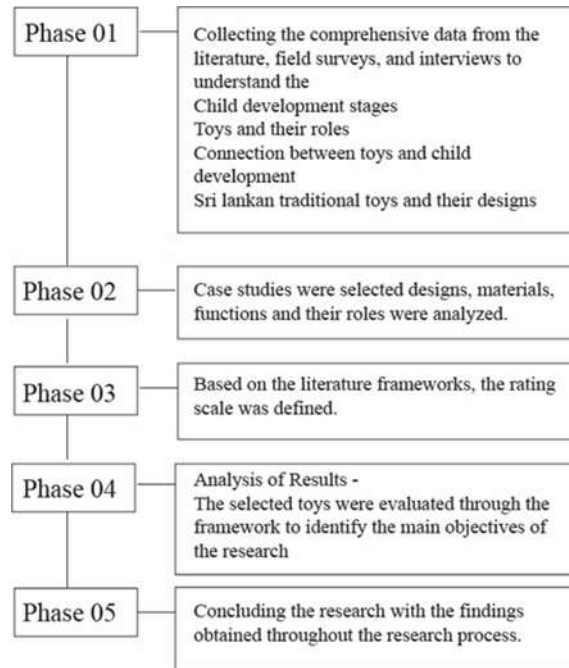


Figure 2, Methodology (Source: Author)

### 3.1. LIMITATIONS

Since most of the traditional toys are limited to rural villages, the design and manufacturing process is rarely recorded as documents. Traditional toy-making skills are often passed down through generations. However, the interest in these crafts is waning among younger generations, leading to a decline in skilled artisans. As a result, there are limitations in finding some region-based toys. out of the findings, several toy designs were selected to ensure the variation of the findings.

## 4. Case study

### 4.1 CASE STUDY 01: “kurumbatti macima”

It’s made from immature coconut and coconut leaf sticks. The play emits a sound like a sewing machine. Sometimes, a piece of paper is added in the middle for maximum enjoyment.

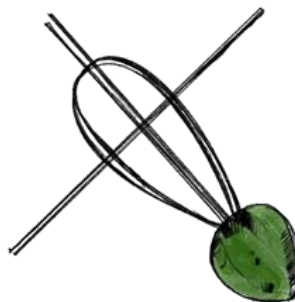


Figure 3, kurumbatti macima (Source: Author)

### 4.2 CASE STUDY 02: “polpethi gona”



Figure 4, Sketch of “polpethi gona” (Source: Author)

*Polpethi Gona* is carved from dry coconut fronds. For the horns, pieces of coconut shells or wooden sticks are used. A rope is tied around its neck as an imaginary pet. Sometimes, children draw eyes and symbols like birthmarks to characterize the toy.

#### 4.3 CASE STUDY 03: *Kirilla thuwakkuwa*

The gun is made using two bamboo sticks and a piece of wood. As bullets, children use *Kirilla* fruit or pepper seeds. The toy can shoot one bullet at a time, and a well-crafted gun can shoot for a few meters.



Figure 5, Sketch of the *kirilla thuwakkuwa* (Source: Author)

#### 4.4 CASE STUDY 04: *pol katu boru kakul*

The toy is made using two dry coconut shells and a rope. The rope is attached to the center of each coconut shell, and children ride it while controlling the balance with the rope.



Figure 6, Sketch of the *pol katu boru kakul* (Source: Author)

#### 4.5 CASE STUDY 05: *olida keliya* (game board)

The game board is made of wood with traditional carvings. Each board has holes on both sides, and *Olida* seeds are used to play the game. Children used to sing traditional folk songs while playing the game.



Figure 7, sketch of *olida petha* (Source: Author)

#### 4.6 CASE STUDY 06: *beli babaraya*

The toy is made using bael fruit or wood apple. The hollowed-out fruit is attached to a stick in the center, and children use a thread to rotate it like a spinning top. Well-practiced players can spin it for a few minutes.



Figure 8, Sketch of *beli babaraya* (Source: Author)

## 5. Result and Discussion

### 5.1 “Kurumbatti masima”

The “Kurumbatti masima” exemplifies creative toys that require assembly before play. Children are encouraged to gather various materials and construct them carefully using simple designs. Building the toys themselves provides children with greater comfort and adds emotional value to the product. Creating a proper “Kurumbatti masima” demands patience, creative thinking, and logical reasoning. Although the machine promotes individual play, children often run with it, influenced by its sound, which also enhances their gross motor skills. Since it is a toy beloved by people of all ages, it impacts two key stages of development. Overall, it can affect approximately 60% of a child's developmental parameters. It can be taken as both an educational and creative toy.

Table 01 – Self assessment based on the rubric defined through the literature - “Kurumbatti masima”

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 – 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
✓				✓			1	1		1	1	1	1		

### 5.2 “polpethi gona”

“Polpethi Gona” was traditionally carved from dry coconut fronds. Same as the other traditional toy designs, children would carve them out of raw materials. This manufacturing process enhances a child's creativity and logical thinking.

Table 02 - Self assessment based on the rubric defined through the literature - “Polpethi gona”

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 – 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
			✓	✓		1	1	1		1	1		1	1	1

Playing with the toy encourages physical movement, as children enjoy walking and running with the toys like pets. This imaginative play develops storytelling abilities and helps build emotional development as children express their emotions to their imaginary characters. Despite its simplicity, the toy has shown an 80% impact on developmental scaling parameters.

### 5.3 “Kirilla thuwakkuwa (bata thuwakkuwa)”

Table 03 - Self assessment based on the rubric defined through the literature - “(bata thuwakkuwa)”

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 – 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
				✓				1	1	1	1	1	1	1	1

The "Kirilla Thuwakkuwa" is one of the coolest toy designs in Sri Lanka, promoting social play. The manufacturing process of this toy gun teaches children about science and technology. Playing with the gun fosters logical thinking, emotional development, creativity, and storytelling abilities. Since the game is played in groups, it enhances teamwork skills and helps children socialize. The toy demonstrates an 80% capability to impact child development parameters.

5.4 "pol katu boru kakul"

Playing with the "Polkatu Boru Kakul" ensures the physical development of children. It helps develop balance and physical movements, as well as fine motor and gross motor skills. The social aspect of the play allows them to make new friends and enhances their imagination. Through "Boru Kakul" they also practice storytelling. Overall, this toy shows about a 70% impact on child development. It can be identified as both a physical toy and a creative toy.

Table 04- Self assessment based on the rubric defined through the literature - "pol katu boru kakul"

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 – 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
✓				✓			1	1		1	1	1	1		1

5.5 "olida keliya" board

The Olida board and its play ensure the mathematical knowledge of children, while the social aspect of the game promotes their socialization. They make new friends, learn to wait for their turn, and develop logical thinking and creativity through the game. Additionally, folk songs help enhance the children's creativity and provide educational value. To play a good game on the Olida board, children need a good memory and a sense of numbers. Since it exhibits qualities of both an educational toy and a social toy, it can be categorized under both. Overall, it shows a 70% impact on child development.

Table 05 - Self assessment based on the rubric defined through the literature - "olida keliya" board

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 – 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
✓		✓						1	1	1		1	1	1	1

5.6 "beli babaraya"

"Beli Babarya" is another interesting toy from the past. The use of natural materials and the manufacturing process ensure a connection between the child and the environment, while the social aspect of play fosters social connections. To play well with "Beli Babarya", children need good focus and logical thinking to place the toy in the correct positions. It can be identified as both a physical and creative toy, showing a 70% impact on child development parameters.



Table 06 - Self assessment based on the rubric defined through the literature - “beli babaraya”

Toy category						Child development stages				Physical development		Cognitive development			
Educational	Physical	Social	emotional	Creative	Technology	0-2 years	2-6 years	6 - 12 years	12 to 18 years	Fine motor skill development	Gross motor skill development	Logical thinking	Creativity	Emotional development	Social development
	✓			✓			1	1	1	1		1	1		1

### 6. Conclusion

The study emphasizes that traditional toys can significantly influence a child's creativity Physical development and Cognitive development. They help develop critical thinking, cognitive skills, communication skills, emotional growth, and physical abilities. This demonstrates that Sri Lankan traditional toys offer more than mere entertainment; they are essential tools for comprehensive child development. They foster creativity, logical thinking, emotional growth, and social development. Physically, they help develop both gross and fine motor skills. The study clearly shows the potential of traditional toys, indicating that they can compete with modern toys. Made from 100% natural materials, these toys are also highly durable. Incorporating these toys into modern educational practices is beneficial for preserving cultural heritage and tradition while fostering cognitive, physical, social, and emotional development in children.

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