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Educational and cultural values of ancient toys: Integration into the 2024 Preschool Education Model

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Abstract

This study addresses the limited use of toys in modern preschool education despite their cultural, cognitive, and social significance. The aim of the study is to identify the pedagogical value of ancient toys and explore their potential for integration into modern preschool education. To this end, the historical contexts and educational functions of toys are analyzed, and their cognitive, social, and cultural contributions are evaluated. Qualitative research method was used in the study and document analysis was adopted as the main data collection tool. The data were collected through a review of museum collections, archaeological reports, and educational science literature. Qualitative content analysis was applied to identify the historical contexts and pedagogical features of ancient toys. The study focuses on and examines their relationship with children's learning processes and the cultural value transmission of ancient toys. The findings reveal that antique toys children's problem-solving, creativity, and social interaction skills are important tools that develop. It was determined that toys made of natural materials contribute to children's exploration of their environment and learning cultural values. These toys support cooperation and leadership skills in group play and encourage imagination and creative thinking in individual play. The study shows that ancient toys have significant potential not only from a pedagogical perspective but also in terms of preserving cultural heritage and increasing diversity in education. The study reveals that integrating ancient toys into modern preschool education materials can contribute to preserving cultural heritage and increasing pedagogical diversity. In addition, it was concluded that these toys are compatible with the goals of value transfer and cultural awareness within the 2024 Education Model.

Keywords: Antique toys, Pedagogical values, Cultural heritage, Pre-school education.

Introduction

Toys, one of the indispensable elements of the children's world, play a critical role in transferring social and cultural values as well as individual development (Özyürek, Tezel Şahin, & Gündüz, 2018). According to anthropological and sociocultural theories, toys play a critical role in cultural transmission. Through toys, children learn the social norms, values, and symbols of the culture they belong to (Vygotsky, 1978; Rogoff, 2003). Guha and Murthy (2018) state that toys are effective tools in the transmission of cultural identity and values, while Ginsburg (2007) states that toys support the learning of social roles and the development of symbolic thinking. In addition, Healey and Mendelsohn (2018) state that toys strengthen children's creative thinking skills. In context, Özyürek, Tezel Şahin, and Gündüz (2018) games and play emphasize the important role in cultural

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intergenerational transmission. In addition, Metin, Mercan, and Kavak (2018) examined the effects of the development of children's cognitive and social states, which are important tools in developing children's creativity. Similarly, Akaroğlu (2014) found that educational toys developed for visual perception training of preschool children have a positive effect on children's visual perception. Onur and Zorlu (2017) examined the relationship between creativity and educational methods applied in design studios and emphasized the importance of toys in the development of creative thinking.

In terms of educational sciences, toys are considered tools that enrich learning experiences as part of pedagogical processes and help children develop creativity, problem-solving, and critical thinking skills (Jani & Sethi, 2024). Toys stimulate imagination, support cognitive and emotional development, and function as important tools in the transmission of cultural heritage (Polat & Kara, 2023). Throughout history, toys have been used as tools that reflect the values, norms, and social structures of societies in different geographies and cultures (Avşar, 2024). However, these multidimensional functions of toys cannot be sufficiently evaluated in today's preschool education (Polat & Kara, 2023). This situation makes it necessary to investigate the integration of the pedagogical values of toys into modern educational processes (Avşar, 2024). The pedagogical role of toys in educational sciences literature is closely related to play-based learning theories. Frost, Wortham, and Reifel's (2012) toys in early childhood with historical origins state that they are important tools that support children's cognitive, social, and emotional development. Similarly, Hirsh-Pasek (2009) emphasized that toys have an indispensable position in play-based learning processes. In the Montessori educational approach, it is stated that toys made of natural materials make important contributions to the development of children's creativity and problem-solving skills (Lillard, 2017). Toys also improve children's communication skills, support their learning processes, and enrich their social interactions. By allowing children to express their feelings and thoughts, they help strengthen their communication skills. In addition, toys function as effective tools for children to manage emotional difficulties such as stress and anxiety; they help children with health problems overcome emotional crises and create a communication bridge between adults and children (Polat & Kara, 2023). Montessori education programs stand out with their supportive aspects of children's psychosocial development and social problem-solving skills. the toys used in these programs have positive effects on children's cognitive and social skills and children's creativity and problem-solving skills It has been supported by studies that improve (Dereli, 2017; Lillard, 2017).

The pedagogical functions of toys in the historical process vary in different geographies and societies. Ancient toys are objects found as a result of archaeological excavations and reflect the pedagogical and cultural contexts of the periods they belong to. In this context, ancient toys are important cultural assets that reflect the values, social structures, and educational understandings of the society to which they belong (Becker, 2006). For example, toys found in Ancient Greek and Roman societies were considered as educational tools that helped children learn their social roles (Ünal, 2024). These toys included rattles, puppets, yo-yos, miniature chariots, and racing chariots. As is the case today, in ancient times, girls enjoyed playing with dolls at home, while boys played with cars or animal figures (Sevim & Gönül, 2012). The digitalization of toys and technological developments have brought new dimensions to children's developmental processes. Research shows that digital toys support science, technology, engineering, and mathematics (STEM) skills and strengthen creative thinking processes (Bourha

et al., 2024; Klopotova & Smirnova, 2022). However, the important contributions of toys in terms of developing symbolic thinking, creativity, and social interaction skills are also frequently emphasized in the literature (Yelland, 2011; Istenič et al., 2023).

The originality of this study lies in the fact that it offers a new perspective on the pedagogical value of ancient toys in terms of their integration into modern preschool education processes. Research on ancient toys can contribute to the development of pedagogical approaches to help children better understand cultural contexts, gain historical awareness, and support their preparation for social roles. This study aims to examine the pedagogical value of ancient toys and assess the possibilities of their integration into modern preschool education processes. In this context, the research will seek answers to the following questions:

- What are the pedagogical functions of ancient toys?
- What educational outcomes can the use of antique toys in modern preschool education support?
- Within the scope of the "Virtue-Value-Action Framework", one of the basic principles of the 2024 Education Model, can antique toys contribute as educational materials?

Method

Research design

The research is based on the document analysis method, one of the qualitative research designs. The document analysis method was used to reveal historical and pedagogical data on ancient toys by systematically analyzing existing documents. These data were then analyzed through qualitative content analysis. Qualitative content analysis allowed for identifying themes in the documents and making pedagogical sense of them. This method was chosen because it allows for an in-depth examination of the historical, cultural, and pedagogical functions of ancient toys, enabling an understanding of the phenomena in their natural context (Creswell, 2007; Merriam, 2009).

This study aims to examine the pedagogical value of ancient toys and the possibilities of their integration into modern preschool education processes from an interdisciplinary perspective (Patton, 2002). Accordingly, archaeological, anthropological, and educational sciences literature were evaluated in a common framework (Krippendorff, 2018; Miles & Huberman, 1994). In particular, archaeological findings, while revealing the physical structure and historical context of toys, and anthropological sources were used to understand the cultural and social roles of toys. Educational sciences literature has been taken as the main reference for evaluating the pedagogical value of toys. The combination of these disciplines provided a more holistic view of the place of ancient toys in education.

In order for this study to provide an interdisciplinary perspective, data from the fields of archaeology, anthropology, and educational sciences were combined and analyzed. Document analysis and qualitative content analysis were used together in the research model, and the data collected through document analysis were analyzed with the qualitative content analysis method.

Data collection and procedure

Data were collected from the following sources:

1. **Archaeological Records:** Museum collections (Metropolitan Museum of Art) and archaeological catalogs. These data were used to examine the historical contexts and physical characteristics of the toys (Frost et al., 2012).
2. **Educational Sciences Literature:** Studies published in peer-reviewed journals focusing on the cognitive, social, and cultural functions of toys were analyzed.
3. **Literature Review with Keywords:** Searches in databases such as Google Scholar, JSTOR, and ERIC with terms such as "ancient toys", "child development and toys", "pedagogical toys", "Montessori toys", "Waldorf pedagogy and toys" allowed for a comprehensive examination of the historical, pedagogical and cultural dimensions of toys.

Documents related to ancient toys were used as primary data sources in the study. In this context, collection catalogs of museums, academic publications on toys in museums, and archaeological reports were examined. The purposive sampling method was used in sample selection. Sample selection was carried out according to the following criteria:

The toys are from the ancient period (3000 BC-1800 AD), the physical characteristics of the toys (material, size, shape, etc.) are clearly identifiable, the pedagogical functions and cultural contexts of toys are evident. Initially, 42 documents were analyzed, but 18 documents with insufficiently clear cultural or pedagogical contexts were excluded, leaving a total of 24 documents to be analyzed. The 24 documents that constitute the data source of the research are categorized as follows:

Table 1 Data source classification

Document Type	Number	Source Examples
Museum catalogs	12	Metropolitan Museum of Art
Archaeological Reports	2	Troy excavation records
Museum Description Texts	10	Metropolitan Museum of Art collection descriptions

In the study, a "Document Analysis Form" was used to collect data. This form includes coding categories covering the pedagogical functions of toys, materials used, cultural contexts and characteristics related to social roles.

The coding categories are:

- Pedagogical Codes: Cognitive development, creativity, motor skills
- Social Role Codes: Cooperation, leadership, social norms, gender roles
- Cultural Codes: Cultural transmission, symbolic meanings, value transmission

This selection process clarified the focus of the research and increased the reliability of the analyzed data (Isaacs, 2018; Maxwell, 2013). The data collection tool used in the study was a qualitative Document Review Form prepared to perform a content analysis of the documents. This form was structured in a way to analyze the relevant sections of the documents systematically. The form was developed to record information about the type of document, historical period, materials of the toys, and pedagogical and cultural functions.

Data analysis

The documents were systematically analyzed using the qualitative content analysis method proposed by Krippendorff (2018). First, each document was analyzed in detail in terms of pedagogical, cultural, and social dimensions, and the relevant statements were marked according to the codes determined. In coding, the statements in the documents were supported by direct quotations. In order to ensure the consistency of the coding process, the agreement rate between two independent coders was calculated, and a reliability of 85% was achieved (Miles & Huberman, 1994). The agreement rate was determined using the inter-coder reliability calculation method proposed by Miles and Huberman (1994). In addition, Cohen's Kappa coefficient, developed by Cohen (1960), was statistically validated by calculating the ratio of consistent coding between coders to total coding. This process was carried out to increase the reliability of content analysis and minimize subjective interpretations (Cohen, 1960).

This process was carried out to increase the reliability of content analysis and minimize subjective interpretations (Cohen, 1960). The statements identified in the coding process were grouped according to their similarities in meaning and content, and sub-codes were created. these sub-codes were transformed into broad main categories, and themes were identified under each category.

Table 2 Codes determined after data analysis

Code Type	Subcode	Example Expression	Description
Pedagogical Code	Cognitive Development	"Wooden block toys develop children's logical thinking." (Kurniawati et al., 2024)	The concrete features of the toy that support cognitive processes are emphasized.
Pedagogical Code	Creativity	"Clay toys stimulate children's imagination." (Fassoulas et al., 2020)	The effects of toys on imagination and creativity were analyzed.
Social Role Codes	Cooperation	"Wooden cars in group play encourage cooperation." (Yuill et al., 2014)	Social dynamics and in group games cooperation are emphasized.
Social Role Codes	Leadership	"Toys that require strategy support leadership skills." (Sousa & Costa, 2014)	The aspect of toys encouraging leadership skills is explained.
Cultural Codes	Cultural Transmission	"Toy figures reflect the social norms of ancient societies." (Palaguta, 2018)	The transmission of cultural values through toys was examined.
Cultural Codes	Symbolic Meanings	"Toy animal figures carry symbolic meanings." (Ahlström, 1990)	Symbolic representations in toys were analyzed.

The analysis process enhanced the reliability of the study by providing an in-depth and systematic examination of the documents. Furthermore, the coding results were checked by another researcher, reinforcing consistency and reliability. This process ensured the effective application of the methods used to understand the pedagogical functions and historical contexts of toys (Frost et al., 2012; Isaacs, 2018; Merriam, 2009). The integrity of the research process and the flexibility of the qualitative analysis method provided an opportunity for an in-depth examination.

Findings

Historical and cultural contexts of ancient toys

Ancient toys, one of the oldest examples of humanity's cultural and social life, offer important clues for understanding the social and educational aspects of childhood. Archaeological findings show that toys are not only an element of entertainment but also have functions such as social

learning, transmission of cultural values, and cognitive development (Kamp, 2001). In this context, the place of toys in the historical and cultural context plays an important role at both individual and societal levels. Ancient toys can be traced back to ancient Mesopotamia, India, Ancient Egypt, Greece, and Rome. The oldest ancient doll was found during the excavations in Troy. In his excavation, excavation leader Heinrich Schliemann's report (1874) states that he found a small clay pot/baby with a rattle in the oldest layers of Troy. In particular, he writes that at a depth of 5 meters (about 16½ feet), he unearthed a completely sealed earthenware vessel with a handle and that it contained small metal pieces that made a sound when shaken *Trojanische Alterthümer*. Schliemann states that this object could have been used as a bell or rattle. As a matter of fact, this artifact in the report "is described as a "Terra-cotta Bell, Clapper, or Rattle" (Schliemann, 1874). This find is also visualized in the photographic atlas accompanying Schliemann's 1874 report. In the atlas, A "Trojan humming-top" and a "clay rattle from a depth of 5 m" were photographed together under Nos. 147 and 148 (Schliemann, 1874). Recent archaeological and historical studies have confirmed Schliemann's find and it to be one of the earliest known examples of a doll-consider. For example, Helmut Niemann and Bekir Onur (2019) stated that this clay object found in the lowest layers of Troy is a "rattle doll" with small balls/stones inside. In Turkish literature, Begiç (2016) elaborates on this find: "*In a pit in one of the lowest layers of Troy, Heinrich Schliemann found a clay doll called a 'rattle doll' with small balls; this was the oldest Greek doll.*"



Figure 1 Toy in the shape of a male figure (Cyprus, c. 600-480 BC)

<https://www.metmuseum.org/art/collection/search/241201>

Finds such as clay dolls, miniature cars and animal figures show that children in these societies played games by imitating adult roles in daily life and learned social norms in the process (Becker, 2006).



Figure 2 Toy Car Model (India, 1st century BC - 1st century AD)

<https://www.metmuseum.org/art/collection/search/241201>

Toys such as miniature objects and animal figures have helped children develop their cognitive skills as well as understand their role in the social context (Greenfield, 2018).



Figure 3 Tomb Guard Monster (China, 265-316)

https://www.metmuseum.org/art/collection/search/42371?what=Ceramics&ao=on&ft=*&offset=0&rpp=20&pos=19

Toys during this period were often made of local materials reflecting cultural and economic differences. While the toys of wealthy families in the Roman Empire were made of expensive materials such as bronze or ivory, the toys of peasant children were made of simple wood or clay materials (Golomb, 1977). This reveals that toys provide information about both economic and social status.

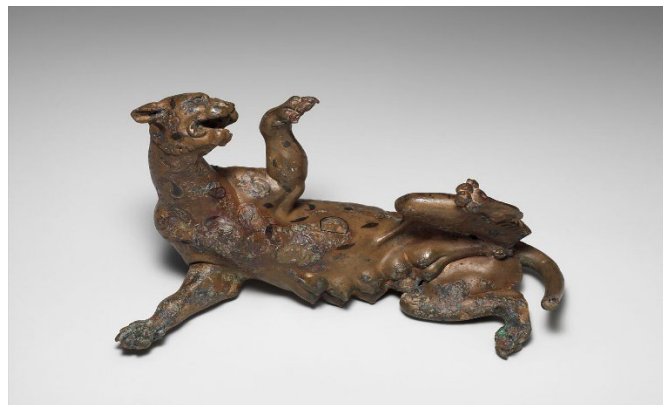


Figure 4 Bronze panther figurine (Rome, 1st-2nd century AD)

<https://www.metmuseum.org/art/collection/search/247875>



Figure 5 Flagellum (Rome, 2nd century AD) (Uzunel, 2015)

100 Pedagogical Perspective

Ancient toys functioned as tools to help children learn social norms and cultural values. Dolls and musical instruments found in ancient Egypt were meaningful in preparing children for religious rituals and participating in social ceremonies (Marshall, 2022).



Figure 6 Cat Toy (Egypt, 9th century BC)

www.vaspitacns.edu.rs/predmet107.php/Igracke%20kroz%20istoriju%201.pdf

Similarly, toys used by children in Ancient Greece are said to have symbolic meanings related to gods and goddesses and played a role in the transmission of religious beliefs (D'Ambra, 2004).



Figure 7 A man fighting a centaur (Greek, 750 BC)

<https://www.metmuseum.org/art/collection/search/249228>

In the context of cultural meaning, it is argued that toys also function as "communication tools". Miniature vehicles and weapons have contributed to the transmission of values while teaching children about tasks and social roles in adult life (Langdon, 2013). Especially in warrior societies, toys such as weapon figures and chariots are thought to be important in the socialization of boys and the learning of gender roles (Foxhall, 2013).



Figure 8 A rider (Greek, 3rd century BC) dressed in elephant skin

<https://www.metmuseum.org/art/collection/search/254825>

Ancient toys were not only limited to the transmission of cultural values, but also supported children's pedagogical development. According to Vygotsky's cultural-historical approach, toys enabled children to develop symbolic thinking and problem-solving skills (Vygotsky, 1978). In ancient China, animal figures and puzzles were used as educational tools to support children's cognitive development (Baxter, 2005).



Figure 9 Game Box for Playing Twenty Squares (China, ca. 1635-1458 BC)

<https://www.metmuseum.org/art/collection/search/553268>

The historical study of such toys offers new perspectives, both pedagogical and cultural, for modern preschool educational materials. The functions of historical toys not only contributed to individual learning processes, but also supported cultural continuity and identity development (Rogoff, 2003).

Ancient toys have a multifaceted significance both as historical cultural objects and pedagogical tools. They provide an important context for the transmission of cultural values and pedagogical development by enabling children to learn social roles in everyday life through play. Therefore, studying toys in their historical and cultural contexts opens new horizons in both archaeology and educational sciences literature.

Preschool is a critical stage during which children rapidly develop their cognitive, social, emotional and motor skills. During this period, toys function as essential pedagogical tools that support children's learning, exploration and understanding of their environment. Toys and games provide a multidimensional learning environment that allows children not only to entertain themselves but also to understand the world, express themselves and develop various skills (Frost et al., 2012).

Toys contribute to the development of problem solving, cause-effect relationship and creative thinking skills in children. According to Piaget's theory of cognitive development, toys help children form schemas and support cognitive adaptation processes (Piaget, 1952). Especially puzzles, building blocks and toys that encourage experiential learning develop children's logical reasoning skills (Casey et al., 2008).

Modern research emphasizes the effectiveness of technological toys in this process. Designed similar to Montessori educational materials, digital toys offer structured activities to support children's cognitive development (Lillard, 2017). However, toys still attract attention for their powerful impact on symbolic thinking and imagination (Hirsh-Pasek, 2009).

Toys facilitate children's social interactions and contribute to the development of skills such as cooperation, empathy and emotional regulation. According to Vygotsky's socio-cultural learning

theory, toys support children's socialization and learning through play (Vygotsky, 1978). Ginsburg (2007) emphasizes that role-playing toys and symbolic games allow children to understand the emotions of others and learn social norms.

In terms of emotional development, soft toys and dolls strengthen children's sense of security and support the development of self-regulation skills. Moreover, expressing emotions through toys helps children cope with early trauma or stress (Sutton-Smith, 1997).

Toys also support the development of both fine and gross motor skills in children. Building toys such as blocks and Lego develop fine motor skills, while toys such as balls, scooters or balance boards develop gross motor skills and coordination (Smith, 2009). Playing with such toys also encourages physical activity and contributes to the development of healthy lifestyle habits at an early age (Timmons et al., 2007).

Toys are integral components of play-based learning programs. Play-based learning not only enables children to learn while having fun, but also facilitates the achievement of curricular goals. According to an OECD report (2021), the quality of toys used in preschool education directly affects children's language development, numerical reasoning skills and self-confidence.

Educational approaches such as Montessori and Waldorf emphasize the use of toys made from natural materials and their role in supporting children's exploration processes. This approach deepens children's learning experiences by increasing their active engagement (Isaacs, 2018).

These toys provided an important context for the transmission of cultural values and pedagogical development by offering children the opportunity to learn social roles in daily life through play. Therefore, examining toys in their historical and cultural contexts opens new horizons for both archaeology and educational sciences literature.

Educational functions of toys

Toys are tools that play an important role in children's development, serving multifaceted functions in the cognitive, social and cultural spheres. The educational functions of historical and modern toys support children's processes of learning, self-expression and integration in a social context through dynamic mechanisms. This chapter details the cognitive, social and cultural functions of toys from an academic perspective.

Toys play a critical role in developing children's problem solving and creative thinking skills. According to Piaget's theory of cognitive development, toys children's active in learning processes contribute to the formation of cognitive schemas by supporting their participation (Piaget, 1952). Jigsaw puzzles, construction toys and games that require strategy help children develop cause-effect reasoning, analytical thinking and creative problem solving skills (Casey et al., 2008).

Montessori materials categorized as toys are also valuable for cognitive development. These toys enable children to develop fine motor skills while mastering cognitive processes such as sorting, matching, and categorization (Lillard, 2017). Furthermore, toys such as LEGO have been shown to positively impact children's creative thinking and spatial intelligence (Sullivan & Bers, 2015).

Recent literature emphasizes the contribution of digital toys to children's cognitive development. In particular, coding toys and STEM-oriented materials are recognized as effective tools for developing analytical thinking and problem-solving skills at an early age (Bers, 2021).

Toys are powerful learning tools that develop children's social skills. According to Vygotsky's

socio-cultural theory, children learn cooperation, communication and social rules while playing with toys (Vygotsky, 1978). Toys, especially those used in group play, enable children to develop skills such as sharing, teamwork and leadership (Ginsburg, 2007).

Role-playing toys and symbolic games play an important role in learning social roles. Materials such as doctor sets, play markets or dolls help children imitate social roles and develop empathy (Smith, 2009). These toys also allow children to develop conflict resolution skills and experience leadership roles during group play.

In the context of social interaction, the impact of toys on gender roles is notable. Providing gender-specific toys for girls and boys contributes to the shaping of gender roles. In this context, providing more inclusive toy options can allow children to explore their individual potential independent of social norms (Foxhall, 2013).

Toys not only support individual learning processes, but also play a vital role in transmitting social norms and values. Anthropological studies have shown that toys teach children cultural values and integrate them into the social structure (Rogoff, 2003).

In Ancient Greece, toys inspired by mythological figures enabled children to learn social norms through mythology (D'Ambra, 2004). Similarly, dolls have been seen as tools that facilitate the transmission of both aesthetic and cultural values (Langdon, 2008).

Today, cultural toys help children learn about different cultures and develop cultural awareness. Especially handmade toys, as products of local craftsmanship, play an important role in preserving and transmitting values (Marshall, 2022). Integrating such toys into early childhood education can also positively affect children's identity development.

Toys assume multifaceted functions in children's cognitive, social and cultural development processes. skills such as problem solving, cooperation, leadership, empathy and cultural value transferContributing to the development of , toys function as indispensable pedagogical tools. In this context, the conscious use of toys in educational environments allows children to develop more holistically at both individual and social levels.

Comparison of historical toys with modern preschool education materials

Compared to preschool materials, historical toys exhibit both similarities and differences in terms of their pedagogical purposes and contexts of use. Historical toys are often handmade and made of natural materials, while modern toys, influenced by technological developments, are made of industrial materials and often have digital components (Bers, modern 2021). This comparison offers an important perspective for understanding the pedagogical potential of toys and integrating historical heritage into modern education.

Historic toys were made from local and natural materials such as wood, clay, stone and animal bones (Langdon, 2008). The handmade nature of these toys created unique aesthetic and functional differences in each product. In contrast, modern preschool toys are often mass-produced from materials such as plastic, rubber, and synthetic materials using mass production techniques (Isaacs, 2018). While modern toys undergo chemical treatments to increase durability and meet safety standards, historical toys are environmentally friendly due to their natural composition (Smith, 2009).

Technological innovations in the production of modern toys have led to the emergence of digital

and interactive toys. Coding toys, robotic sets and augmented reality tools have become important pedagogical materials that support children's integration into the digital world (Bers, 2021). However, the overuse of these technological toys has been criticized for potentially limiting children's imagination and creative thinking processes (Hirsh-Pasek, 2009).

The pedagogical functions of historical toys focused on helping children learn social norms, develop cognitive and motor skills, and internalize cultural values (Rogoff, 2003). In contrast, modern toys aim to develop not only these skills, but also children's technological literacy, STEM (science, technology, engineering and math) abilities, and digital competencies (Sullivan & Bers, 2015).

Educational approaches such as Montessori and Waldorf still encourage the use of toys made from natural materials inspired by historical toys. These toys aim to support children's learning processes based on individual exploration and unique experiences (Lillard, 2017). In contrast, traditional educational approaches often use plastic or electronic toys that offer a more structured learning environment (Isaacs, 2018).

Historic toys often have simple and flexible designs that encourage children's creativity and imagination. Wooden blocks and clay figures offer children opportunities to create their own stories and use objects in a variety of contexts (Smith, 2009). In contrast, modern toys that come with predefined instructions for use and digital features can limit children's creative processes (Hirsh-Pasek, 2009).

However, the interactive features of modern toys allow children to adapt to different learning styles and engage in complex problem-solving processes (Bers, 2021). Robotics and coding toys in particular help children develop logical thinking and digital skills (Sullivan & Bers, 2015).

Historical toys are powerful tools for teaching children about social norms and cultural values. Toys inspired by mythological figures and handmade toys have contributed to the preservation of cultural heritage in historical contexts (Langdon, 2008). Today, however, toys are not only designed to increase children's awareness of their own culture, but also to promote understanding of different cultures. Toys and storybooks that introduce world cultures increase children's cultural awareness (Rogoff, 2003).

However, commercial priorities in the modern toy industry can sometimes overshadow the transmission of cultural values. The unique designs of historical toys into Integrating educational materials can address this gap (Isaacs, 2018).

Historical and modern toys share both differences and similarities in their pedagogical functions and purposes. The simplicity and creativity-supporting structures of historical toys can complement the technological and interactive features of modern toys. This comparison historical heritage has the potential to create a more balanced and effective learning environment by integrating into education.

Historical modernization of toys

Original implementation plan for the modernization process

Redesigning historical toys for modern education has the potential to enhance pedagogical resources while preserving cultural heritage. In this process, modern designs should be created taking into account the physical characteristics, materials and pedagogical functions of historic

toys. A unique modernization plan should be structured to integrate sustainability, pedagogical effectiveness and cultural transmission.

In the first stage of the modernization process, data on the physical characteristics, production techniques and contexts of use of historical toys should be collected. Archaeological and anthropological sources should be examined to analyze the functions, aesthetic elements and pedagogical contributions of toys such as clay figurines from ancient Greece or wooden chariots from Roman times (Neils, 2003). In this process, museum catalogs, excavation reports and academic publications can be used.

In the pedagogical adaptation process, the educational functions of historical toys should be reinterpreted in accordance with modern preschool education approaches. In line with approaches based on the Montessori method, it is important to design toys to support individual learning processes (Lillard, 2017). In addition, toys adapted for STEM-based education should include elements that will improve children's analytical thinking and problem-solving skills (Bers, 2021).

In the design process, the natural materials of historical toys should be preserved and sustainable production techniques should be adopted. Environmentally friendly materials such as wood, clay and natural fabrics should be used to increase the durability of toys and preserve their cultural authenticity (Isaacs, 2018). For example, clay animal figures from ancient Anatolia can be reproduced using modern ceramic techniques.

During the prototype development process, the pedagogical effectiveness of the designed toys should be tested in preschool classrooms. Pilots should be used to observe the impact of the toys on children's development of creative thinking, collaboration and cultural awareness (Smith, 2009).

The integration of these toys into educational programs will increase children's historical awareness by presenting them in their historical context. Toys supported by cultural narratives will contribute to children's better understanding and internalization of cultural values (Rogoff, 2003).

The process of transforming historical toys into modern educational materials includes the following steps:

- **Historical Analysis:** The materials and designs of toys from archaeological finds should be analyzed to determine their pedagogical adaptability (Neils, 2003).
- **Pedagogical Adaptation:** Toys should be adapted to modern educational approaches such as Montessori or STEM (Lillard, 2017).
- **Use of Sustainable Materials:** Environmentally friendly and durable materials should be preferred in modern designs (Isaacs, 2018).
- **Testing and Evaluation:** The pedagogical effectiveness of the designed toys should be tested in preschool classrooms and the results evaluated (Bers, 2021).

The modernization of historical toys offers an innovative approach to preserving cultural heritage and diversifying pedagogical resources in education. In this process, it is of great importance to systematically analyze historical data and develop designs compatible with modern educational models. Future research can encourage interdisciplinary collaborations by addressing the use of

historical elements in modern toy designs from a broader perspective.

Turkey's 2024 education model and historical toys in preschool education

Turkey's 2024 Education Model offers a holistic approach to education that emphasizes the transmission of national, spiritual and cultural values while supporting the individual development of children. The model aims to develop children's skills, values and dispositions in an integrated manner while promoting constructivist and play-based approaches to enrich learning processes (MEB, 2024a). In this context, the modernization of historical toys as educational materials offers a rich framework both pedagogically and culturally. The use of historical toys is seen not only as a source of entertainment, but also as a tangible learning material for the preservation of cultural heritage, values education and increasing cultural awareness (MEB, 2024a).

The "Virtue-Value-Action Framework", one of the fundamental principles of the 2024 Education Model, aims to help children internalize national and spiritual values and apply them in their daily lives. In this framework, historical toys gain importance not only as a means of play, but also as concrete representations of historical knowledge and values. Modern replicas of wooden toy cars or clay animal figures at the Museum of Anatolian Civilizations can help children make historical connections by supporting play-based learning processes (MEB, 2024a).

Historical toys play a critical role in transmitting universal values such as justice, aesthetics and compassion. While these toys allow children to experience these values through play, they also ensure the preservation of cultural heritage. Moreover, in line with the Maarif Model's goal of preserving cultural heritage, the use of these toys as educational materials offers children the opportunity to connect with the past and develop an awareness of history. In addition to supporting cultural transmission, this also contributes to children's self-confidence and identity development (MEB, 2024a).

Historical toys in preschool education can be seen as effective tools in achieving the skill and disposition goals defined in the 2024 Education Model. These toys play an important role in the development of skills in areas such as Turkish, mathematics, science, social studies, art and music, as well as conceptual skills such as higher-order thinking and reasoning (MEB, 2024b). For example, wooden toy cars or clay dolls from Anatolia develop children's fine motor skills and support their cognitive skills such as creative thinking and problem solving (Smith, 2009).

The educational functions of historical toys can also be effective in supporting children's social-emotional development. While historical toys used in group play contribute to the development of social skills such as cooperation and empathy, they encourage creativity and self-confidence in individual play (Lillard, 2017). Their simple and versatile designs stimulate children's imagination and enrich play-based learning processes (Isaacs, 2018).

Modernizing historical toys as educational materials in line with the child-centered approach and play-based learning principles of the 2024 Education Model will contribute to the protection of cultural heritage while increasing pedagogical diversity. The use of historical toys in preschool education is also in line with the holistic education approach of the 2024 Education Model. The model emphasizes play-based learning approaches and the creation of enriched learning environments that appeal to children's individual differences. In this context, historical toys can be considered as an important tool for increasing children's cultural awareness and developing

their social skills.

Discussion, Conclusion, and Recommendations

The findings of our study show that antique toys are important in developing preschool children's problem solving, creativity and social interaction skills. The literature also indicates that classical toys encourage children's thinking, problem solving, social interaction and creative expression skills at a high level (Kisly, 2023). Since these toys are open-ended materials, they can be used in different ways and remain interesting for generations (Kotenko & Puholovok, 2020). Playing with toys improves children's motor skills and supports their cognitive development (Bahri et al., 2023). Ancient toys have also been found to help children understand social roles (Puholovok, 2020). Antique toys support different areas of development in individual and group play. Such toys support language development by increasing parent-child interaction (Istenci et al., 2023). It also enables the discovery and transmission of cultural values from generation to generation (Atdaev, 2022). The effects of historically based toys on child development in the literature When are examined, it is stated that toys contribute to physical and cognitive development and increase environmental awareness by transferring knowledge about nature (Pereira et al., 2021; Margaretha & Haryono, 2024). Pereira et al. (2021) emphasized that toys have important contributions to cognitive development and environmental awareness. In our study, it was found that ancient toys provide important pedagogical contributions to children's development. Our findings show that ancient toys provide significant support to the development of creativity, problem solving skills and self-confidence. Similar results are also confirmed in the literature. Dese et al. (2023) and Fisher et al. (2011) physical and stated that toys support creativity, self-confidence and play-based learning processes in children. In addition, in our study, it was observed that ancient toys allow children to experience the roles of past societies and thus contribute to the transmission of cultural values. This confirms the findings of Singh et al. (2024) that when toys are associated with their historical contexts, they help children internalize cultural heritage and social roles. This finding is also consistent with Vygotsky's socio-cultural learning theory. Vygotsky (1978) emphasizes that children learn cultural values by experiencing them through play. In our study, children's role-playing of the lifestyles and roles of past societies using ancient toys is an important finding in terms of socio-cultural learning. In terms of Piaget's cognitive development theory, play is defined as the process of adapting the external world to the child's own mental schemas. While playing with antique toys, children have the opportunity to shape the knowledge and experiences of the outside world in their own minds. As Pedapati (2022) states, play-based learning enables children to develop cognitive flexibility and problem-solving skills, especially through symbolic play. In our study, children's use of antique toys for different purposes and in creative ways supports this finding.

The findings of our study carry important messages for today's education system and especially for the 2024 Education Model. The 2024 Maarif Model represents an innovative approach that emphasizes the reinterpretation and integration of cultural values into educational programs and skill-based learning in the Turkish education system (Güven et al., 2025). The 2024 Maarif Model emphasizes the integration of cultural values into educational programs and skill-based learning. Our findings show that the use of antique toys in preschool education can contribute to these goals. As a matter of fact, it has been emphasized in the literature that preschool programs enriched with cultural elements develop identity awareness in children and strengthen the transmission of cultural values from generation to generation (Güven et al., 2025). Since antique

toys concretely represent cultural heritage, children have cultural experiences while playing with these toys. This facilitates the transfer of national and spiritual values to new generations (Avşar, 2024).

Incorporating antique toys into preschool education settings can increase children's interactions with cultural heritage. The use of historical toys in educational processes supports children's motor and cognitive development and enables them to connect with historical-cultural values (Kotenko & Puholovok, 2020). In cultural corners created in the classroom Exhibiting toys increases children's interaction with these toys. In particular, the inclusion of rag dolls in preschool play supports children's sensory and social development and raises awareness of traditional arts and craftsmanship (with historical origins Kotenko & Puholovok, 2020).

Including activities such as Day" allows children to experience toys in groups. Research has shown that "in education programs Antique Toy such toys promote social skills, cooperation and teamwork (Ukala, 2020). It is also emphasized that these games are important for cultural transmission and understanding social norms (Ibragimova, 2023).

Since ancient toys were usually made of natural materials, using toys made of wood, clay or fabric instead of plastic in modern classrooms strengthens children's ties with nature (Semiz, 2022). Materials such as wood and clay have been proven to enrich children's sensory experiences and increase creativity (Kotenko & Puholovok, 2020).

Integrating ancient toys into education supports children's cognitive, social and emotional development. With games and toys, it is possible to strengthen children's cultural ties and encourage them to interact with nature-appropriate materials. Our findings show that the simple structure of ancient toys stimulates children's imagination and supports their problem-solving skills (Ibragimova, 2023).

In conclusion, the integration of ancient toys into modern educational settings can increase children's cultural awareness, support identity development and enhance nature awareness. It is recommended that these toys, which have great potential for cultural transmission, environmental awareness and pedagogical benefits, should be redesigned and presented in the educational system. Presenting toys together with cultural activities such as storytelling will further increase sensitivity to cultural heritage (Ukala, 2020; Kotenko & Puholovok, 2020).2024 Within the framework of the Maarif Model's value transmission and holistic education approach, transforming ancient toys into modern educational materials can contribute to children's internalization of social norms and cultural values through play (Tanko & Hryhorenko, 2022). The use of these toys in group play develops children's empathy, sharing and cooperation skills, while encouraging creative thinking in individual play (Bogush, 2023). Interdisciplinary collaborations and training programs can be organized for educators to gain awareness on how to use the pedagogical values of historical toys in classroom activities (Li, 2024). Collaborations between local museums, universities, and preschools will increase teachers' knowledge about the use of antique toys and facilitate their integration into educational settings (Nasution, 2024).

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