Analysis of Design Factors for Parent-child Toys: An Exploration from the Perspectives of Children's Psychology and Parental Needs

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Abstract: The origin and principles of parent-child toy design are deeply rooted in the needs of modern families and the characteristics of children's psychological development. With the acceleration of the pace of life, parent-child interaction has become particularly precious, so parent-child toys have emerged as an important medium to enhance family emotions. When designing parent-child toys, we must first follow the principles of children's psychological development. Children of different age groups have different cognitive and emotional needs, and toys should be able to stimulate their curiosity, creativity, and desire for exploration. At the same time, emphasis should be placed on the elements of parent-child interaction, making toys a bridge for parents and children to participate together, enhancing mutual understanding and trust. Safety is the core principle of parent-child toy design. Toy materials should be non-toxic and environmentally friendly to ensure the health of children. In addition, the structure and form of toys should also avoid potential dangers such as sharpness and fragility, ensuring the safety of children during play. Innovation and fun are also indispensable. By incorporating modern technological elements, we can create more innovative and interesting toy forms to satisfy children's curiosity and exploratory desires, allowing them to enjoy fun while playing, and also feel the care and companionship of parents.

1. Introduction

In the long history of China, the one-child policy has been implemented for thirty years, making children the focus and core of every family. Whether it's ringing bells during infancy or puzzle blocks for preschool children, toys always play an indispensable role in children's growth process[1]. However, with the rapid development of society, modern parents have gradually gone to extremes in their parenting concepts, overly focusing on their children's intellectual development and academic performance, while ignoring the most precious factor in children's growth - family affection.

There is a wide variety of toy products on the market, most of which are sold for fun and puzzle, but there are very few toys that can truly enhance parent-child relationships[2]. Designers tend to focus more on how to attract children's attention and provide them with fun and knowledge during

play when designing toys, but often overlook the potential value of toys in promoting parent-child interaction and emotional communication[3]. The essence of design is to make people's lives better. In the process of children's growth, family affection is the most precious wealth. It not only provides children with a sense of security, but also cultivates their emotional intelligence and social skills[4]. Therefore, designers should make promoting emotional communication between parents and children an important goal in designing toys.

To achieve this goal, designers can approach it from multiple perspectives. They can incorporate elements that require both parents and children to participate in the design of toys, such as puzzle games, parent-child reading, etc. These activities can allow children to feel the companionship and care of their parents while playing[5]. Designers can also use modern technology to develop interactive toys that allow parents and children to interact remotely through toys, allowing them to feel each other's warmth even when in a different location. Designers should pay attention to the family needs of children's growth and design more toy products that can promote emotional communication between parents and children, so that every family can grow together in joy and warmth[6].

2. Sources and principles of parent-child toy design

2.1. Source of parent-child toy design

In today's society, the pressure of life and the hardship of work are like two mountains, pressing on everyone's heart. At the same time, the deterioration of the environment has brought many inconveniences to our lives [7]. In this context, children are forced to immerse themselves in various competitions from a young age. They are sent to various training classes, and their skills have indeed improved, but happiness gradually fades in the process. Therefore, the call for a better childhood for children has become increasingly strong, which has also given rise to the demand for parent-child interaction, thereby promoting the emergence of parent-child interactive children's toys.

Parent child interactive children's toys are not only objects for children to play with, but also a bridge for emotional communication between parents and children [8]. This type of toy is designed with full consideration of parent-child interaction elements, making it no longer a cold product, but a warm and loving companion. In the process of using these toys, parents can explore, learn, and play together with their children, thereby enhancing the relationship between parents and children, and allowing children to feel the warmth and care of the family while playing.

There are various types of parent-child interactive children's toys, including puzzle puzzles and building blocks, sports ball games and roller skating, as well as creative handicrafts and paintings. Each type of toy has its unique interactive way, allowing children to not only exercise their skills during play, but also feel the companionship and care of their parents[9]. At the same time, these toys can also stimulate children's curiosity and creativity, allowing them to explore the unknown world and achieve self-growth in games.

The emergence of parent-child interactive children's toys has provided a new way of parenting for modern families[10]. It can not only meet the growth needs of children, but also promote emotional communication between parents and children, allowing children to grow up in happiness and have a beautiful childhood.

2.2. Principles of parent-child toy design

As an important companion for children's growth, the primary attribute of children's toys is undoubtedly functionality. These toys need to meet the daily gaming needs of children, from simple

building block puzzles to complex electronic toys. Whether it is to exercise hands-on ability or inspire intelligence, toys play an indispensable role.

In the design of toys, usability is crucial. Children are naturally curious and lively, often not interested in complex operations, but prefer toys that are simple, intuitive, and easy to get started with immediately. Therefore, the operation design of toys should be simplified as much as possible, so that children can easily master and fully enjoy the fun brought by games.

In addition to functionality and ease of use, the material selection of toys is also crucial. Quality assurance is the primary principle for selecting toy materials, which not only relates to the lifespan of toys, but also directly affects the safety of children. In terms of material selection, we should try our best to choose non-toxic, odorless, and environmentally friendly materials to ensure that children are not harmed during play.

The safety issue also needs to be specific to the form details of the toy. The edges of children's toys should be rounded and chamfered to prevent children from scratching their skin while playing. At the same time, the overall shape of toys should also avoid elements that may pose safety hazards such as sharpness, dents, and protrusions.

In modern society, children often have fewer opportunities to interact with nature. Therefore, in children's product design, we can use bionic design to integrate natural elements into toys, helping children feel nature in the city and experience the fun it brings. This design not only enriches the gameplay of toys, but also stimulates children's love and curiosity for nature. Table 1 clearly shows the attributes and characteristics that need to be noted in the design of parent-child toys.

Table 1: Attribute characteristics that need to be noted in the design of parent-child toys

Attributes/Characteristics	Describe	Importance	Consider factors
Functionality	Meet children's daily gaming needs, exercise hands-on skills, and inspire intelligence	Primary attribute	Types and difficulty of toys
Usability	Simplified toy operation design, making it easy for children to master	Critical	Operational complexity and intuitiveness
Material selection	Non toxic, odorless, and environmentally friendly materials	Quality assurance	Safety and service life
Security	Edge rounding and chamfering treatment to avoid safety hazards such as sharpness, depression, and protrusion	Indispensable	Edge treatment and overall styling
Bionics Design	Integrating natural elements into toys to help children experience nature	Innovation and Inspiration	Integration of natural elements and diversity of gameplay

3. The design of parent-child toys should adapt to the psychological development needs of children

In the field of product design, research positioning is an indispensable and important link, which is related to whether the product can truly meet the needs of consumers and whether it can succeed in the market. Especially for products like children's toys, the special nature of their service targets determines that in-depth research must be conducted before design, accurately grasping the psychological development characteristics of children, putting people first, putting children at the

center, and designing products that truly meet their needs.

The service target of children's toys is mainly children aged 0-12, and the psychological development of children in this stage has distinct characteristics. From unconsciousness in infancy to initial cognition in early childhood, to the burst of imagination and creativity in preschool children, and the formation of logical thinking ability in school-age children, each stage has different psychological needs and characteristics. Therefore, before designing children's toys, designers must have a deep understanding and research on the psychological development characteristics of these stages, in order to accurately position the product and ensure that the designed toys can adapt to children's psychological development.

Only by adapting to children's psychological development can children's toys truly play their educational role. For children, toys are not only tools for playing, but also an important medium for them to understand and explore the world. A well-designed toy can not only meet children's entertainment needs, but also stimulate their curiosity, imagination, and creativity, promoting their physical and mental development. Therefore, when designing children's toys, designers should pay attention to the educational and inspiring aspects of the toys, allowing children to grow and progress during play.

Satisfying children's psychological needs is also the key to increasing product added value and obtaining enormous economic value. A toy that can truly attract children and make them happy to accept can often gain better reputation and sales performance in the market. Therefore, when designing children's toys, designers should pay attention to the fun and interactivity of the products, so that children can feel joy and satisfaction while playing.

Childhood is an important period for the growth and personality shaping of the whole person. The design of children's toys must be centered on children, accurately grasp their psychological development characteristics, and design products that truly meet their needs. Only in this way can children be willing to accept toys, truly play the educational function of toys, and at the same time obtain huge economic value. Figure 1 clearly shows the areas that designers need to pay attention to when designing parent-child toys.
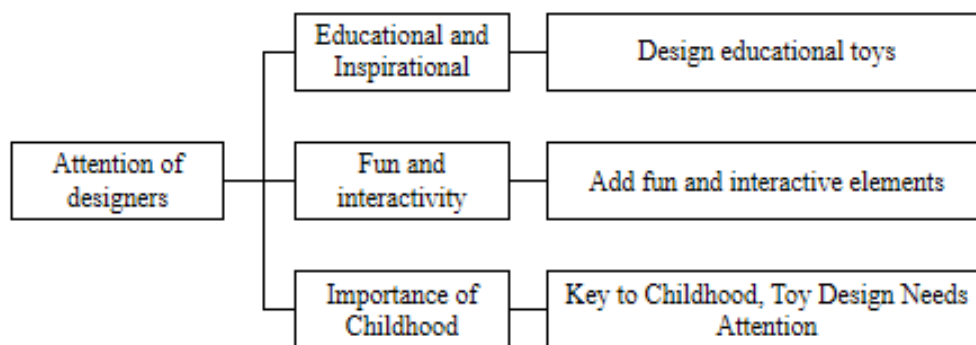

Figure 1: Notes for Designers in Designing Parent-child Toys

4. The design of parent-child toys takes into account both children's psychology and parental needs

Toys, as intimate companions for children's growth, are not only objects for play, but also carry the responsibility of communication and exchange. In children's world, toys are an important medium for expressing emotions and exchanging ideas. Through toys, they can establish friendships with peers and engage in intimate interactions with parents.

For parents, there is a potential demand for the interactivity of toys. They hope that toys can not

only bring joy to children, but also serve as a bridge for communication with them, allowing them to share happiness and express their feelings to parents while playing. Therefore, when choosing toys, parents pay extra attention to the educational attributes contained in the toys. They hope that toys can combine education with entertainment, allowing children to learn knowledge and improve their abilities during play.

Parents do not like their children to demand toys without restraint. On the one hand, having too many toys not only makes it difficult to tidy up, but also makes the home messy and disorganized; On the other hand, having too many toys can make children become fond of the new and tired of the old, and they can only maintain a brief interest in each toy. In addition, the continuous rise in toy prices is also a significant economic burden for families.

From the perspective of children, appropriate restraint in purchasing toys can cultivate their habit of cherishing things from a young age. When they grow up, seeing the dolls or trains that accompanied them through their childhood will surely evoke beautiful memories and thoughts, and these toys will become valuable assets on their growth path.

For parents, controlling the quantity of toys purchased appropriately can not only reduce unnecessary expenses in parenting, but also alleviate conflicts between parents and children caused by purchasing toys. Parents can communicate and guide their children to learn how to treat toys rationally and understand their true value.

The most important thing is that children's toys must adapt to their psychological development. Only toys that truly meet the psychological needs of children can make them willing to accept them, and thus play the educational role of toys during play. On the contrary, if toys go against children's psychological wishes, they will generate negative emotions such as resistance, dissatisfaction, and fear. This not only fails to achieve the goal of educating children, but may also have a negative impact on their mental health.

Parents should have a deep understanding of their children's psychological needs when choosing toys, and choose toys that are both educational and in line with their children's interests. At the same time, we should also guide children to treat toys rationally, so that they can learn to cherish and grow through playing.

5. Conclusions

In today's fast-paced society, many families find it difficult to fully accompany their children due to the pressure of life and work, coupled with the inconvenience caused by environmental degradation. Children engage in various competitions and training classes too early, and their happiness gradually disappears. Therefore, society calls for a better childhood for children, which has also spurred the growth of demand for parent-child interaction and promoted the rapid development of parent-child interactive children's toys. Parent child interactive children's toys are not only entertainment tools, but also a bridge for emotional communication between parents and children. These toy designs focus on parent-child interaction, making them warm and loving companions. In play, parents and children explore and learn together, enhance emotional connections, and let children feel the warmth of the family. There are various types of parent-child toys, including puzzle puzzles, sports balls, and creative handicrafts, each with its own characteristics. They not only exercise children's skills, but also make them feel the company and care of their parents, stimulate curiosity and creativity, and achieve self-growth. When designing parent-child toys, it is necessary to follow the principles of functionality, ease of use, and safety. Toys should meet children's gaming needs, with simplified and easy to use operations. The materials should be non-toxic, odorless, and environmentally friendly to ensure children's safety. Toy design also needs to adapt to children's psychological development. Children of different age

groups have different psychological needs, and designers need to conduct in-depth research, accurately grasp the characteristics, and design toys that meet the needs of children. The design of parent-child toys should take into account the needs of both children and parents. Toys should be able to attract children and also meet parental expectations. By designing toy activities for parent-child participation, we can enhance parent-child relationships and promote family harmony. Parent-child interactive children's toys are becoming increasingly important in modern families, bringing joy and growth to children, and building emotional communication bridges between parents and children. Following design principles and considering the needs of both parties, we can create more excellent parent-child interactive toys to add color to children's beautiful childhood.

Acknowledgements

References

[1] Pan Xiaoning. The Application Value of Excellent Traditional Chinese Culture in Ideological and Political Education in Universities [J]. Reference for Middle School Political Teaching, 2023 (30): 84.

[2] Min Haozhe, Mo Jiali. On Ideological and Political Education in Universities from the Perspective of Network Culture [J]. Frontiers of Social Sciences, 2024, 13 (1): 5.

[3] Wu Rile. The Inheritance and Application of Excellent Traditional Ethnic Culture in Ideological and Political Education in Universities [J]. Heilongjiang Ethnic Series, 2022 (3): 157-161.

[4] Yang Zhiyuan. Research on the Value and Application of Traditional Chinese Culture in Ideological and Political Education in Universities [J]. Curriculum Education Research, 2019 (5): 2.

[5] Liu Na, Song Lihua, Liu Lihua. The Value and Application of Excellent Traditional Culture in Ideological and Political Education in Universities [J]. Cultural Industry, 2021 (14): 3.

[6] Wang Jia. Analysis of the Inheritance and Application of National Excellent Traditional Culture in Ideological and Political Education in Universities [J]. Popular Digest, 2022 (26): 0114-0116.

[7] Zhou Liyun, Huang Ping. The Application of Excellent Traditional Ethnic Culture in Ideological and Political Education in Universities [J]. Changjiang Series, 2019 (27): 3.

[8] Bao Cuicui, Ming Chengman. Research on the Integration of Excellent Traditional Culture Education and Theoretical Teaching of Ideological and Political Courses in Universities [J]. Journal of Heihe University, 2019, 10 (5): 3.

[9] Bao Dongjiao. Telling the "Chinese Story" Well in English: Exploring the Integration Model of Course Ideological and Political Education and Safety Professional English Practice Teaching [J]. Campus English, 2022 (13): 72-74.

[10] Hu Jie. Research on the Effective Infiltration of Traditional Culture in College Ideological and Political Education [J]. Economic and Social Development Research, 2020 (1): 1.