

Illustration in Children's Food Packaging Involved Methods and Applications

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Abstract: With the growth of the global population, the children's food market is expanding, and the design of children's food packaging is increasingly being paid attention to. As an intuitive and vivid visual language, illustration plays a vital role in children's food packaging. It can not only attract children's attention and improve the appeal of the product but also increase the interest in the package through the story context and game elements, thereby enhancing children's awareness and loyalty to the brand. Therefore, the application method and effect of illustration in children's food packaging have become a problem worth studying. In-depth understanding of children's preferences and cognitive characteristics of illustration in different age groups is helpful to design food packaging that better meets children's needs. With the continuous expansion of the modern children's consumer market, illustration design, as an indispensable element in children's food packaging, has a unique visual appeal and emotional connection ability to attract children consumers. This paper will study the method of integrating illustration design into children's food packaging and discuss the three parts of hand-drawn design, vector drawing, and digital synthesis technology in detail. This paper aims to explore the application methods and effects of illustration in children's food packaging, identify the research gaps in this field by summarizing the current research progress, and put forward the research theme and specific problems of this paper. Then, the methods adopted in this study will be introduced in detail, and their significance will be expounded. Finally, future development will be predicted, and suggestions for possible problems will be put forward.

Keywords: illustration, children's food, packaging design, advertising.

1. Introduction

The core of children's food packaging design is to attract children's attention and stimulate their desire to buy. As an intuitive and vivid visual element, illustration can quickly catch children's eyes and establish an emotional connection with them. Therefore, cleverly integrating illustration design into children's food packaging can not only effectively enhance the market competitiveness of products, but also bring pleasant shopping experience to children.

Scholars at home and abroad have conducted extensive research on the application of illustration in children's food packaging. Foreign studies mainly focus on the enhancement of the recognition and attractiveness of children's food packaging by illustration, as well as the influence of representative food illustrations on consumers' purchase intentions. At the same time, there are also studies to

explore the difference in the effect of hand-drawn and computer-generated illustrations in food packaging. Domestic studies pay more attention to food packaging illustrations with local characteristics, such as the application of Chinese painting and comic style, as well as the use of traditional elements in design.

Although the current research has made some achievements, there are still some research gaps. First of all, there is a lack of systematic research on the specific application methods and effects of illustration in children's food packaging. Secondly, the research on illustration preferences and cognitive characteristics of children of different ages is not deep enough. Finally, the role of illustration in shaping children's food brand image and conveying corporate culture has not received sufficient attention. The significance of this study is to systematically explore the application methods and effects of illustration in children's food packaging, providing theoretical guidance and a practical basis for food packaging designers.

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With the progress of science and technology and the change of consumer demand, the application of illustration in children's food packaging will also face new challenges and opportunities. Future research can further explore the combination of illustration and new media technology, as well as the process and effect of optimizing illustration design by using big data and artificial intelligence technology. At the same time, attention also needs to be paid to the role of illustration in promoting healthy eating for children and environmental protection, in order to promote sustainable development of food packaging design.

2. The characteristics of children's illustrations

Children's illustrations refer to the illustrations drawn by children's books, magazines, newspapers, children's toys, and other children's products. These illustrations usually appear in vivid, interesting visual forms to attract children's attention and help children better understand and remember the content conveyed. The drawing style used in children's illustrations is very simple, mostly using bright colors such as red, blue, yellow, white, and green. Construct simple, clear, and direct figures in rich colors. Daub stage (1-3 years old).

* Preference: They prefer rhythmic activities, like to do some repetitive actions, and have a very weak cognition of painting. They enjoy the process of painting.

* Cognitive characteristics: Children at this stage mainly draw unconscious, random graffiti, their paintings often do not have any rules and specific images. This kind of graffiti meets the psychological needs of children, such as light arm movement and body movement, which can stimulate their sense of security and satisfaction.

Symbolic or symbolic stage (3 ~ 5 years old)

* Preference: They begin to associate familiar objects with basic shapes such as circles, squares, triangles, and so on, and even though the painted image is far from or nothing like the thing or object it is called, they will give the painted image a name.

* Cognitive characteristics: During this period, children's cognition of external things is basically self-centered and intuitive symbolization. They begin to use symbols (such as circles, squares, triangles, etc.) to represent the characteristics of the object, exaggerating the main features or impressive aspects.

Subjective sensory expression period (5 ~ 9 years old)

Preference: After the age of five and a half, children begin to gradually become interested in the relationships between things, and try to express these relationships with drawings.

* Cognitive characteristics: Children at this stage begin to use the base line in the drawing, and they add their own imagination and subjective feelings while perceiving reality. Observation, imagination, creativity, aesthetic ability and so on have been greatly developed and improved.

Visual Realism period (ages 9-13)

* Preference: If the child is still very fond of painting during this period, parents can conclude that the child is talented in this area.

* Cognitive characteristics: Children at this stage begin to enter the early stage of realism, their paintings gradually close to the image of real things, and pay more attention to the performance of details. [1]

Children's illustrations can make the brand more recognizable in the market through unique image design. For example, you can design a distinctive cartoon character or animal as a brand image, so that children will think of this brand as soon as they see this image, or use the character image of children's cartoons in the packaging, not only to attract children who like to watch such cartoons, but also to use cartoon packaging that can be seen everywhere to bring the number of cartoons.

3. Application of hand-drawn design in children's food packaging

With its unique artistic style and expressive force, hand-drawn design has become an important means of illustration design in children's food packaging. Hand-drawn illustrations can show the characteristics of products and brand culture through delicate strokes, rich colors, and vivid images. In hand-drawn design, designers need to fully consider children's aesthetic characteristics and psychological needs and use exaggeration, deformation, and other techniques to create illustrations that meet children's preferences. Children's illustrations can make food packaging more interesting through the setting of the story situation. For example, food packaging can be designed as a small storybook or adventure map, so that children can enjoy the food and participate in an interesting story. In addition to rich and diverse illustrations, adding game elements to children's illustrations is also a good way to improve the fun of food packaging. For example, you can design some hidden patterns or small gifts that need to be solved to find, so that children can have more fun in the process of shopping and enjoying food. [2]

3.1. Vector drawing

Vector drawing technology has become another important way of illustration design in children's food packaging because of its high clarity and true amplification. Vector drawing can quickly generate a variety of complex graphics and patterns through computer software, designers can flexibly use lines, colors and shapes and other elements to create illustrations that meet the characteristics of the product. At the same time, the vector drawing technology can also realize the rapid modification and reuse of illustration, and improve the design efficiency.

3.2. Digital synthesis technology

Digital synthesis technology is a technology that combines multiple image elements through computer software to create new visual effects. In children's food packaging, digital synthesis technology can organically combine hand-drawn illustrations, vector graphics, and other elements to create creative and dynamic illustration works. For example, a designer can combine a hand-drawn cartoon image with background elements in a vector graphic to form a complete illustration. In addition, digital synthesis technology can also achieve the combination of illustration and dynamic effects, making the packaging more attractive and interactive.

3.3. Color matching in packaging

Color plays a crucial role in the design of children's food packaging. Reasonable color matching can not only attract children's attention, but also stimulate their desire to buy. In the design of the integration of illustration materials, the following points should be noted:

1. Bright and lively colors: Children have a natural attraction to bright and bright colors. Therefore, bright and vivid colors should be used in the design to attract the attention of children.
2. Harmonious color matching: When choosing colors, attention should be paid to the harmony of colors to avoid being too dazzling or chaotic. Reasonable color matching can make the illustration more beautiful and comfortable, and improve the overall beauty of the product.
3. Color meaning is clear: color also has a certain symbolic significance. In the design, you can choose colors with clear meanings according to the characteristics of the product and the target audience. For example, blue can represent fresh, healthy, green can represent nature, environmental protection and so on. [3]

3.4. Add puzzle content to packaging

Adding educational content to children's food packaging design can not only attract children's attention, but also cultivate their intelligence and creativity. In the design of illustration materials, the following points should be noted:

1. Content design should be interesting: Educational content should be interesting to attract children's participation. In the design, we can set up puzzles, games and other forms to let children learn and grow in play.
2. Educational content design: Educational content should have a certain degree of education, can teach some useful knowledge and skills. In the design, some scientific, cultural and other elements can be incorporated, so that children can learn more knowledge in play.
3. Combination of content and product characteristics: When designing educational content, the characteristics and target audience of the product should be fully considered. For example, for children's milk products, you can design some milk-related puzzle games or puzzles; For candy products, you can design some puzzle content related to candy shape, color, etc. [4]

3.5. Design smart and cute cartoon characters

As a visual language, the vividness and decorative nature of illustration is more attractive to the majority of consumers [5]. Children have a natural affinity for cartoon characters. In the design of children's food packaging, the design of smart and cute cartoon images is an important means to attract children's attention. In the design of illustration materials, the following points should be noted:

1. Unique image design: Cartoon images should have unique shapes and characteristics to distinguish them from other products. The unique design can make the product stand out among many competing products and attract the attention of children.
2. Smart and cute image: cartoon images should have smart and cute characteristics to meet the aesthetic preferences of children. In the design, the cartoon image can be more vivid and interesting through exaggeration and deformation.
3. The combination of image and product characteristics: when designing cartoon images, the characteristics of the product and the target audience should be fully considered. For example, for healthy food, you can design some healthy and lively cartoon images; For snack products, you can design some cute and interesting cartoon images.

4. Conclusion

The design ideas of integrating illustration materials in children's food packaging design, including hand-drawn design, vector drawing, and digital synthesis technology, have their own advantages in the illustration design of children's food packaging, which can complement each other and jointly create illustrations with unique charm and creativity. When using these technologies, designers need to fully consider the aesthetic characteristics and psychological needs of children and pay attention to the integration of illustration and product characteristics, as well as the coordination of illustration and overall packaging design. And clever matching color, design smart and cute cartoon images, add puzzle content, and so on. Through reasonable color matching, unique cartoon image design, and interesting educational content, it can attract children's attention and enhance the attractiveness and market competitiveness of the product. In the future, we should continue to explore and innovate and inject more creativity and vitality into the design of children's food packaging. Through continuous trial and innovation, designers can create more illustrations in line with children's preferences and inject more vitality and creativity into children's food packaging.

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