

Research on Creation Strategies of Picture Books for Children's Cognitive and Imaginative Development

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Abstract: This paper discusses the creation strategies of picture books for children's cognitive and imaginative development, and proposes that picture book creation should closely focus on the needs of children's cognitive and imaginative development. Through analysis, this paper summarizes the effective strategies in the creation of picture books, aiming to provide theoretical reference and practical guidance for the design of children's picture books, and further promote the comprehensive development of children's cognitive and imaginative abilities.

Keywords: Picture book creation; Cognitive development; Imaginative development

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1. Introduction

In the golden age of children's growth, the development of cognition and imagination is an important cornerstone of their overall quality construction. As a unique medium integrating visual art and storytelling, picture books attract children's attention with their colorful pictures, and become an important tool to promote children's cognitive development and imagination stimulation with their profound educational connotation and unlimited imagination space.

With the continuous progress of educational concepts and the advent of the picture-reading era, picture books play an increasingly prominent role in children's education. It can not only help children accumulate vocabulary and improve their language expression skills, but also stimulate children's imagination and creativity through vivid storylines and rich visual elements, and promote their all-round development of emotional, social, and cognitive abilities. Therefore, the creation strategy of picture books for children's cognitive and imagination development is studied. It is of great significance to enhance the educational value of picture books and enrich children's spiritual world. This study will combine the theories of child psychology, cognitive science, and picture book design to discuss how to create picture books that conform

to the rules of children's cognitive development and can effectively stimulate their imagination from multiple dimensions such as content selection, visual design, and narrative structure of picture books ^[1]. Through an in-depth analysis of children's cognitive characteristics and development stages of imagination ability at different ages, this paper proposes targeted picture book creation strategies, in order to provide practical guidance and theoretical support for picture book creators and jointly promote the prosperity and development of children's picture book creation ^[2].

2. Overview of the theory of children's cognitive and imaginative development

2.1. Cognitive development

Cognitive development is a complex and dynamic psychological process, involving the individual's comprehensive ability to obtain information from the environment, process information, construct knowledge systems, and apply this knowledge to solve problems. Its core lies in the intelligent construction and evolution of the mind, covering many dimensions such as perception, attention, memory, thinking, language, and imagination. The theory of cognitive development proposed by Piaget profoundly reveals the formation and development rules of children's wisdom and cognitive mechanisms ^[3]. He believed that children's cognitive development is a process of continuous construction from low level to high level through two mechanisms of assimilation and adaptation on the basis of existing cognitive schema, and this process is manifested as the gradual complexity of cognitive structure. According to this, he divided children's cognitive development into four key stages, namely, the sensorimotor stage (0–2 years old), in which children explore the world mainly through the coordination of senses and movements; in the pre-operational stage (2–6/7 years old), children begin to use symbols to think but their logical thinking is not mature; in the concrete operation stage (6/7–11/12 years old) ^[4], children can make concrete logical reasoning but still need concrete physical support; in the formal operation stage (age 11/12 and beyond), children develop abstract logical thinking, are able to deal with hypothetical problems, and perform formal logical operations. Each stage is accompanied by the typical characteristics and rules of children's cognitive development, starting from the initial low level of equilibrium, imbalance in the face of new stimuli, and then through the interaction between the subject and the object, that is, the process of assimilation or adaptation, so as to achieve a new cognitive balance ^[5]. The cycle of this process constitutes the basic pattern of cognitive development, balance to imbalance and then to a new balance, which continuously promotes the continuous growth and deepening of children's wisdom and cognitive ability.

2.2. Imaginative development

The development of children's imagination is one of the fields of cognitive systems, and its evolution process shows the characteristics of multiple stages from basic to advanced, from simple to complex. Imagination, as a mental process, involves the processing and reorganization of stored information to create new images or situations. In the childhood stage, the development of imagination first shows a strong intentional change, that is, from the initial blind and passive state gradually transitioned to the active and conscious ^[6]; young children's imagination is often triggered by external stimuli, it lacks clear purpose and is mostly manifested as unfettered reverie. As they grow older, they begin to be able to construct imaginary content around specific purposes and current needs, and the reality of children's imagination becomes increasingly enhanced, undergoing a gradual transition from fantasy to reality. Creativity is also an important aspect of children's imagination development, which starts from simple imitation and reconstruction and gradually

develops into innovation and creation. When they are young, children's imagination is mostly based on the direct simulation or reproduction of characters and scenes in reality or media, and then they begin to integrate their personal creativity to create unique imaginative content ^[7]. In addition, the generality of children's imagination is gradually improved, showing a transition from concrete to abstract. In the early stage, their imagination is closely dependent on the intuitive perception of objects, models, or graphics, which mostly reflect the concrete details in real life. With the maturity of thinking ability, they are able to go beyond concrete images and build a more abstract and complex imaginary world ^[8].

3. Picture book creation strategies for children's cognitive and imaginative development

3.1. Creation of color elements

In the creation of children's picture books, the use of color deeply reflects the respect and adaptation to the development law of children's cognitive instinct and sensory perception. The first principle of the selection of color elements is to meet the cognitive psychological characteristics of children, while closely fitting the evolution of visual needs of children of different ages, to ensure that the design of picture books can accurately connect and promote the phased development of children.

For children of 0–2 years old, the use of color is particularly critical. In the first four months, black and white contrasting patterns are ideal for stimulating visual nerves and promoting visual development, and these patterns can help young children establish an initial understanding of the world around them. As the age increases to six months, the introduction of natural colors and large color blocks can further improve the visual attention and perceptual ability of children. Entering the preschool stage of 3–6 years old, children's cognition of color begins to gradually deepen. At the age of 3 or 4 ^[9], they may not have fully mastered the name and tone distinction of colors, but by the age of 5, they are more sensitive to the nuances of color, including changes in tone and saturation. During this period, children preferred colors with high purity and bright brightness as well as mixed tones with harmonious matching, which put forward higher color application requirements for picture book design ^[10]. Creators need to carefully select and cleverly match colors to stimulate children's visual interest and promote their color cognitive development. When children enter the school age of 7 to 12 years old, their perception and understanding of color have been significantly improved ^[11]. After receiving a more systematic and comprehensive education, they can accurately identify the name of the color and the cold and warm attributes, and show a more mature and diversified aesthetic preference for the use of color. At this time, the color design in the picture book should no longer be limited to bright warm colors, but can boldly try to integrate cold dark colors to create a richer and more changeable visual effect to meet the growing aesthetic needs and exploration desires of children ^[12].

3.2. Text and language creation

The language design of children's picture books should be closely focused on the cognitive characteristics, imagination development, and reading ability of children of different ages.

For young children 0–2 years old, the text in the picture book should be brief and concise, and adopt colloquial expressions close to daily life, so that parents can read it and children can understand it. At this stage, the main function of words is to assist visual images and help children establish preliminary language concepts and vocabulary accumulation ^[13]. As children enter the early school age of 3–6 years old, their demand for words is gradually increasing. At this time, picture books should have the beauty of

refinement and rhythm, and attract children's attention through rhythmic sentence patterns^[14]. Meanwhile, the content should be closely adapted to children's actual life experiences, so as to promote their cognition and understanding of the world around them. However, when children enter the school age of 7–12 years old, their reading ability and interest points have changed significantly. Picture books at this stage should no longer be limited to simple colloquial expressions but should pay more attention to the construction and narration of story plots. Only with rich plots and fascinating storybooks can better meet the pursuit of reading depth and breadth for school-age children, stimulating their imagination and interest in reading.

3.3. Creation of subject matter content

In order to meet the unique needs of children at different stages of growth, picture books should present the characteristics of diversification and increasing depth of themes.

For young children aged 0–2, due to their early intellectual development, limited cognitive ability, and lack of mastery of text reading, the selection of picture book themes should focus on being close to children's daily life, emphasizing simple, intuitive, and emotional resonance^[15]. It is also found that newborns show a special preference for faces, so at this stage, picture books can integrate more warm family scenes and interaction with characters to promote the emotional connection between parents and children and the visual development of children. At the early school age of 3–6 years old, children's curiosity and desire to explore surge, and simple cognitive picture books are no longer able to meet their needs^[16]. At this time, picture book creators should focus on developing children's imagination, observation, and empathy, and design inspiring stories with adventure elements and educational significance^[17]. At the same time, considering the characteristics of children's easily distracted attention, the length of picture books should be properly controlled. The content needs to be interesting and easy to understand. For school-age children between 7 and 12 years old, with the expansion of their social circle, the growth of academic knowledge, and the accumulation of social experience, the scope of picture book themes also expands^[18]. At this stage, picture books carry the function of transferring knowledge and inspiring thinking, and become an important medium to guide children to face complex social issues and understand the meaning of life. A wide range of subjects, such as loss, war, sex education, art appreciation, natural science exploration, and even biography, can be presented in the form of picture books to help children build a comprehensive and profound worldview and values. Through rich text narration and delicate image expression, these picture books help children learn to think, feel, and grow in reading^[19].

4. Children's picture book creation practice

The practical part of this study is mainly designed for children aged 3 to 6 years old. At this stage, children are in a critical period of increasingly keen visual perception and rapid improvement of language understanding and expression skills. At the same time, their personality and self-awareness are gradually taking shape, they are full of infinite curiosity and desire to explore the world around them and show strong imagination and thinking ability^[20]. However, due to their still-developing attention spans, children often need to rely on points of interest or adult guidance to maintain attention for long periods of time^[21]. This practice project plans to design a picture book named *Four Seasons*, which vividly shows the unique charm and different characteristics of the changes of the four seasons through intuitive and attractive picture design and simple and easy-to-understand words close to children's oral habits.

4.1. Color matching of picture books

The purpose of the *Four Seasons* book is to lead children to explore the differences between the four seasons, using four bright colors as the iconic border of each season's chapters. The use of vibrant green in spring symbolizes the recovery and rebirth of all things; in summer, warm and bold red is chosen to highlight the heat of the sun and the burst of vitality; framed by a warm yellow color, autumn depicts the beauty of harvest and tranquility; with deep blue as the keynote, winter is created as a cold and quiet ice world. These colorful designs successfully attract readers' attention, so that children can swim in the ocean of colors and feel the wonder and charm of the changes of the seasons. The specific design is shown in **Figure 1**.



Figure 1. *Four Seasons* color design

4.2. Text design of picture books

The design of the text part of the picture book should be both concise and rhythmic, while closely combining the characteristics of the four seasons, close to the actual life experience of children. The following are some specific text designs in the description of the spring, summer, autumn, and winter of the picture book:

(1) Spring

- a. The spring breeze blows gently, the flowers wake up, let's walk into the spring world together!
- b. In spring, the grass is green, the butterflies are flying, and the bees are busy collecting honey.

(2) Summer

- a. In summer, the sun is hot, the trees are shaded with umbrellas, and the rivers are babbling with cool water.
- b. When summer comes, lotus flowers laugh, frogs cry and cicadas sing.

(3) Autumn

- a. Autumn wind, yellow leaves floating, fruits hanging on the tree tops.
- b. Autumn leaves fall, we step on the fallen leaves, creak sound, the heart is happy to bloom.

(4) Winter

- a. Snow is falling in winter, let's make a snowman, put a little red riding hood on it, and see who makes the biggest one.
- b. Winter snow dance, white, snowman smile, happy in the heart.

4.3. Theme design of picture books

In order to stimulate children's imagination and observation, the story theme design incorporates some adventure elements and emotional resonance. The main character of the picture book, a boy, will lead the reader on an adventure through the four seasons, designing a quest in each season—finding the end of the missing rainbow in spring, helping the animals in the forest through the drought in summer, collecting the most beautiful leaves to make a magic book in autumn, and searching for the secret of the warm heart in winter. At the same time, incorporating emotional elements into the adventure process, such as friendship, courage, and helping others, let children feel warmth and strength in reading, and cultivate their empathy. Through reading these stories, children can not only experience the fun of adventure, but also deeply feel the power of emotion, learn to illuminate each other with love and courage on the way to growth, and cultivate valuable empathy and social responsibility.

5. Conclusion

By studying the rules of children's cognitive and imaginative development, this paper deeply analyzed the key elements of picture book creation and put forward a series of targeted picture book creation strategies. These strategies cover the clever use of color elements, the refinement and vivid expression of text language, and the rich diversity of subject matter and inspiring thinking, aiming at promoting the improvement of children's cognitive ability and the expansion of imagination in an all-round way. In order to further verify the effectiveness of these strategies, this paper also carefully designed a specific case of a children's picture book, which integrates various creative points in the above analysis to bring a richer, more profound, and inspiring reading experience to children.

Disclosure statement

The authors declare no conflict of interest.

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