VISUAL ARTS LEARNING KIT DESIGN FOR BUILD UP RELATIONSHIP BETWEEN CHILDREN AND DIET

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Abstract

This study aims to improve the relationship between children and food by designing and producing a board game focused on children's nutrition education. This study aims to explore how gamification can promote children's awareness and interest in healthy eating, thereby cultivating positive eating habits. Board games are centered around children, guiding them to understand the nutritional content, sources, and impact on their physical health of different foods through interesting game rules and interactive elements. During the game, children will participate in activities such as food selection and nutrition knowledge quizzes, thereby enhancing their preference and awareness for healthy foods. In addition, board games also provide opportunities for parent-child interaction, where parents can participate in games with their children, discuss the importance of healthy eating together, and provide positive encouragement and support. Through this approach, we hope to promote the acceptance and practice of healthy eating at the psychological, cognitive, and behavioral levels of children, laying the foundation for building healthy eating habits. Future research can further explore the long-term effects of board games on children's dietary behavior and health status, and combine other educational methods and intervention measures to comprehensively improve children's nutritional level and health literacy.

Keywords: Board games, the Relationship Between Children and Food, Parents and Children

Introduction

In the realm of daily life, the reluctance of children to consume vegetables is a pervasive concern often expressed by parents. This seemingly innocuous preference, however, can manifest in a range of physical issues for children aged 6-10, a critical period for their physical and mental development, particularly in forming dietary habits. Amidst technological advancements and growing environmental concerns, the evolving relationship between children and their diets becomes increasingly complex.

Contemporary children grapple with challenges such as poor eating habits, nutritional imbalances, and a deficiency in food culture. This problem manifests in poor diet choices, malnutrition concerns, and a notable absence of food culture education. A survey reveals alarming statistics, indicating that a significant proportion of children favor unhealthy food options, leading to issues like distracted eating and an inability to eat autonomously.

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Malnutrition is another critical aspect, with data showing a reluctance to consume essential food groups, slow growth, and an increasing prevalence of obesity. Lack of food culture is further exacerbated by time constraints, insufficient parental guidance, and indulgent attitudes towards children's food preferences. The consequences of these challenges are visible in children's limited food preferences, potentially leading to nutritional deficiencies.

The research seeks to delve into the root causes of these issues and proposes solutions through interactive games designed to transform children's picky eating habits. By fostering a diversified understanding of food culture and nutritional values, the study aims to promote balanced nutrition, healthy growth, and disease prevention during this crucial developmental phase. In essence, the exploration of these problems is deemed essential, holding potential for meaningful improvements in children's dietary development and overall well-being.

Objectives

This paper is committed to exploring the root causes of the problem through deeply analyzing the causes of children's bad eating habits. From a professional perspective, we will design an attractive set of food interactive learning games, so as to improve children's understanding of various kinds of food and nutrition, and finally achieve the following specific goals:

1.Children's awareness of the benefits and drawbacks of different foods to their physical health

2. Children can understand the nutrition, growth, different cultures, colors, shapes, etc. of different foods.

3.The aim of children's partial picky eating is to maximize their adaptability to various types of food.

4. Children understand the relationship between their body and food, improve picky eating habits, and improve their quality of life.

Material and Method

1 status quo of overseas research

In fact, foreign scholars have made many studies and discussions on the issues related to children's diet. Among them, the American scholar Daniels has conducted related studies on the consequences of overweight and obesity in children. Birch, L. L., & Fisher, J. O. have done related research on the development of eating behaviors in children and adolescents. In addition, in some official institutional studies, there are also relevant data statistics. For example, American Academy of Pediatrics and World Health Organization (WHO) and CDC have relevant statistics on sugar intake in adults and children. For the above issues, Hingle, M. D., & O 'Connor, T. M provide some interventions for parental participation to improve children's dietary intake. However, in the collected literature, there has been no specific design study from the perspective of interactive game design.

2. status quo of domestic research

A search for children's bad eating habits on the CNKI found a total of 72 related research papers, including 64 academic journals, 4 master's degree theses and 2 newspapers. In summary, these research articles mainly focus on the following aspects: One is the harm caused by bad eating habits to children, including the master's thesis of Lin Zhiping of Fujian Medical University A study of dietary behavior and its influencing factors and health effects in urban children. The second is to study the harm of bad eating habits in children in regional schools or communities for example, represented by Wei Jianhua on the harm of Bad Eating Habits on the Physical Development and Psychological Development of Preschool Children

published in the journal Modern Diagnosis and Treatment. However, the design of the design field for children's poor dietary habits is also insufficient.

3. (6-10 Year Old Children) Analysis of Unhealthy Dietary

On October 16,2019, the UNICEF's China Office and the Chinese Nutrition Society jointly released the State of World Children 2019 report in Beijing, with the theme of "Children, Food and Nutrition: Growing healthily in a Changing World". Representatives from academia, NGOs and other United Nations agencies attended the conference. The report reveals that at least one third of children under five worldwide are undernourished or overweight, and half face hidden hunger. The report shows that the main cause of the triple burden of malnutrition is poor dietary quality in children, and two-thirds of children do not meet the minimum diversity criteria. Rapid globalization, urbanization, increasing injustice, humanitarian crisis and climate change have further worsened this problem, and made the global nutrition situation face unprecedented negative effects, thus further threatening the survival and growth of children, as well as the development of various countries.According to the report, we found that children's poor eating habits mainly focus on the following aspects:

1. High sugar diet: Children consume excessive amounts of high sugar foods and beverages, such as candy, desserts, carbonated drinks, and fruit juices.
2. High fat diet: Children consume foods high in fat and cholesterol, such as fast food, fried food, potato chips, and high fat dairy products.
3. Low intake of fruits and vegetables: Children do not eat enough fruits and vegetables and lack vitamins, minerals, and fiber.
4. Unbalanced diet: Children may rely too much on processed foods and fast food, while neglecting the staple foods, protein, vegetables, and fruits in a balanced diet.
5. Eat less breakfast: skipping breakfast or eating unhealthy breakfast may affect children's attention, learning, and quality of life.
6. Large amount of snacks: Children may frequently consume high calorie, low nutritional value snacks.
7. Irregular diet: Irregular dietary schedules and irregular dietary patterns.

Methodology

Materials and Technique Experiment

In the process of thesis, the core focus is on the production process of the product, and how to improve the product quality through cutting technology, painting, plate making, printing, binding and other skills. At the same time, I will use wood, paper, paper shell, composite materials, paint, iPad and other materials to create a creative and educational value of food education sets.As scholars Jo Bird, Susan Edwards pointed out: “A significant problem for early childhood education has been how to understand the pedagogical use of technologies in a sector that values play-based learning. ”

Research Framework

The basic research idea of this thesis is to start with the relevant research problems, and use the analysis method of 5w1h to gradually find problems, analyze problems and solve problems.

First of all, I will analyze the specific reasons for children's bad eating habits from the physical and psychological factors. On the basis of analyzing the reasons, it can be concluded that due to physical and psychological problems, children will have some specific ways of expression and bad behavior when eating.

Secondly, I have analyzed the different and same aspects of children and parents' understanding and cognition of food by exchanging the perspectives and positions of food. In

other words, what they are most interested in and enthusiastic about and what they care most about about food.

In addition, on the basis of the above two studies and analysis, the two aspects are combined, and then the physiological factors, physiological factors and educational factors are taken as my research scope to carry out specific research.

Finally, I will build an interactive game set that focuses on children's diet. With the help of the adventurous and interesting story background and diversified game level design, children can understand the characteristics of various foods during the game, and help them overcome their prejudice against food, so as to help them grow up healthily.



Figure 1.2 Paper framework mind map
Source : Author

Results and Discussion

Results

After deeply exploring the causes, influences and solution strategies of children's bad eating habits, I decided to use a unique and innovative way to spread this key message. By integrating story creation and game design, I hope to guide the children to develop the habit of healthy eating with a lively attitude. To achieve this goal, I chose the IPD Procreat drawing software as the design tool. Known for its rich features and ease of use, the software has become an indispensable tool for designers. In this project, I made full use of the drawing function of Procreat to build a story world full of fun and adventure for the children.

In the story, I skillfully integrate the relevant knowledge of healthy eating, so that the children can enjoy the story while also learning practical eating concepts. In addition, I have designed a series of challenging games to help children further understand the importance of healthy eating during the game. These games are full of challenges, but also stimulate their creativity and imagination, so that they can gain knowledge and happiness in the games.

In the design process, I always uphold the principle of "child-centered". I believe that only by truly understanding our children's needs and interests can we provide them with the most valuable educational experience. Therefore, I fully considered the children's age, cognitive ability and interests in the design process, and strive to let each child find their own fun in the story and games.

After a period of hard work, I finally completed the design results of this project. This is a set of healthy diet education materials integrating stories, games and education, namely,

aiming to help children establish the correct eating concept and form good eating habits. I look forward to this design results to plant healthy seeds in the hearts of more children and add a bright color to their growth path.

In short, through the in-depth study of children's bad eating habits and the use of IPD's Procreat drawing software, I have created a set of innovative healthy diet education design results. In the form of stories and games, they vividly convey the importance of healthy eating, aiming to help children develop good eating habits. I firmly believe that with the love and recognition of the children, the design results will have a positive impact on their healthy growth.

Conclusion

Design a learning kit to enhance and build a good relationship between children and their diet (designed to achieve better long-term health outcomes). In the field of children's education, we are committed to exploring the most suitable way for children's education methods. To some extent, the traditional compulsory education can not meet the needs of children, they need a self-centered education from their own point of view. This way should stimulate their interest, let them learn in happiness, so as to truly realize edutainment.

I know the importance of children's knowledge of food. They need to understand the nutritional value of food and how to match their diet to form healthy eating habits. However, traditional teaching methods have often bored children, who know very little about food. Therefore, I designed a child-centered learning kit designed to stimulate their interest in food in innovative ways and allow them to learn food knowledge in a pleasant atmosphere.

The learning kit uses a clearance game design designed to stimulate children's interest in and understanding of food in the game. They need to overcome all kinds of difficulties and complete various tasks in the game, so as to understand the various knowledge of food. The design is designed to give children fun while also addressing their rejection of some food. In this way, the children unconsciously improve their interest in food and develop good eating habits.

In the process of designing this learning kit, I fully considered the children's psychological characteristics and interests. The design of the game is both interesting and challenging, so that the children can feel the fun of learning in the game. In addition, I also focus on combining food knowledge with real life, so that children can understand the importance of food in their daily life. This practical design allows children to learn practical knowledge in the games, so as to be better applied in real life.

In short, this child-centered learning kit is designed to let children learn about food in a pleasant atmosphere, increase their interest in food, and develop good eating habits. In this way, we hope that our children can love food and enjoy a healthier and more delicious life. At the same time, we also hope that this toolkit can inject new vitality into China's education cause, so that more children can grow up happily.

Recommendations

How should we deal with and help children build healthy eating habits for their bad eating habits? Here are some detailed suggestions and strategies

1Raise education and educational awareness

1.1Family

Parents can regularly learn healthy eating knowledge with their children, so that their children can understand the impact of different foods on their health, and cultivate their good eating habits.As some scholars have pointed out： “Currently, limited conclusions may be drawn regarding the best method to involve parents in changing child diet to prevent obesity and improve health. Indirect methods remain the most commonly used strategies to engage

parents, however, direct methods of engagement show more promise and therefore, warrant further research."

1.2 Schools

Schools can carry out nutrition education courses, so that students can master the basic nutrition knowledge and develop good eating habits.

1.3.Community

The community can organize healthy diet publicity activities to raise children's awareness and attention to healthy diet.

2Demonstration and encouragement

2.1 Parents and guardians

Parents should set an example by choosing a healthy diet and encourage their children to try various foods during eating.

2.2 Educators

Teachers can encourage students to choose healthy food in the school canteen and set an example for them.

3 Improve the food environment

3.1 Schools

School canteens should provide more healthy food choices and reduce the supply of foods high in calories, high in fat and high in sugar.

3.2Day care centers

Day care centers should also pay attention to children's healthy diet and provide balanced food.

4policies and regulations

4.1 Government

Formulate relevant policies and regulations, restrict children's food advertising, and improve school catering standards.

4.2 Food packaging

Nutrition information is required to be marked on the food packaging, so that parents and children can make a wise choice.

5 .Cultivate children's ability of self-management

5.1 Education department and family

Through group discussion, role playing and other ways, let children understand the importance of reasonable diet, and cultivate their ability of independent thinking and decision-making.

5.2 Practical activities

Organize children to participate in planting, cooking and other activities, so that they can personally experience the whole process of food from planting to cooking, so as to cherish food more.

6 Increase outdoor activities and physical exercise

6.1 Schools and communities

Encourage schools and communities to organize more outdoor activities to allow children to exercise in the natural environment.

6.2 Family

Parents can accompany their children to do outdoor sports, which can not only enhance the parent-child relationship, but also help their children consume excess energy.

7Mental health support

7.1 Professional institutions

Psychological counselors can cooperate with children, parents and teachers to solve dietary problems and pay attention to children's mental health.

7.2Family

Parents should pay attention to their children's emotions, create a harmonious family atmosphere, and help their children build confidence.

8Diversified ways of education

8.1 Animations, picture books, games, etc.: Guide children to develop good eating habits through vivid and interesting stories and characters.

8.2Education courses: Use diversified education methods, such as cartoons, picture books, games, etc., to let children understand a healthy diet in a relaxed and happy atmosphere.

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