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Teaching Challenges and Improvement Strategies for the "Design and Production of Educational Toys in Kindergartens" Course in Preschool Education Majors at Universities

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Abstract: In numerous higher education institutions, the establishment of preschool education programs is essential. Students in this field are cultivated to become comprehensive talents, learning foundational theories in five major areas. Beyond this, they also acquire professional practical skills in music, fine arts, and dance, which places certain demands on their personal qualities and overall abilities. Consequently, the study of fine arts within the preschool education curriculum becomes particularly significant. Fine arts education holds a prominent role in kindergarten activities, with most universities offering courses on designing and making educational toys and creating kindergarten environments to meet the needs of early childhood education. Thus, for students in this field, mastering the fine arts course is crucial. Through teaching "Design and Production of Educational Toys in Kindergartens," it has been observed that this course enhances students' comprehensive abilities and develops various skills. This paper analyzes the teaching practices of the educational toy design and production course in preschool education, hoping that this course will continue to provide deeper knowledge and insights, and a blend of theory and practice, to teachers, students, and children.

Keywords: Preschool education; Fine arts course; Homemade educational toys

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1. Introduction

Educational toys play a vital role in early childhood education. For kindergarten teachers, the course "Design and Production of Educational Toys in Kindergartens" is of great importance. The course not only showcases teachers' professional skills but also helps in nurturing and developing a variety of comprehensive abilities in both kindergarten teachers and children. Therefore, mastering this course is crucial and should receive attention from all universities.

2. The significance of implementing the "Design and Production of Educational Toys in Kindergartens" course

2.1. Enhancing professional skills of teacher trainees

In the realm of preschool fine arts education in universities, students need to possess two professional skills: painting and handicraft making. Firstly, painting skills can be acquired through the study of "Fundamentals of Fine Arts", which covers basic art knowledge such as color, form, and sketching. From theoretical learning to practical hands-on exercises, this enhances practical operational skills and lays a solid foundation for subsequent fine arts courses.

Secondly, handicraft-making is a crucial aspect of kindergarten teaching. Mr. Chen Heqin once pointed out, "Play is a psychological characteristic of children, it is their work, and it is their life." "Play brings joy, experience, common sense, thoughts, and health to children." In kindergartens, play is the first step in conducting early childhood education, and the involvement of toys in various games is essential. For most kindergartens, continually purchasing new toys would inevitably be costly. To save costs and meet the diverse needs of children for toys, making educational toys is an excellent solution. Therefore, offering this course in universities is very necessary. It has been found that the course demands high levels of creativity and hands-on making skills from students. The production of homemade educational toys emphasizes creativity. Before making, it is necessary to decide which type of educational toys to create, then draw design sketches according to needs. The design of the drawings involves multiple conceptualizations, incorporating unique ideas, followed by preparing materials based on the designed drawings. The production process involves cutting, sewing, and gluing, allowing students to exercise hand muscle strength and hand-eye coordination, and develop thinking and imagination [1].

Moreover, teacher trainees also need to grasp relevant psychological knowledge, making toys that are age-appropriate based on the physiological and psychological characteristics of young children. The production of toys from waste materials also involves knowledge of hygiene and mechanical construction, enhancing students' skills in all aspects. For preschool majors, making educational toys is a comprehensive training, making it an essential teaching skill for future careers in early childhood education.

2.2. Understanding regional specialty materials

Homemade educational toys require various materials for their creation and use by young children. The types of materials used for making educational toys are diverse, including natural materials, fabric, metal, paper, and plastic. Depending on the geographical location and environmental characteristics of each region, some materials can be sourced locally and adaptively, reflecting local features and folk customs. For instance, in coastal cities like Dalian, Qinhuangdao, Qingdao, and Weihai, collecting materials such as shells and pebbles is convenient, and they can be used to create shell paintings, shell wind chimes, and stone graffiti among other artistic educational toys. Conversely, in the northern regions where agriculture and livestock dominate, collecting shells is challenging.

In the north, materials like grains, branches, leaves, sticks, and straws are readily available and easy to obtain. These plants not only meet daily life needs and decorate environments but also serve in handicraft production. For example, using small sticks to make furniture like dining tables, chairs, and benches fulfills the needs of children in dollhouse activities. Artistic collage creations can be innovated based on the different colors of grains, adding to the fun of art. Straw is particularly useful in making educational toys in the north, where it can be used to weave items such as bags.

Among weaving and tying crafts, palm weaving is renowned, requiring the use of palm leaves. In China, palms are primarily found in the warm, moist, and rainy areas south of the Qinling Mountains, excluding

Tibet. From southern Shaanxi down to Guangdong, Guangxi, and Yunnan, and from the Tibetan border east to Shanghai and Zhejiang, palms are widespread. Palm leaves can be used to make fans and straw hats; palm fruits and seeds can be pressed for oil for industrial and food purposes; palm trunks can be used in construction and furniture making. Thus, in palm-rich areas, weaving small animals with palm leaves can be an integral part of designing and making kindergarten educational toys.

2.3. Inheriting Chinese traditional culture

Educational toys are cultural products of human society, embodying societal cultural values and meanings. Toys also play a crucial role in the inheritance and dissemination of social culture. In Chinese traditional folk arts, there are many characteristic folk toys, such as Beijing's Rabbit Lord, Huaiyang's Clay Dogs, Shaanxi's Fengxiang Colored Clay Sculptures, Huishan's Clay Figure *Da A Fu*, Tianjin's "Clay Man Zhang", paper-cutting, and shadow puppetry. These traditional folk art pieces, often created by folk artists or rural women, allow one to perceive their keen artistic sensitivity and fervent aspirations for a beautiful life [2].

When students create folk art pieces, they must understand not only how they are made but also why. Initially, they should learn the historical context, methods, and cultural significance of the artwork before starting production. For instance, in studying paper-cutting, students should learn about its different styles: negative and positive paper-cutting; single-color, multi-color, and dyed paper-cutting; and the various folding methods such as two-fold, three-fold, and up to five-fold, which affect the style of the cuts. Learning about the paper-cutting master Ku Shulan, students can understand her challenging journey in paper-cutting and sense her intense passion for art and her expectations for a good life through her works. Paper-cutting encompasses rich traditional culture and advocates the transmission of the Chinese nation's excellent qualities, such as in the "Twenty-Four Filial Exemplars", which uses paper-cutting to express traditional Chinese filial piety. While making these artworks, students are subtly influenced by the stories within the "Twenty-Four Filial Exemplars", understanding that filial piety is paramount, which significantly shapes their worldview and values. If paper-cutting artworks are used to decorate corners in kindergartens, they also provide children with profound experiences. In creating paper-cutting works like "The Twelve Beauties of Jinling", students not only practice the methods and skills of paper-cutting but also deepen their literary interest in "Dream of the Red Chamber", promoting the study of ancient classical works.

3. Challenges in the course of homemade educational toys

3.1. Neglecting theoretical knowledge

Currently, the course on homemade educational toys in the school's preschool education program is elective, hence it is not taken seriously by students. Theoretical learning is predominantly passive listening, with students seldom taking notes actively; while practical aspects are mostly handled through group projects. Practical implementation is a test of theoretical knowledge, and during the hands-on stages, gaps in theoretical understanding become apparent. For example, students may not know the type of educational toys they are making, and basic skills for handling materials are often overlooked. In practice, they tend to rely on their existing experience without integrating theoretical knowledge. For instance, in fabric-based toy production, students are taught basic sewing techniques like straight stitch, back stitch, hidden stitch, appliqué stitch, and reverse stitch, and are guided through each method. However, when tasked with independently crafting fabric toys, students often opt for the familiar straight stitch for convenience, showing reluctance to try new techniques. When asked verbally about the sewing techniques they learned, students struggle to respond promptly, with some forgetting immediately after learning [3].

There are two reasons for such behavior. First, students undervalue the course, perceiving homemade educational toys merely as hands-on making, with assessments based on toy production rather than written exams, leading them to believe that it is easy to earn credits. Second, the content of the course is not inherently difficult to understand but is often willfully ignored by students, who assume the course solely emphasizes practical production. Completing a toy is mistakenly equated with course completion, leading to a neglect of theoretical knowledge.

3.2. Lack of innovation

The main goal of creating kindergarten educational toys is to cater to students' desire for diverse and innovative toys, so toys that offer multiple ways of playing can quickly capture children's attention and interest, increasing the utilization rate of homemade educational toys. Such toys are popular among young children and can also save on financial and time costs due to repeated use [4].

However, it has been observed during classes that students are generally reluctant to think innovatively about new methods of toy production, showing a lack of innovative spirit. After assignments are given, most students resort to searching for toy-making tutorials on platforms like Xiaohongshu, Baidu, and Douyin, and then simply replicate the methods found, completing their projects without actual thought or original design. This approach prevents students from gaining comprehensive training and improvement. As the saying goes, "Renew thyself completely each day; do it again, and again, and forever again." This highlights the importance of innovation, which is essential for development, strength, and improvement. The lack of innovative spirit has become a common phenomenon among students, who typically adopt a passive attitude toward learning. Educated in an environment that does not encourage critical thinking or proactive questioning, students tend to avoid seeking novelty and innovation. Thus, fostering a spirit of innovation in the course of homemade educational toys becomes even more challenging.

3.3. Monotony in material use

The successful operation of the homemade educational toys course relies heavily on the availability of diverse materials. Commonly used materials include paper, fabric, clay, natural substances, and recycled materials, offering a wide variety of choices. However, some materials, being expensive or difficult to collect, are often overlooked by students, who prefer to use simpler, more accessible materials. This leads to a uniformity in material selection and use. In the classroom, it has been noted that students generally prefer to use paper materials for toy making, such as colored cardstock, corrugated paper, crepe paper, and recycled boxes and cartons. For example, when constructing architectural toys, materials like popsicle sticks, colored cardstock, and recycled boxes might be considered. Students tend to choose paper materials for ease of acquisition and simplicity in handling, as popsicle sticks are perceived as costly and cumbersome to work with. Only a few students, driven by a desire for uniqueness, opt for popsicle sticks for constructing architectural toys.

The preference for paper materials among teachers and students is due to their low cost, easy availability, simplicity of use, and versatility. Consequently, art classrooms tend to stockpile large quantities of paper materials, leading to a scarcity of other types, and for convenience, paper materials become the default choice for toy making.

4. Optimization approaches in the course of homemade educational toys

4.1. Integrating theory with practice

Homemade educational toys are an essential vocational skill for students in preschool education. If students are

unaware of the course's importance, teachers must play a pivotal role in guiding them. Strict requirements for note-taking should be enforced in theoretical studies, along with reviews before class, interactive questioning during class, and practical applications afterward. By intertwining theoretical knowledge throughout the course, students can build a solid theoretical foundation for practical application. Practice is the sole criterion for testing truth, so practical work built on a rich theoretical foundation can achieve greater effectiveness. With a robust theoretical background, students can guide their practice, and through conceptualizing, designing, crafting, and refining based on theory, the educational toys produced will be both knowledgeable and professional, achieving multipurpose use and recyclability.

For instance, in the production of sports-related educational toys, theoretical knowledge covers the types of sports toys, such as running, throwing, jumping, crawling, balancing, and so on, and the methods of making them. After completing the theoretical learning, teachers should guide students to consider multipurpose usage in their creations, stimulating thorough thinking. A sports toy made from an old cardboard box might integrate running, throwing, and hoop-tossing activities. The box could be shaped into animals like giraffes, elephants, or rabbits, utilizing features like long ears, trunks, or necks for hoop-tossing exercises; a basketball net could be attached to one side for shooting; geometric shapes could be cut on the top for ball-throwing activities; and a section near the base could be cut out for pushing and chasing balls while running. Such toys, which fully integrate theoretical knowledge and encourage innovative thinking, meet the developmental needs of young children.

4.2. Expanding perspectives and ideas

Achieving excellence in homemade educational toys requires creators to have a broad knowledge base and worldview. The following methods can help students broaden their perspectives and ideas. Firstly, teachers can improve learning by showcasing and analyzing exemplary homemade toys in class, encouraging students to gather further information on such toys through books and online resources. Additionally, drawing design ideas and methodologies from commercially produced toys can help prevent stagnation in creativity, allowing for a broader approach to toy creation.

Moreover, students are encouraged to visit art galleries, exhibitions, and museums to closely observe and experience the craft of making educational toys. Such experiences can spark curiosity and create emotional resonance, helping students understand what types of toys are needed in the current era and incorporate innovative ideas and methods into their creations. By appreciating works from various perspectives, such as contemporary art exhibitions and graduation shows from major art schools, students can enhance their artistic aesthetics, learn about the innovative use of materials in sculpture, and explore advanced architectural materials and methods in architectural works, thus broadening their creative horizons [5].

Vision determines the height one reaches, so it is crucial to broaden the horizon for the cultivation of students, and teachers should do a good job in leading the work.

4.3. Enriching material variety

The initial step in creating homemade educational toys is establishing a solid material base. A complete and high-quality educational toy is constructed from a combination of various materials, so lacking any can diminish the desired outcome. For instance, creating a "Rural Farmyard" toy might involve using branches, ultra-light clay, cardboard, pebbles, and leaves.

To ensure the completeness of the projects, it is crucial to prepare a sufficient supply of materials before the course begins, including investing in purchasing and collecting various materials. It is especially important

to ensure a diverse selection of materials, moving beyond readily available paper materials to include clay materials such as ultra-light clay, stone clay, and pottery clay for creating sculptural toys. Natural materials like leaves, stones, branches, and sticks can be collected outdoors. Purchasable materials might include wooden discs, shells, mosaics, beads, crystal stones, and dried fruit peels.

The use of recycled materials offers a rich variety and is particularly accessible for college students. Common items like delivery boxes, beverage bottles, biscuit boxes, packaging, and cosmetic boxes can all be repurposed into educational toys. With a broader selection of materials available, students are encouraged to think creatively and boldly innovate in their designs.

5. Conclusion

The course on homemade educational toys is essential for students majoring in preschool education, as it enables them to fully demonstrate their professional skills and enhance their capabilities in early childhood education work. However, based on the current performance of students and the course content itself, there are significant shortcomings and areas for improvement. This paper has identified these issues and proposed solutions, hoping to resolve these problems in future teaching practices. The goal is for students enrolled in "Design and Production of Educational Toys in Kindergartens" to gain more comprehensive and professional theoretical knowledge and practical skills and to foster a greater appreciation for this course.

Disclosure statement

The author declares no conflict of interest.

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