



Research on the Visual Design of Leather-Carved Figurines

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Abstract: This paper targets students majoring in visual communication design, engaging them in a university-industry collaborative project where they create handmade leather carving works based on their favorite figurine themes, using either hand-drawn or digital illustrations. The process involves scanning or photographing these illustrations for digital processing, followed by color laser printing and utilizing various tools to assist in each stage of leather carving and visual design. Through this hands-on experience in foundational illustration design courses, students and instructors apply practical tasks to enhance understanding of leather materials, tool use, coloring, embossing, nailing, and other practical skills. Ultimately, the project aims to produce culturally creative leather-carved figurine products that meet industry demands in visual design.

Keywords: Figurine Design, Visual Design, Handmade Leather Carving.

1. Introduction

This paper presents an industry-academia collaboration established between the researcher and Yuezhi Art and Craft Workshop, aiming to showcase the aesthetic appeal of figurine visual design through practical projects emphasized in professional courses within the Visual Communication Design department. This collaboration offers valuable visual design references for companies developing leather-carved cultural and creative products. Furthermore, the company, operating as a hands-on workshop, guides students in applying their own figurine designs using various leather carving techniques. This practical experience allows students and instructors to explore the use of leather materials, tools, coloring, and color-mixing techniques. The collaboration fosters cultural product design skills by encouraging future design possibilities and significantly enhances students' practical abilities.

2. Literature Review

This paper integrates an industry-academia collaboration in leather-carved figurine visual design into the teaching and learning process of professional courses in the Visual Communication Design department. Through this real-world collaboration, the goal is for students to train and strengthen the practical skills necessary for professional design.

In line with this focus, students are encouraged to create figurine designs based on objects they admire, either through hand-drawn or digital illustrations, while applying and experimenting with color combinations. The designs are then processed through software for color adjustments and printed with color laser output. On a theoretical basis, the study emphasizes collecting and organizing information on the fundamental qualities and meanings of visual design as a reference for students in their creative work.

Scholars have explored the reaction time to visual designs of traffic signs, finding that bilingual signs require more response time, though incorporating simple icons can alleviate this issue, underscoring the importance of effective visual design in daily life [1]. Another study showed that visualized design allows relevant personnel to better understand task distribution and process changes, enhancing collaboration between departments [2].

However, while visual design is valued, environmental protection issues must also be considered. Green design and energy-efficient, low-carbon visual designs are important topics for design professionals [4]. Additionally, researchers have suggested that combining light sensors with AI navigation technology can effectively enhance



the use of solar thermal energy in museum visual communication design, optimize environmental quality, and promote sustainable development in museums, achieving more efficient resource utilization and environmental protection [3].

3. Topic Content

The instructor integrates the contract themes of industry-academia partnerships signed with companies into the teaching and learning process of design professional courses. The aim is to achieve the department's educational objective of combining theory and practice in design education. In this process, teachers convey professional knowledge, while students engage actively, creating a dynamic, interactive feedback loop between teacher and student.

This industry-academia collaboration report details a leather-carved figurine visual design project in partnership with Yuezhi Art and Craft Workshop. The project focuses on figurine visual design to develop concepts and practice in leather cultural products, allowing students to turn concept sketches into tangible creations, achieving both design and practical implementation in cultural and creative products.

This collaboration also enables students to connect with the industry early, helping them understand market needs and current design trends, thus enhancing a teaching approach that blends theory with practice. This experience has a profound influence on students' future creative careers, making it a highly valuable initiative for design educators to promote.

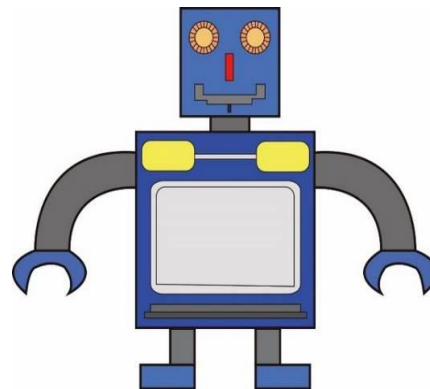
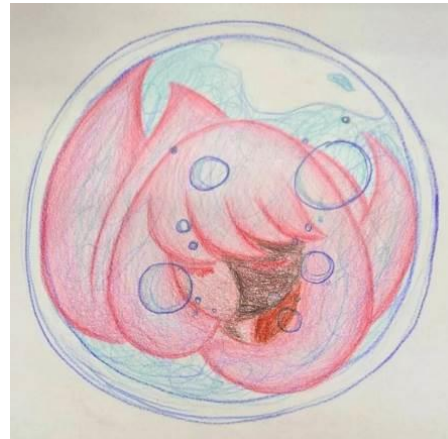
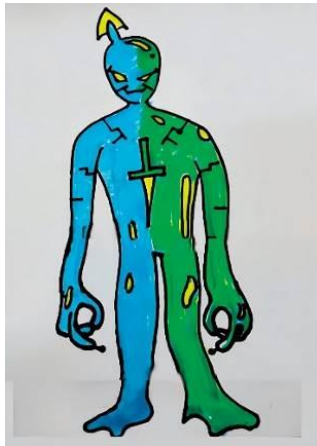
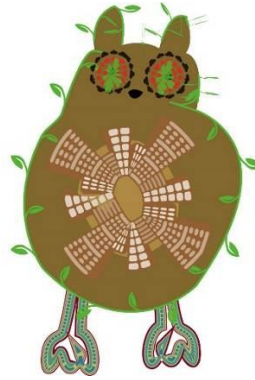
Finally, as students create based on the design themes provided by the company, the instructor provides assistance and suggestions for revisions throughout the process. These discussions help shape the primary visual design for the figurine cultural product, serving as a valuable reference for the company's future innovative product design and development.

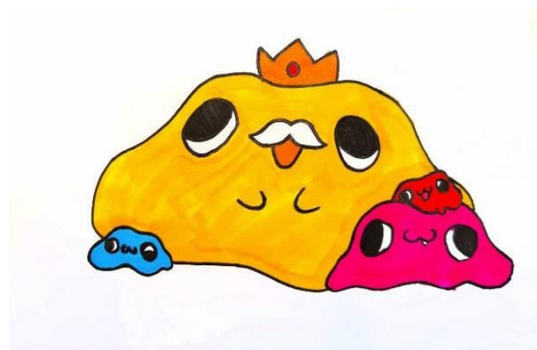
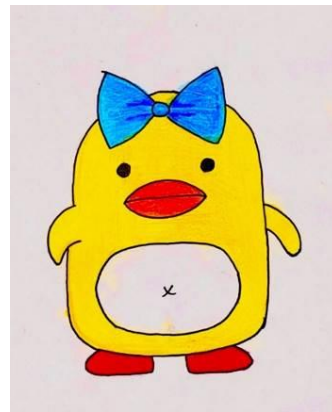
4. Achievements Exhibition

This paper integrates the topic of industry-academia collaboration into the teaching and learning processes of design professional courses, aiming for students to visually interpret their favorite objects as figurines. Through creating lines, shapes, and colors, as well as using techniques like anthropomorphized design, transformation, and distortion, students express their favorite forms in hand-drawn or digital illustrations. These illustrations are then printed with color laser and further developed in a handmade leather carving workshop, where visual design motifs are applied to leather cultural products.

In the coloring process, light coloring techniques are used to achieve aesthetic visual effects without heavy pigment layers. This approach not only helps protect the leather and minimize cracking but also reduces water pollution, supporting environmental conservation. This paper first showcases the students' hand-drawn or digitally created works of figurine visual design (figure 1). Next, after scanning or photographing to convert into an electronic file, it is printed using a laser printer, cut according to its shape, and then transferred onto leather using a heat transfer pen. This article demonstrates the practical processes of applying figurine visual design onto leather, including hot stamping, cutting, coloring, edge finishing, hole punching, riveting, and assembly (figure 2). Finally, the results of the instructor guiding students in the design of figurine cultural products will be showcased (figure 3).







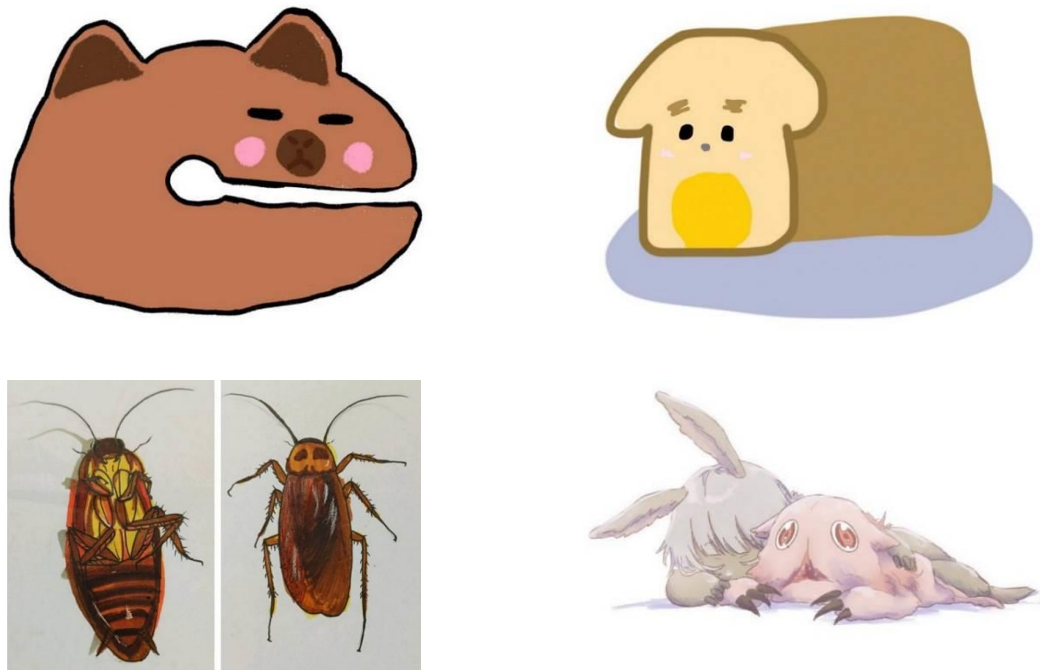


figure 1: Students' Hand-Drawn or Digitally Created Works of Figurine Visual Design









figure 2: The Practical Process of Applying Figurine Visual Design onto Leather







figure 3: Results of Leather-Carved Figurine Visual Design

5. Results and Contributions

This paper discusses how the instructor, based on the figurine themes provided by the company, guides students to create anthropomorphized visual designs based on their favorite objects. By integrating industry-academia collaboration and hands-on workshops into the design professional curriculum, students not only engage in the



creation of two-dimensional visuals but also learn leather carving and hot stamping techniques through practical workshops, thereby enhancing their practical skills in cultural product design.

Additionally, this industry-academia collaboration, involving industry professionals in the teaching and learning activities of design courses, helps students gain early insights into the industry's demand and landscape for design talent, thereby strengthening and training their professional practical abilities.

Moreover, the company hopes to leverage the creativity of young people to bring a more youthful perspective to leather carving in the development of new products, thus attracting the interest and purchases of younger demographics and achieving mutual benefits. Overall, the outcomes of the industry-academia collaboration and workshops have positive impacts and extended benefits for students, teachers, companies, and schools, making them worthy of promotion in the future.

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