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## Research on the Visual Pattern Deformation Design of Leather Carving Commodities

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**Abstract** This article carried out an industry-academia collaboration with manufacturers for the production of leather carving products with visual pattern deformation design through commercial design students as the object and the Chang'hua Roundhouse as the theme. This allowed teachers and students to create ideas for visual pattern deformation consistent with the practical issues in the teaching and learning process of the professional design course after understanding the scene. The proposed design result showed the application of visual pattern deformation design in leather carving products of the Chang'hua Roundhouse which was in line with the needs of the industry.

**Keywords** Leather Carving Products, Chang'hua Roundhouse, Visual Design

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### Introduction

In this article, an industry-academia collaboration was signed with Chang Peng Handcraft Workshop to take part in the creation of the professional design course, enabling students to design visual pattern deformations according to the beauty of the displayed shape based on their understanding of the Chang'hua Roundhouse.

The design achievements were selected by both the teacher and the industry according to the scoring criteria that comprised of the design theme and aesthetic sense. These were used as a reference for the visual pattern of the leather carving products. Moreover, the industry provided scholarships, and the school issued certificates to encourage such work.

### The Creative Idea

The basic components of visual design are the point, line, and surface, which can also be deformed according to needs. It is actually one of the basic courses for cultivating the practical ability of students.

This article integrated the teaching and learning process of professional design courses into industry-academia collaboration, hoping to train students' practical ability through real-world cases. Therefore, the characteristics and implications of the basic components of visual design were discussed first [1, 6], then relevant materials were collected and sorted out to provide students with a reference during their creative process [2, 4]. In addition, industry-academia collaboration was also used to allow students to connect with the industry as soon as possible and help them understand the industry's demand for design manpower and the importance of product innovation.

### Creative Skills

The integration of industry-academia collaboration into the professional design courses allowed students to create, and as a consequence, achieved the educational goal of combining theory and practice. Secondly, through the transfer of the teacher's professional knowledge, students were encouraged to study seriously and actively, achieving a two-way interactive feedback and professional knowledge enhancement [3, 5].

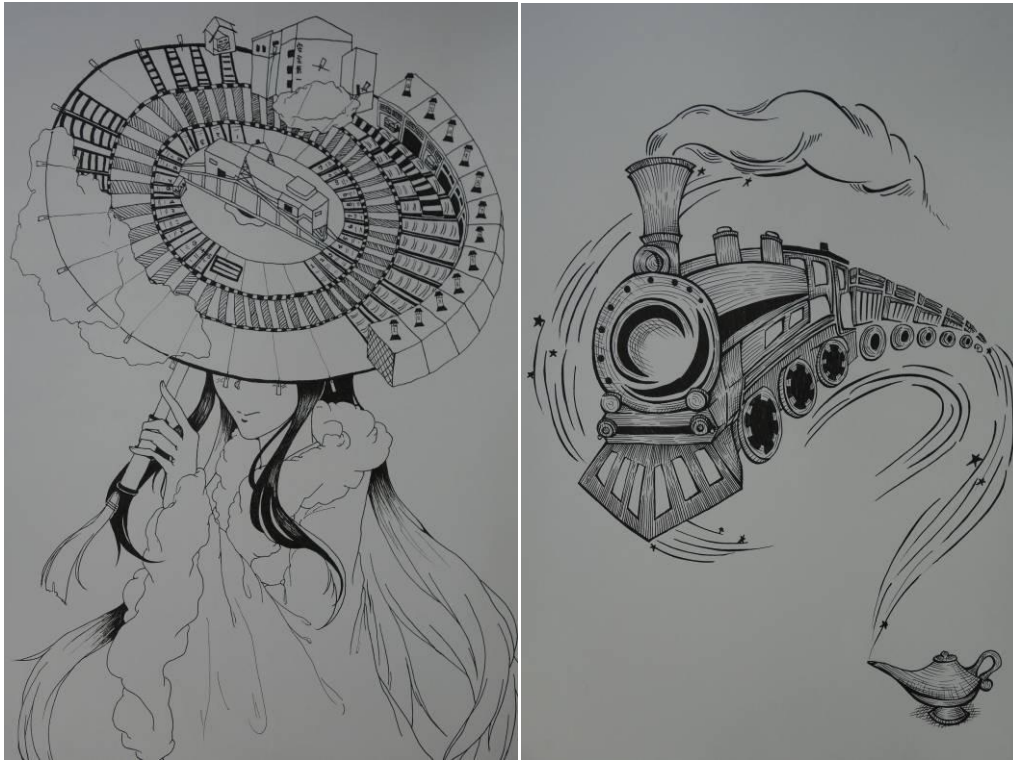


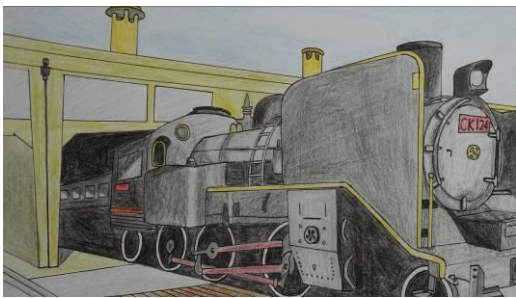
The teacher guided the students in the transformation of the Chang'hua Roundhouse according to the formal principles of beauty and presented it in a deformed creative way, providing the industry with creative ideas that are different from the past, in hopes of making the leather carving cultural and creative products closer to the young people, accordingly stimulating demand and increasing purchase desire.

### Achievements Exhibition

The teacher and industry practitioner jointly formulated: (1) visual elements (30%); (2) creative expression (30%); (3) color scheme (30%); (4) design concept (10%) evaluation criteria, to provide a reference for the industry in their development of innovative products (figure 1).







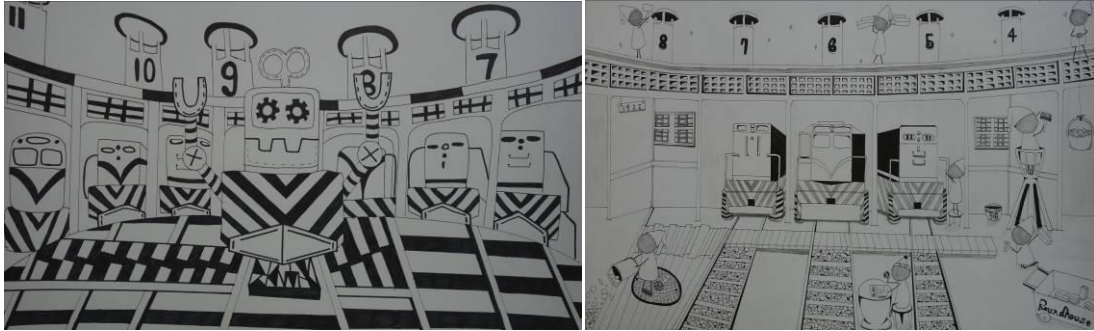


Figure 1: Design results

### Results and Contributions

This article is an industry-academia collaboration on the creative design of the visual pattern deformation of the Changhua Roundhouse as proposed by the manufacturer. It integrated competition into the teaching and learning activities of the professional design course, in hopes of enabling students to understand the actual situation of the industry and the demand for design manpower as soon as possible, thus, enhancing their professional and practical abilities. Secondly, the industry expected to inject new ideas into the development of leather carving cultural and creative products through the creations of the young people, to make the products younger, subsequently attracting their appreciation and purchase.

Then, the teacher asked the students to present written descriptions and oral reports of their creative ideas. Finally, the outstanding works were selected according to the scoring criteria, then certificates and scholarships were awarded as encouragement. Overall, the research and development results of the industry-academia collaboration and competitions were very important to the teacher, students, and practitioners, and all had a positive influence and extended benefits.

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