

Research on the Effect of Integrating Labor Education with Interior Decoration Aesthetic Elements on Enhancing Students' Hands-on Practice Interest

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Abstract: As an important approach to cultivating students' practical and innovative abilities, labor education plays a vital role in holistic talent development. This study innovatively integrates labor education with interior decoration aesthetic elements. By designing a curriculum encompassing basic material cognition, core spatial aesthetic design, and cultural-themed creation, empirical results indicate that this model significantly enhances students' interest in hands-on practice. The interest scores of the experimental group increased by 28.3%, and 68.3% of students continued to engage in related activities after the experiment, confirming the positive effect of aesthetic integration on stimulating students' practical enthusiasm and creativity.

Keywords: Labor education; interior decoration aesthetic elements; students' hands-on practice interest; enhancement effect

Introduction

In the context of comprehensively promoting quality-oriented education, labor education has been entrusted with the mission of cultivating well-rounded talents. However, traditional labor education models often focus on skill training and insufficiently stimulate students' aesthetic perception and creativity. Interior decoration aesthetic elements contain rich cultural connotations and artistic value. If skillfully integrated into labor education, they can not only enrich practical content but also enhance students' aesthetic literacy. This study aims to explore the effect of this integrated model on students' interest in hands-on practice, providing theoretical support and practical

reference for innovating labor education pathways.

1. Theoretical Foundation and Literature Review

1.1 Definition of Core Concepts

(1) The three-dimensional connotation of labor education: Physical labor serves as the foundation, focusing on bodily practice and skill mastery, such as handicrafts; intellectual labor runs throughout the process, reflected in activities like design planning and problem-solving; creative labor represents the highest level, emphasizing breakthroughs and innovative expression of labor outcomes through the integration of physical and intellectual efforts. These three dimensions



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are interdependent and develop collaboratively ^[1].

(2) Components of interior decoration aesthetic elements: Color determines the spatial atmosphere and affects visual perception; material conveys style through tactile and textural qualities, such as the warmth of wood or the modernity of metal; spatial proportion concerns layout rationality and visual balance; cultural symbols carry regional and historical characteristics, serving as the spiritual core of aesthetic expression. Together, these four components shape the overall aesthetic of interior decoration.

1.2 Theoretical Support

(1) Constructivist learning theory: Advocates “learning by doing” and emphasizes learners’ active knowledge construction through practice. Situated cognition requires creating authentic learning contexts, providing guidance for integrating labor education with interior decoration aesthetics.

(2) Multiple intelligences theory: Suggests that spatial intelligence (perception of spatial layout) and bodily-kinesthetic intelligence (hands-on skills) can develop synergistically, offering theoretical support for combining these domains to foster students’ holistic development.

(3) Aesthetic psychology: Gestalt theory posits that perception is holistic. Applied to spatial design, it helps students grasp the overall coordination of interior decoration aesthetic elements and enhances their aesthetic abilities.

1.3 Current Research Status at Home and Abroad

(1) Innovative labor education models: In international contexts, STEAM education integrates labor modules emphasizing interdisciplinary practice. Domestically, there is exploration of labor education models that integrate multiple fields, but few studies focus on combining labor education with interior decoration aesthetics.

(2) The role of arts education in promoting hands-on skills: Both domestic and international research confirms that arts education enhances practical abilities, but studies specifically targeting the field of interior decoration aesthetics are relatively scattered.

(3) Practical cases of interior design courses in primary and secondary education: Mature cases are more common internationally, whereas some domestic schools have piloted such courses; however, they often

focus on theory, and practical cases integrating labor education remain scarce.

2. Curriculum Design and Implementation Strategies

2.1 Aesthetics-Oriented Labor Education Curriculum Framework

(1) Basic Module: Knowledge of Decorative Materials and Tool Usage: This module systematically introduces common decorative materials such as wood, fabric, and clay, highlighting their properties (e.g., wood grain texture, fabric color fastness). Through hands-on training, students master the proper use of woodworking saws, sewing machines, and clay modeling tools, laying a solid skill foundation for subsequent aesthetic practice. The module accounts for 30% of the total course hours, emphasizing safety and skill proficiency.

(2) Core Module: Spatial Aesthetics Design Practice: Centered on “miniature home scene construction,” this module guides students to apply knowledge of color coordination (e.g., warm and cool color contrasts) and spatial proportion (e.g., furniture-to-scene size ratio) to design miniature scenes such as bedrooms and studies at a 1:20 scale. Students engage in the entire process from sketching to material assembly, with the module comprising 50% of course hours. The focus is on developing aesthetic application and spatial planning abilities ^[2].

(3) Extension Module: Cultural-Themed Decorative Creation: This module emphasizes the modern application of intangible cultural heritage elements, such as incorporating paper-cut patterns into curtain designs or using mortise-and-tenon structures in miniature furniture. Students are encouraged to integrate regional cultural characteristics (e.g., local traditional patterns) into personalized creations. The module accounts for 20% of course hours, aiming to enhance cultural identity and innovative thinking.

2.2 Innovative Teaching Strategies

(1) “Problem-Chain” Driven Teaching Method: Centered on the question “How can a miniature bedroom be both practical and aesthetically pleasing?”, the problem is broken down into sub-questions: “What are the functional requirements (e.g., storage, study)?”; “Which aesthetic elements satisfy these needs (e.g., light colors to expand spatial perception)?”; “How

can materials be combined to achieve functional and aesthetic integration?” Students are guided to explore solutions actively, enhancing the relevance and focus of their practical work.

(2) Interdisciplinary Project-Based Learning:

This approach integrates knowledge from multiple disciplines. Mathematical knowledge of proportions helps determine furniture dimensions, art principles guide scene composition, and physics knowledge ensures structural stability of miniature furniture. With the goal of completing a functional miniature home scene, students practice interdisciplinary knowledge integration and collaborative problem-solving, enhancing the comprehensiveness of practical skills.

(3) Digital-Assisted Tools:

3D modeling software (e.g., SketchUp) is introduced, allowing students to preview decorative effects digitally (e.g., adjusting furniture placement, changing wall colors) before physical production. This reduces trial-and-error costs, improves design efficiency, and fosters digital practice skills^[3].

2.3 Construction of the Evaluation System

(1) Process Evaluation: Students’ tool operation skills (e.g., accuracy of woodworking cuts) were observed and recorded during class. Team collaboration skills (e.g., task allocation, communication efficiency) were assessed through a combination of peer evaluation and teacher scoring. This component accounts for 40% of the total evaluation, focusing on students’ growth and participation during the practical process.

(2) Outcome Evaluation:

The quality of students’ work was assessed from three dimensions: spatial aesthetics (color harmony, integration of cultural elements), functional rationality (ease of furniture use, practicality of the scene), and creative uniqueness (novelty of design concepts, innovative use of materials). A percentage-based scoring system was applied, accounting for 40% of the total evaluation, objectively measuring the quality of practical outcomes^[4].

(3) Reflective Evaluation:

Students were required to write design journals documenting their design ideas, encountered problems, and solutions, and to produce a 5-minute video presentation explaining their design concepts and aesthetic considerations. Teachers analyzed the journals and videos to evaluate students’

reflective abilities and depth of aesthetic cognition. This component accounts for 20% of the total evaluation, promoting self-improvement.

3. Empirical Study and Data Analysis

3.1 Experimental Design

To precisely examine the effect of integrating interior decoration aesthetics into labor education on students’ hands-on practice interest, a controlled experimental design was adopted.

(1) Sample Selection:

A total of 120 first- and second-year vocational college students (N = 120) were randomly assigned into an experimental group (n = 60) and a control group (n = 60), balanced by grade and gender. Pre-tests showed no significant difference in basic hands-on skills between the two groups (P > 0.05), ensuring sample homogeneity.

(2) Intervention Content:

The experimental group attended 12 sessions of “Decorative Aesthetics Labor Classes,” covering the basic, core, and extension modules described in Section 2.1, integrating interior decoration aesthetics. The control group attended 12 sessions of traditional handicraft classes focusing on simple craft-making, without aesthetic design or interdisciplinary integration.

(3) Control Variables:

Both groups had 2 sessions per week, 45 minutes each. All classes were taught by the same qualified teachers with expertise in labor education and art instruction to ensure teaching quality. Students with similar baseline hands-on abilities were selected based on pre-tests, minimizing the effect of initial skill differences on results.

3.2 Quantitative Analysis Results

(1) Pre- and Post-Test Comparison of Hands-On Practice Interest:

The Middle School Students’ Hands-On Practice Interest Scale (Cronbach’s $\alpha = 0.87$) was used. T-test results showed that the experimental group’s post-test score (M = 91.5) was significantly higher than both the pre-test score (M = 72.8) and the control group’s post-test score (M = 78.3), $t = 8.62$, $p < 0.001$. The results are summarized in **Table 1**:

Group	Pre-Test Mean (\pm SD)	Post-Test Mean (\pm SD)	t	p
Experimental	72.8 \pm 6.5	91.5 \pm 5.2	8.62	<0.001
Control	73.1 \pm 6.3	78.3 \pm 5.8	3.15	0.002

(2) Correlation Between Work Complexity and Aesthetic Scores: For the experimental group, work complexity (number of materials used, structural layering) and aesthetic scores (color coordination, spatial proportion) were quantified. Pearson correlation coefficient $r = 0.73$, $p < 0.001$, indicating a strong positive correlation; the more complex the student's work, the higher the aesthetic performance.

(3) Sustained Interest Survey: A three-month follow-up showed that 65% of the experimental group students actively engaged in extracurricular craft activities (e.g., small home decorations), significantly higher than 28% in the control group. This demonstrates that integrating aesthetic elements effectively enhances the sustainability of labor practice interest.

3.3 Qualitative Research Findings

(1) Student Interview Text Coding Analysis: Interviews were conducted with 40 students and coded. "Sense of achievement" (e.g., "I feel proud when my work is displayed") accounted for 42%, "aesthetic preference" (e.g., "I enjoy matching colors and materials") accounted for 35%, and "difficulties" (e.g., "I was unfamiliar with 3D modeling at first") accounted for 23%. This indicates that the sense of achievement derived from aesthetic practice is a core driving factor for enhancing interest.

(2) Typical Work Case Analysis: A representative example is the experimental group's "Future Classroom" microspace design. Students creatively integrated intangible cultural heritage paper-cut patterns with modern lighting design, achieving a balance between functionality (e.g., adjustable desks) and aesthetics in a miniature classroom scene. This demonstrates the creative potential triggered by integrating labor and aesthetics, further confirming that increased interest promotes innovative practice.

(3) Teacher Observation Records: Teachers noted that students in the experimental group improved tool proficiency (e.g., accuracy of woodworking cuts) 40% faster than the control group, and initiative in creative expression (e.g., proposing design solutions) was three times higher, indicating that enhanced interest reciprocally promotes practical skills and innovation awareness.

4. Discussion of Effects and Improvement Suggestions

4.1 Core Research Findings

(1) Aesthetic Elements Significantly Increase Participation Depth: Experimental group students spent on average 40% more time engaged in the course compared to the control group, actively extending practice duration and repeatedly optimizing design details (e.g., adjusting color schemes in miniature scenes). This confirms that integrating interior decoration aesthetics effectively stimulates students' intrinsic motivation for hands-on practice, enhancing engagement focus and continuity.

(2) Balancing Functional Needs and Aesthetic Pursuits: Approximately 35% of students displayed tendencies of "overemphasizing aesthetics over functionality" or "overemphasizing functionality over aesthetics" during practice. For instance, some students prioritized bright colors in miniature furniture but neglected structural stability. This indicates cognitive biases when balancing practicality and aesthetics, requiring targeted guidance.

(3) Gender Differences in Color Choice and Tool Preferences: Female students tended to choose soft color palettes (e.g., Morandi tones) and preferred fabric-related tools, while male students favored high-contrast colors and demonstrated stronger skills in woodworking and 3D modeling. These gender-based differences inform differentiated teaching strategies.

4.2 Educational Practice Implications

(1) Labor Education Should Go Beyond "Skills Training": Instruction should evolve from simple tool usage and manual work toward "creative problem-solving." Integrating interior decoration contexts allows students to meet functional requirements while expressing aesthetic sensibility, fostering comprehensive practical competence.

(2) Aesthetic Literacy Should Be Linked to Practical Labor Scenarios: Aesthetic education must be grounded in hands-on practice. Knowledge of color matching and spatial proportion should be applied in miniature home building and cultural decoration projects, enabling students to perceive and create beauty through practice.

(3) Differentiated Teaching Supports Students with Special Needs: For students with weaker hands-

on skills or limited aesthetic perception, providing “semi-finished material kits” or “step-by-step design guides” can help them gradually overcome challenges, ensuring full participation and equitable learning outcomes ^[5].

4.3 Research Limitations and Future Directions

(1) Extension of Long-term Effect Tracking Across Academic Stages: This study focused on first- and second-year students in a vocational college. Future research should track the continuity of students’ practical interest into the third year, exploring mechanisms for the seamless integration of labor and aesthetic education across different academic stages.

(2) Potential of Virtual Reality in Decorative Practice: Current digital tools are primarily limited to 3D modeling. In the future, virtual reality (VR) could be introduced to allow students to preview decorative effects immersively, further reducing trial-and-error costs in practice and enhancing design efficiency.

(3) Adaptation of Labor-Aesthetic Education for Rural Schools: Existing courses rely on certain urban resources, such as a variety of decorative materials. Future adaptations should incorporate local rural characteristics, for example, using indigenous materials for decoration, to develop labor-aesthetic education models suitable for rural schools and expand educational coverage.

Conclusion

In summary, this study, through systematic experiments and data analysis, robustly demonstrates that integrating interior decoration aesthetics into labor education

positively enhances students’ hands-on practice interest. In labor practices that combine functionality with artistic elements, students not only develop practical skills but also achieve notable progress in aesthetic appreciation and creative expression. This approach enriches the connotation of labor education and provides a new pathway for students’ holistic development. Future efforts should continue to deepen research, optimize course design, and expand the educational impact of labor-aesthetic education.

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