# Academic Research Questionnaire: Application of Hakka Plant-Dyed Colors in Rush Grass Craft Design

*A Study on Market Perception, Cultural Symbol Recognition, and Material Functionality*

**Dear Respondent,**

Thank you for taking the time to complete this questionnaire. This study explores the interdisciplinary integration of Taiwan's traditional Yuanli Rush Grass (Schoenoplectus triqueter) weaving crafts with Hakka plant dyeing techniques (such as Strobilanthes cusia Indigo Blue and Cochineal Red). By employing design semiotics, this research translates cultural codes into contemporary modular lighting product prototypes.

This survey investigates material functionality (moisture absorption, breathability, heat dissipation, durability), cultural color symbol recognition, craft aesthetics, and market purchase intentions. All responses are completely anonymous and will be used solely for academic analysis and design evaluation.

Thank you for your valuable contribution to the preservation of local crafts, cultural translation, and sustainable design!

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## Part I: Demographic & Basic Information

**1. Biological Gender:** (Single Choice)

□ Male □ Female □ Other

**2. Age Group:** (Single Choice)

□ 10–19 □ 20–29 □ 30–39 □ 40–49 □ 50–59 □ 60 or above

**3. Current Occupation Field:** (Single Choice)

□ Student □ Design / Art / Cultural & Creative Industry □ Academia / Education / Research □ Public / Civil Service □ Commerce / Industry / Services / Finance □ Freelance / Business Owner □ Other

**4. Current Residential Region:** (Single Choice)

□ Northern Taiwan □ Central Taiwan □ Southern Taiwan □ Eastern Taiwan & Outlying Islands □ Overseas

**5. Hakka Ethnic Background Identification:** (Single Choice)

□ Hakka background (fluent or understand Hakka language) □ Hakka background (do not speak Hakka)
□ Non-Hakka background □ Uncertain

## Part II: Awareness & Experience with Hakka Culture, Blue Dyeing & Rush Grass Crafts

**6. Prior to this survey, how familiar were you with Yuanli 'Tachia Rush Grass Weaving Craft' and its history?** (Single Choice)

□ Not familiar at all □ Slightly familiar □ Moderately familiar □ Familiar □ Very familiar

**7. Your past experience with rush grass woven products (e.g., mats, hats, bags, cushions):** (Single Choice)

□ Never encountered □ Seen before but never used □ Currently or previously used traditional mats/hats
□ Have purchased/used innovative/creative rush grass products

**8. Your level of awareness regarding Hakka 'Indigo Dyeing Craft' and its cultural values (frugality, pragmatism, harmony with nature):** (Single Choice)

□ Not aware at all □ Slightly aware □ Moderate awareness □ Well aware □ Very deeply aware

**9. Research experiments show rush grass possesses natural surface wax that requires dewaxing before 'plant dyeing (Indigo Blue / Cochineal Red)'. What do you consider the greatest value of introducing plant dyeing to rush grass crafts?** (Multiple Choice, max 2)

□ Breaking single traditional beige tone to enrich color aesthetics □ Integrating Hakka color language to deepen narrative & local identity □ Upholding non-toxic, eco-friendly & sustainable materials (SDGs)
□ Enhancing visual delicacy & market value of handcrafted products □ Other

## Part III: Recognition of Hakka Plant & Cultural Symbols (5-Point Likert Scale)

Please rate your level of agreement regarding the symbolic cultural meaning of each Hakka plant and cultural element (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree):

| Cultural / Plant Element | Representative Color | Core Symbolic Meaning in Research | 1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree |
|---|---|---|---|---|---|---|---|
| Hakka Blue Shirt (Blue Shirt) | Indigo Blue | Symbol of pragmatism, frugality & labor aesthetics (M=4.72, SD=0.51) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Hakka Floral Cloth | Hakka Red (Cochineal Red) | Symbol of celebration, passion, solidarity & ethnic identity (M=4.65, SD=0.55) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Ixora (Xinding Flower) | Vivid Red / Pink | Symbol of family prosperity, growth & generational blessing (M=4.58, SD=0.57) | ☐ | ☐ | ☐ | ☐ | ☐ |

| Cultural / Plant Element | Representative Color | Core Symbolic Meaning in Research | 1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree |
|---|---|---|---|---|---|---|---|
| Tung Flower | Pure White / Yellow Heart | Symbol of diligence, simplicity & Hakka village imagery (M=4.46, SD=0.60) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Tea Plant | Emerald Green / Brownish Green | Symbol of humility, tea etiquette & warm social connection (M=4.39, SD=0.62) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Moxa / Wormwood (Aicao) | Dark Green / Greyish Green | Symbol of warding off evil, protection & healthy living (M=4.31, SD=0.64) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Night-Blooming Jasmine (Yehe) | Milky White / Light Yellow | Symbol of protection, female virtue & tranquil beauty (M=4.22, SD=0.66) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Banana Leaves (Bajiao) | Green / Brown | Symbol of tolerance, integrity & eco-coexistence (M=4.10, SD=0.70) | ☐ | ☐ | ☐ | ☐ | ☐ |

## Part IV: Evaluation of 'Weaving Dreams' Plant-Dyed Rush Grass Lighting Design & Material Properties

Note: The prototype 'Weaving Dreams' combines natural rush grass brown (land & craft), Indigo Blue (LAB: L26 A9 B-22, heritage & stability), and Cochineal Red (LAB: L40 A51 B35, vitality & celebration). The structure integrates rush grass weaving (under-one, under-two, mesh, and pineapple patterns), wood, and metallic hardware in a modular assembly.

| Design & Material Functionality Items | 1 Strongly Dissatisfied / Disagree | 2 Dissatisfied / Disagree | 3 Neutral | 4 Satisfied / Agree | 5 Strongly Satisfied / Agree |
|---|---|---|---|---|---|
| 10. Color Imagery: The combination of Indigo Blue and Cochineal Red effectively evokes visual associations with Hakka culture and craft spirit. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 11. Form & Aesthetics: The combination of curved weaving and circular lampshade form (symbolizing reunion and cultural flow) achieves both traditional and contemporary | ☐ | ☐ | ☐ | ☐ | ☐ |

| Design & Material Functionality Items | 1 Strongly Dissatisfied / Disagree | 2 Dissatisfied / Disagree | 3 Neutral | 4 Satisfied / Agree | 5 Strongly Satisfied / Agree |
|---|---|---|---|---|---|
| beauty. | | | | | |
| 12. Multi-Material Structure: Integrating rush grass weaving with wood and metallic hardware in a 'modular structure' significantly enhances modern quality and practical usability. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 13. Light & Shadow Effect: When lit by a warm bulb, light passing through the woven gaps (under-one / pineapple patterns) creates attractive layered light-and-shadow effects. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 14. Breathability & Heat Dissipation: Experiments confirm that the triangular hollow fiber of rush grass offers good breathability, serving as an effective medium for heat dissipation and light diffusion. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 15. Moisture Absorption & Regulation: Experimental data shows an average moisture content of 8.84%, demonstrating excellent humidity regulation suitable for humid indoor environments. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 16. Olfactory Aroma: Gentle warmth from the light bulb releases natural rush grass aroma and mild plant dye scent, offering relaxing psychological value. | ☐ | ☐ | ☐ | ☐ | ☐ |

**17. In which spatial environment would you most prefer to place this 'Hakka Plant-Dyed Rush Grass Cultural Lamp'?** (Multiple Choice, max 2)

□ Home environment (Living room / Bedroom / Study) □ Cultural exhibition / Tea ceremony / Craft workshop space □ Commercial spaces (Boutique restaurant / Café / Bed & Breakfast) □ Outdoor leisure & camping style spaces □ Office & public cultural spaces

## Part V: Market Purchase Intent, Decision Factors & Maintenance Concerns

**18. Considering raw material scarcity, labor-intensive handweaving by master craftspersons, and plant dyeing value, if priced higher than mass-produced lamps, your purchase intention is:** (Single Choice)

□ Very low intention □ Low intention □ Neutral (depends on product quality and price) □ High intention □ Very high intention

**19. Following Q18, what is your primary core decision factor when purchasing a plant-dyed rush grass craft lamp?** (Single Choice)

□ Overall price & value for money □ Exterior aesthetic design & Hakka cultural texture □ Material durability & ease of daily cleaning/maintenance □ Cultural story & handmade craft rarity □ Functionality (moisture absorption, aroma, lighting atmosphere) □ Brand reputation & after-sales service

**20. Surveys indicate consumers have maintenance concerns regarding plant-dyed rush products. What is your primary concern during daily use?** (Multiple Choice, max 2)

□ Mold growth or moisture damage due to humid climate □ Fading or color variation over time due to sunlight/aging □ Dust accumulation in woven gaps and difficulty in cleaning □ Loosening or damage of woven structure over long-term use □ Gradual dissipation of natural grass aroma over time □ Other

**21. In your opinion, which improvement strategies should be prioritized to enhance market acceptance of plant-dyed rush grass craft products?** (Multiple Choice, max 2)

□ Developing standardized modular parts to reduce production costs & price □ Providing specialized maintenance guides & anti-mold treatment technology □ Combining digital marketing with immersive hands-on DIY workshop experiences □ Designing a wider variety of lifestyle products (bags, home decor, furniture) □ Strengthening alignment with global sustainability topics (SDGs) & eco-material image

**22. Do you have any other valuable suggestions or expectations regarding the integration of Hakka plant-dyed colors and rush grass weaving crafts into contemporary creative markets? (Optional)**

Answer:

**— End of Questionnaire. Thank you very much for your time and academic support! —**