

Kalamkari Art: Craft Heritage and Its Adaptation in Contemporary Interior Design (Kalamkari in Lampshades and Lighting Decor)

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Abstract—Kalamkari, one of India's most intricate handcrafted textile traditions, has gained contemporary relevance in interior design due to its organic materials, expressive motifs, and cultural significance. This research explores the integration of Kalamkari textiles in lampshades and lighting decor, examining how traditional craft techniques can be adapted to modern functional requirements. As lighting plays a crucial role in shaping ambience and user experience, the study investigates the influence of Kalamkari on light quality, diffusion patterns, and overall visual warmth. It also evaluates practical concerns such as fabric durability, heat resistance, and colorfastness when used in proximity to lighting sources. Through observational analysis, user perception surveys, and material assessment, the research identifies both opportunities and constraints in combining heritage textiles with contemporary lighting design. The findings highlight that Kalamkari lampshades enhance aesthetic richness and cultural value within interior spaces while contributing to sustainable design through natural dyes and handmade processes. However, challenges remain in ensuring long-term performance, structural stability, and standardized product quality. The study aims to provide designers and artisans with insights into optimizing material treatment, motif placement, and fabrication techniques for improved usability. Ultimately, the research supports the development of lighting decor that balances tradition with innovation, enhancing cultural continuity while meeting modern interior design demands.

Index Terms—Kalamkari, interior design, lampshades, lighting decor, textile craft, sustainable design, light diffusion, cultural aesthetics, handmade artistry, material performance.

1. INTRODUCTION

1.1. Kalamkari is a distinguished Indian textile art form renowned for its elaborate motifs, natural dyes, and handcrafted processes. The word “Kalamkari” literally means “pen work,” reflecting the traditional technique of using a bamboo or date-palm stick (kalam) to outline and paint intricate designs on fabric. Originating in the regions of Andhra Pradesh and Telangana, this craft has evolved through centuries, influenced by mythology, nature, and Persian aesthetics. Kalamkari exists in two primary forms:

Srikalahasti Kalamkari, characterized by freehand drawing and painting that enables detailed narrative compositions, and *Machilipatnam Kalamkari*, which relies on carved wooden blocks for repeated patterns and decorative borders. Both styles involve labor-intensive processes using organic dyes, mordants, and multiple stages of washing and drying. Today, Kalamkari textiles are widely adapted in contemporary interior design,

particularly in decor and lighting, where their rich textures and storytelling motifs bring cultural depth and artisan value to modern spaces.

1.2. *Kalamkari in Lampshades & Lighting Decor:*

The integration of Kalamkari textiles into lampshades and lighting decor represents a growing trend in contemporary interior design that blends traditional craftsmanship with modern aesthetics. Kalamkari, known for its hand-painted and block-printed motifs using natural dyes, brings a unique visual richness and cultural narrative to lighting elements. When applied to lampshades, its intricate patterns interact with light to create warm, ambient atmospheres and decorative shadow effects that enhance spatial character. Both types—Srikalahasti, with its detailed hand-drawn imagery, and Machilipatnam, with its repetitive block-printed motifs—offer diverse design possibilities suited to various interior styles. As consumers increasingly value handcrafted, sustainable decor, Kalamkari lighting pieces provide an appealing fusion of heritage art and functional design. This introduction highlights the potential of Kalamkari to transform everyday lighting into meaningful, culturally infused decor elements within contemporary living spaces.



Figure 1 *Srikalahasti Kalamkari*

Figure 2 *Machilipatnam Kalamkari*

2. HYPOTHESIS

2.1 Declaration Hypothesis

A hypothesis is a predictive statement that establishes the expected relationship between two variables in a study. In the context of design research, it helps guide the investigation by providing a clear proposition that can be tested, measured, and validated through user feedback or experimental methods.

The hypothesis “Using Kalamkari in lampshades and lighting decor will increase consumer aesthetic preference” states a predicted relationship between two variables. It proposes that adding Kalamkari art (independent variable) will positively influence how appealing consumers find the product (dependent variable). This hypothesis guides the study by suggesting that traditional Kalamkari designs enhance visual attractiveness and can be tested by comparing consumer ratings of Kalamkari versus non-Kalamkari lampshades.

3. ANALYSIS

3.1 Familiarity with Kalamkari Art

The majority of respondents are at least somewhat familiar with Kalamkari, with 48.4% selecting “Somewhat familiar.” Only 6.4% reported having no familiarity. This indicates a generally aware audience, making them more receptive to Kalamkari-based interior products.

3.2 Preferred Style of Kalamkari

Srikalahasti (hand-painted) style is the most preferred at 48.4%, reflecting interest in intricate hand-drawn artwork. A smaller portion (22.6%) prefers Machilipatnam block prints, while 25.8% like both styles. This shows that hand-painted craftsmanship holds higher appeal.

3.3 Interior Applications for Kalamkari

Wall art/murals received the highest interest at 61.3%, making it the dominant application. Curtains (35.5%) and decorative panels (25.8%) also show demand. Very few respondents preferred lighting or other uses (3.2% each), indicating that large visual surfaces are favored.

3.4 Motif Preferences

Respondents equally valued Traditional mythological and Nature-inspired motifs (both 41.9%). This shows a balanced appreciation for cultural narratives and organic aesthetics. Only a small percentage preferred geometric patterns.

3.5 Preferred Kalamkari Technique

More than half (51.6%) prefer hand-painted Kalamkari due to its authenticity and artistic value. Combination techniques are also popular (29%), indicating openness to mixed methods. Hand-blocked work alone is less preferred.



Figure 3 a) Preferred Kalamkari Technique, b) Motif Preferences, c) Familiarity with Kalamkari Art, d) Preferred Style of Kalamkari, e) Interior Applications for Kalamkari.

4. MATERIAL AND METHODS

4.1 Materials

4.1.1. Materials Used in Kalamkari:

- i. Cotton Fabric — primary base cloth (pre-treated for dye absorption).
- ii. Natural Dyes — extracted from plants, roots, minerals (e.g., indigo, madder, pomegranate rind).
- iii. Kalam (Pen/Brush) — bamboo or date-palm stick with cotton-wrapped tip for hand-painting.
- iv. Wooden Blocks — carved blocks for block-printing designs.
- v. Mordants — alum, iron filings, and myrobalan for fixing dyes.

- vi. Jaggery & Iron Solution — used to create black dye outlines.
- vii. Buffalo/Cow Milk & Resin — used in pre-treatments to prevent color spreading.
- viii. Natural Bleaching Agents — cow dung, sun-drying, and water for fabric preparation.

4.1.2. Kalamkari Materials Used in Lampshades & Lighting Decor:

- i. Kalamkari Cotton Fabric — the main decorative outer layer (hand-painted or block-printed).
- ii. Natural Dyes — vegetable-based pigments that create traditional motifs and patterns.
- iii. Lampshade Frame (Metal/Wire) — supports the fabric and maintains shape.
- iv. Inner Lining Material — usually PVC sheet, parchment, or fabric lining to improve light diffusion and heat resistance.
- v. Adhesives — fabric glue or lamination adhesive to fix Kalamkari fabric to the frame or lining.
- vi. Protective Coating (Optional) — clear spray or fabric sealer to enhance durability and prevent fading.
- vii. Finishing Trim/Tapes — cotton or jute trims used to cover edges and give a neat finish.

4.2 Methods

4.2.1. Applications of Kalamkari Materials & Methods:

i. Cotton Fabric — Base Cloth

Application: Serves as the main canvas for hand-painting or block-printing.

Method: The cotton is pre-treated through scouring, soaking in myrobalan solution, and sun-drying to improve dye absorption.



Figure 4 Srikalahasti Kalamkari



Figure 5 Machilipatnam Kalamkari

ii. Natural Dyes

Application: Provide color for motifs and backgrounds using eco-friendly pigments.

Method: Extracted from plants/minerals and applied through boiling, dye baths, or direct painting.

iii. Kalam (Pen/Brush)

Application: Used for outlining and detailing motifs in Srikalahasti-style Kalamkari.

Method: Artists dip the cotton-wrapped tip into dye solutions to draw freehand designs.

iv. Wooden Blocks

Application: Create repetitive patterns, borders, and large motifs.

Method: Blocks dipped in dye paste are pressed onto the fabric repeatedly for consistent prints.

v. Mordants (Alum, Iron, Myrobalan)

Application: Fix dyes to the fabric and determine final color shades.

Method: Applied before dyeing; alum gives red tones, iron gives black or brown.

vi. Jaggery & Iron Solution

Application: Forms the black outlining dye.

Method: Fermented mixture is used with a kalam for detailed outlines.

vii. Buffalo/Cow Milk & Resin

Application: Prevents dyes from bleeding during painting.

Method: Fabric soaked in milk-resin solution to make fibers non-spreading.

viii. Natural Bleaching Agents

Application: Lighten fabric and remove impurities.

Method: Sun-drying, cow-dung treatment, and repeated washing prepare the fabric for dye work.

4.2.2. Applications of Kalamkari Materials in Lampshades & Lighting Decor:

i. Kalamkari Cotton Fabric (Decorative Layer)

Application: Acts as the outer aesthetic layer, carrying motifs that define the visual appeal.

Method: Fabric is measured, cut, and wrapped around the lampshade frame with adhesives.

ii. Natural Dyes

Application: Provide traditional colors while allowing soft light filtering.

Method: Pre-dyed Kalamkari fabric is selected to complement interior themes.



Figure 6 *Kalamkari in Lightings*

iii. Lampshade Frame (Metal/Wire)

Application: Provides structural support and defines the shape (drum, cone, cylinder).

Method: Fabric is stretched and glued over the frame to ensure smooth, wrinkle-free finish.

iv. Inner Lining Material (PVC, Parchment, Fabric)

Application: Enhances light diffusion, prevents overheating, and protects the textile.

Method: Lining is attached to the inner side of the Kalamkari fabric before mounting on the frame.

v. Adhesives

Application: Secure fabric and lining layers to the frame and maintain shape.

Method: Lamination adhesive or fabric glue is applied at edges and seams during assembly.

vi. Protective Coating (Optional)

Application: Increases longevity, prevents fading, and protects against dust/moisture.

Method: A light, clear spray or fabric sealant is applied after the lampshade is assembled.

vii. Finishing Trim/Tapes

Application: Conceal edges, seams, and joints for a clean professional finish.

Method: Cotton or jute trims are stitched or glued along the top and bottom borders.

5. RESULTS AND DISCUSSION

5.1 Material Compatibility of Kalamkari

The results show that Kalamkari cotton fabric demonstrates good material compatibility for lampshade and lighting decor applications. Its flexible weave allows it to wrap smoothly around frames, while natural dyes adhere well to cotton fibers, ensuring stability under moderate lighting conditions. When paired with PVC or parchment lining, the fabric maintains structural integrity and diffuses heat safely. However, prolonged exposure to strong light sources may cause gradual fading of natural dyes, indicating the need for protective coatings. Overall, the fabric's natural absorbency, texture, and adaptability make it suitable for decorative lighting products when treated and assembled appropriately.

5.2 Visual Performance and Aesthetic Behavior

Kalamkari textiles significantly enhance visual performance in lampshades by producing warm, soft light and adding intricate artistic detail to interior spaces. When illuminated, their natural dyes create gentle diffusion, reducing glare and creating a cozy ambience. Hand-painted Srikalahasti designs provide high visual depth, while block-printed Machilipatnam motifs offer symmetrical patterns suited for contemporary styles. The fabric's earthy tones harmonize well with various interior palettes, emphasizing cultural richness and artisan craftsmanship. Users reported that Kalamkari lampshades function as statement pieces, elevating decor aesthetics through pattern complexity, organic textures, and visually engaging shadow effects that enhance overall interior atmosphere.

5.3 Functional Performance in Upholstery and Interior Applications

Functionally, Kalamkari performs well in interior applications such as lampshades, wall hangings, panels, and light-duty furnishings. Its breathable cotton structure and natural dye composition respond well to low-heat environments, making it ideal for ambient lighting decor. However, its durability is limited for high-friction upholstery, where frequent use may lead to wear, fading, or fiber thinning. When reinforced with linings, laminations, or protective coatings, its performance in decor elements improves significantly. Results suggest that

Kalamkari is best suited for accent and decorative applications rather than heavy-use seating, aligning its strengths with visual richness rather than structural load-bearing requirements.

5.4 User Acceptance

User feedback indicates strong acceptance of Kalamkari in lighting decor, with respondents appreciating the cultural value, handcrafted nature, and warm ambience created by the fabric. Many users expressed preference for Kalamkari lampshades due to their uniqueness and artistic character, viewing them as premium decor elements. The natural dyes and traditional motifs added emotional and aesthetic appeal. Minor concerns included maintenance, color sensitivity, and higher cost compared to mass-produced alternatives. Despite these factors, users widely favored the blend of tradition and modern functionality, showing strong willingness to incorporate Kalamkari lighting products into homes, studios, boutiques, and themed interior environments.

5.5 Cultural, Sustainability, and Market Viability

Kalamkari lighting decor demonstrates high cultural value by preserving traditional Indian art forms and supporting artisan communities. The use of natural dyes, hand processes, and eco-friendly materials reinforces its sustainability, appealing to environmentally conscious consumers. Market trends show increasing demand for handcrafted and culturally rooted decor items, giving Kalamkari strong potential in boutique, artisan, and luxury interior markets. While mass production is limited due to labor-intensive techniques, this exclusivity enhances product desirability. The results indicate strong market viability, particularly among consumers seeking authentic, sustainable, and visually distinctive lighting decor that blends heritage craftsmanship with modern interior design needs.

Table 1. Results and Discussion on Kalamkari Material Performance and Market Viability

Section	Focus Area	Key Findings	Conclusion / Considerations
5.1 Material Compatibility	Suitability of Kalamkari cotton for lampshades	Flexible fabric wraps well; natural dyes adhere strongly; stable with PVC/parchment lining	Good compatibility; may require protective coatings to prevent dye fading under strong light
5.2 Visual Performance & Aesthetic Behavior	Light diffusion and aesthetic impact	Produces warm, soft light; reduces glare; enhances ambience; designs add artistic depth	Strong aesthetic value; blends cultural richness with interior decor needs
5.3 Functional Performance	Use in lampshades, panels, light-duty furnishings	Performs well in low-heat and decorative applications; improves with linings/laminations	Not suitable for heavy-use upholstery; best for accent decor rather than load-bearing items
5.4 User Acceptance	Consumer preference and feedback	Users value cultural appeal, uniqueness, ambience; perceived as premium décor	High acceptance despite minor concerns (maintenance, cost, dye sensitivity)
5.5 Cultural, Sustainability & Market Viability	Cultural relevance and market potential	Supports artisans; eco-friendly dyes; rising demand for handcrafted products	Strong market viability in artisan, boutique, and luxury décor segments

6. CONCLUSION

The study concludes that Kalamkari textiles offer significant aesthetic, cultural, and functional value when applied to lampshades and lighting decor. Their natural dyes, intricate motifs, and handcrafted techniques create warm ambient lighting and visually rich interior atmospheres. While the material performs well in low-heat applications, protective linings and coatings are essential to enhance durability and color retention. User responses indicate strong acceptance and appreciation for the cultural narrative and sustainability associated with Kalamkari products. Although less suited for mass production, its artisan exclusivity increases market desirability. Overall, Kalamkari successfully bridges traditional craftsmanship with contemporary interior design, making it a viable and culturally meaningful choice for modern lighting decor.

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