

A Study on Innovation Design Solutions for Residential and Commercial Spaces

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INTRODUCTION

Interior design has evolved from a functional need to a creative art form that blends aesthetics, utility, and sustainability. As consumers become more design-conscious, the demand for innovative solutions in residential and commercial spaces has increased. This study investigates consumer preferences, key material selection factors, smart technology adoption, and satisfaction levels to understand the future direction of design trends.

OBJECTIVES OF THE STUDY

- To analyse preferences for interior design elements in residential and commercial spaces.
- To identify key factors influencing material selection and consumer satisfaction.
- To evaluate the level of interest in smart technology and eco-friendly materials.
- To assess the impact of design aesthetics on customer recommendations.

SCOPE OF THE STUDY

- The study includes 100 respondents from various professional and personal backgrounds.
- Covers both residential and commercial interior design preferences.
- Focuses on modern elements such as false ceilings, smart technology, and sustainable materials.
- Data collected reflects trends in design behaviour and satisfaction.

NEED FOR THE STUDY

With growing urbanization and increasing disposable income, people are investing more in personalized spaces. A clear understanding of user expectations and challenges can help service providers tailor their offerings. The study also aids in identifying the rising role of design aesthetics, digital platforms, and sustainability in consumer decision-making.

REVIEW OF LITERATURE

Kumar and Singh (2020)

Studied the adoption of eco-friendly materials in urban interior projects and found a strong consumer shift toward sustainability.

Mehra et al. (2019)

Highlighted the growing influence of online platforms like Pinterest on interior design decisions in India.

Sharma and Bose (2021)

Analysed user satisfaction in residential design and concluded that aesthetic value plays a major role in repeat customers.

Rao and Iqbal (2018)

Found that false ceiling and lighting designs significantly impact space perception in both homes and offices.

Verma and Pillai (2022)

Demonstrated how smart technology integration is becoming a preferred feature among urban consumers seeking convenience and automation.

RESEARCH DESIGN

The research follows a descriptive and analytical design. A structured questionnaire was used to gather quantitative data from 100 respondents. This approach helps capture both consumer behaviour and the rationale behind interior design preferences. The design supports cross-sectional analysis using regression and chi-square tests.

SOURCES OF DATA

Primary Data: Gathered from a questionnaire answered by 100 respondents covering preferences, satisfaction, and innovation expectations.

Secondary Data: Journals, articles on interior design trends, and sustainability reports in India.

CHI-SQUARE ANALYSIS

Hypothesis

H₀: No relationship between occupation and preference for residential vs. commercial design.

H₁: There is a significant relationship.

Test Type	Value	df	p-value
Pearson Chi-Square	11.72	4	0.020

Interpretation: The p-value is 0.020 (< 0.05), so we reject H_0 .

Inference: There is a significant relationship between profession and design preference. For example, business owners prefer commercial spaces, while homeowners lean toward residential designs.

REGRESSION ANALYSIS

Aim: To test whether material selection factors affect the likelihood of recommending Sri Hanuman Services.

Regression Model:

$$Y = \beta_0 + \beta_1(\text{Durability}) + \beta_2(\text{Cost}) + \beta_3(\text{Aesthetic}) + \beta_4(\text{Maintenance}) + \beta_5(\text{Sustainability}) + \varepsilon$$

Predictor	Coefficient (β)	p-value
Intercept	2.10	0.035
Durability	0.42*	0.006
Cost	-0.15	0.168
Aesthetic Appeal	0.58**	0.004
Maintenance	0.08	0.343
Sustainability	0.31*	0.007

Interpretation: Aesthetic Appeal, Durability, and Sustainability significantly influence customer recommendations ($p < 0.05$).

Inference: Interior designers should focus more on aesthetics and sustainable materials rather than price alone to drive satisfaction and referrals.

FINDINGS

- 87% of respondents are under 35 years old.
- 78% are male, 22% are female.
- 25% are business owners; 18% are homeowners.
- 62% have recently renovated or redesigned their space.
- 50% prefer residential space design; 30% prefer commercial.
- 45% prefer wallpapers; 35% false ceilings.
- 35% prioritize durability in material selection.
- 25% prefer low cost, 20% focus on aesthetics.
- 45% gather ideas from online platforms; 35% from designers.
- 65% faced challenges in selecting materials.
- 70% favour eco-friendly materials.
- 65% are interested in smart tech integration.
- 80% are satisfied or very satisfied with past design choices.
- 70% are willing to recommend Sri Hanuman Services.

SUGGESTIONS

- Emphasize aesthetic value in design proposals.
- Promote eco-friendly and sustainable materials.
- Use Pinterest-style visual platforms to showcase ideas.
- Offer personalized consultations to reduce material selection challenges.
- Integrate smart home features for modern functionality.

CONCLUSION

The study reveals a growing preference for innovation in interior design, especially among younger consumers. Key drivers of satisfaction include aesthetic appeal, sustainability, and professional advice. Service providers must adapt to these changing preferences by leveraging digital platforms and offering customizable, smart, and sustainable solutions.

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