



# A STUDY ON VIRTUAL SHOPPING EXPERIENCES AMONG YOUNG CONSUMERS

Pooja R Belakere<sup>1</sup>, Dr. Vinay K S<sup>2</sup>

<sup>1</sup>Student – RV Institute of Management

<sup>2</sup>Professor - RV Institute of Management

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## INTRODUCTION

The advent of the internet and digital technologies has catalysed a profound transformation in the retail landscape, giving rise to virtual shopping as a prominent mode of consumer engagement. This shift has presented a lifetime opportunity for businesses to revolutionize their operations, enhance customer experiences, and tap into new markets. Virtual shopping, characterized by the use of digital interfaces to browse and purchase goods or services, has evolved from simple online stores to immersive experiences incorporating virtual reality (VR), augmented reality (AR), and even metaverse environments. This evolution necessitates a comprehensive understanding of consumer behavior within these virtual spaces, particularly among young consumers who are at the forefront of digital adoption.

From a bird's eye view, the problem lies in the dichotomy between the rapid advancement of virtual shopping technologies and the lagging understanding of the nuanced consumer experiences within these environments. While businesses are quick to adopt new technologies to attract customers and increase sales, there's often a disconnect between the intended experience and the actual consumer perception. Consumers may be drawn to the convenience and accessibility of online shopping, but they also face challenges such as poor interface design, limited product information, and a lack of personalized service. Retailers, on the other hand, grapple with issues like high overhead costs, delivery challenges, and the complexities of replicating the in-store experience online. This misalignment can lead to consumer frustration, reduced satisfaction, and ultimately, hinder the growth potential of virtual shopping.

## KEYWORDS

Virtual Shopping, User Interface, Product Information, Digital Transactions, Customer Engagement

## LITERATURE REVIEW

The paper discusses the evolution of virtual shopping on the Internet and its potential to displace or complement existing retail formats. It also explores the reasons why it has been difficult to predict the impact of new communication technologies on retailing, the potential responses of existing retailers, the future evolution of the Internet and electronic shopping, and strategies for managers to plan for the future. The research paper indicates that there are many factors that inhibit the growth of Internet-based electronic commerce. These

include consumers being frustrated by poor shopping interfaces, limited online merchandise selection, and high prices. Retailers face constraints due to high overhead costs, delivery charges, return rates, and the potential loss of impulse sales. Manufacturers feel restricted by their reliance on traditional retailers

The paper investigates the effects of the accelerating adoption of head-mounted devices by brands and consumers on retailers' in-store traffic and discusses how VR could complement the consumer experience across the shopping journey. The findings show that there is an expectations' gap buildup through the usage of VR versus what could be the actual generic in-store experience.

The study examines the potential of a VR store to elicit hedonism and utilitarianism by using a quasi-experimental design to measure levels of hedonism, utilitarianism, store satisfaction, and perceived assortment size. The research found that VR has a negative impact on satisfaction, moderated by perceived assortment size. It also elicits both utilitarianism and hedonism, which mediate the impact of the channel on store satisfaction. Overall, consumers reported high levels of outcome variables after VR exposure, and behaviours in VR-based and physical stores were comparable.

The purpose of this paper is to empirically identify categories of online shopping experiences and web site functions facilitating these experiences, and to test the effect of those experiences on browser satisfaction, conversion, and online store performance. In addition to supporting the existence of such parallel in-store and online experiences as sensory, cognitive, pragmatic, and relational, a new type of online shopping experience (interactive/engagement) was identified. It comprises customer involvement with the online store and with friends and other shoppers via the online store interface. The mediating role of browser satisfaction in increasing sales and traffic to online stores was confirmed.

This protocol analysis examines the content of virtual experience in e-commerce, as concurrently verbalized by a sample of 30 participants while interacting with four 3-D products. Thirteen different types of psychological activities were observed and classified into five characteristics of virtual experience: active process, presence, involvement, enjoyment, and affordances. As a result, virtual experience is vivid, involving, active, affective psychological states occurring in an



individual interacting with 3-D computer simulations. The study anchors the position of virtual experience on the spectrum of consumer experience with design implications in e-commerce discussed. The study observed thirteen different types of psychological activities and classified them into five characteristics of virtual experience: active process, presence, involvement, enjoyment, and affordances. This protocol analysis examines the content of virtual experience in e-commerce, as concurrently verbalized by a sample of 30 participants while interacting with four 3-D products.

Through a series of studies designed to explore important aspects of virtual experience, a new type of product affordances—virtual affordances—is proposed and tested empirically. In addition, the existing geometric and material product taxonomy is extended to include mechanical products within the classification structure. Utilizing these new concepts, 3-D product visualization is compared with traditional 2-D product representations and television advertising. The results largely support the proposition that 3-D product visualization is capable of influencing brand attitude and purchase intention for geometric and mechanical products within e-commerce environments. Through a series of studies designed to explore important aspects of virtual experience, a new type of product affordances—virtual affordances—is proposed and tested empirically. In addition, the existing geometric and material product taxonomy is extended to include mechanical products within the classification structure. Utilizing these new concepts, 3-D product visualization is compared with traditional 2-D product representations and television advertising

This research article explores the content of consumers' experience when they shop online and proposes a first step in conceptualizing the 'online shopping experience' (OSE). First, we carried out an extended literature review and proposed an integrative conceptual framework. Then, we relied on a consumer's discourse analysis with four focus groups with consumers who differ in terms of age, gender and online shopping experience. We define the OSE and propose a conceptualization through four core dimensions: the physical, ideological, pragmatic and social dimensions. Connections are established between the flow concept and the 'traditional' dimensions of experience, and specific shopping values are identified. Moreover, an appropriation process of commercial websites is revealed; beyond purchase intentions and rituals, the OSE is embodied by the use of online tools and patronage routines. The study defines the Online Shopping Experience (OSE) across four dimensions: physical, ideological, pragmatic, and social. It also connects the flow concept to traditional dimensions of experience and identifies specific shopping values.

The paper discusses how new technology helps managers develop ideas that break through the clutter of messages and confusing arrays of products, and how companies have traditionally used marketing research to test shoppers' reactions to new ideas to reduce risk. The research outlines that new technology helps managers envision the future, and that it also helps to develop ideas that break through the clutter of messages in the mass media and the confusing array of products

at the point of purchase. The paper discusses how companies have traditionally used marketing research to test shoppers' reactions to new ideas, thereby reducing risk. The paper discusses that new technology helps managers envision the future and develop ideas that break through the clutter of messages.

The paper explores the adoption of virtual reality (VR) shopping environments. It investigates how immersion influences adoption by comparing high-immersion (head-mounted display) and low-immersion (desktop) environments. The study concludes that immersion doesn't affect reuse intention due to counteracting effects: a positive hedonic path through telepresence and a negative utilitarian path through product diagnostic. The negative effect is attributed to low readability of product information in VR.

This paper aims to identify the key determinants of consumer acceptance and the use of virtual stores, offering theoretical and practical implications for developing e-commerce strategies. Expanding the Technology Acceptance Model and Innovation Diffusion Theory, the authors propose a theoretical model for studying e-commerce strategies. The model is tested using a web-based survey, identifying factors that impact the acceptance of virtual stores, including product offerings, information richness, usability of storefront, perceived trust, and perceived service quality. The paper discusses implications for research and practice on remaining competitive in the electronic marketplace.

Virtual reality elicits behaviour that is more similar to behaviour in the physical store compared to the picture condition for the number of products selected and amount of money spent. Virtual reality can improve realism in responses to shelf allocation. Virtual reality was not able to diminish other differences between lab and physical store: participants bought more products and spent more money (for biscuits and fruit & vegetables), bought more national brands, and responded more strongly to price promotions in both virtual reality and pictorial representations than in the physical store.

The results of the study demonstrate the significant role of telepresence components in the simulated experience, and the critical role of that experience, along with hedonic and utilitarian values, in engagement. Purchase intention is influenced by satisfaction, which is, in turn, influenced by enjoyment and engagement. Engagement is influenced by utilitarian and hedonic value and the experience of product simulation or telepresence, which is composed of control, colour and graphics vividness, and 3D authenticity. In the immersive, 3D environment, experience is more associated with engagement and enjoyment, leading to greater purchase intention.

The experimental results show that perceptual fluency affects both cognitive effort and positive affect experienced during online shopping. The results also indicate that cognitive effort and positive affect influence judgments about the perceived decision quality of the choice made. The study is based on fluency theory within an environmental psychology



framework. It uses an experiment to examine how consumers' perceived fluency of the verbal online information affects their perceived cognitive effort and positive affect within a choice context.

The study provides insights into understanding the most salient AR factors influencing the immersive state of flow and satisfaction with AR experiences. The findings from this study provide key insights into understanding the most salient AR factors influencing the immersive state of flow and satisfaction with AR experiences.

This enhancement directly influences customer satisfaction with the website. Furthermore, customer satisfaction and website loyalty are identified as critical factors for success in B2C e-commerce. Product knowledge negatively moderates the relationship between RA recommendation quality and customer satisfaction with the website. Consumers' online shopping experience does not significantly affect the relationship between customer satisfaction and customer loyalty.

The paper does not present explicit findings of a study, but rather review the literature and propose a framework. It highlights the growing interest in XR technologies in marketing and the need for a more systematic and rigorous approach to research in this field. The authors emphasize the importance of defining the concept of Virtual Experience in Marketing (VEM) and developing a methodological framework for its research.

The paper argues that digital retailing is rapidly evolving into omnichannel retailing, which requires retailers to integrate various online and offline channels to meet customer expectations. It also finds that traditional retailers are lagging in adopting digital innovations and need to transform their strategies to compete effectively with online players.

It is an editorial piece that discusses the application of virtual reality in surgery and references the work of Marescaux and colleagues. Marescaux et al. used the three-dimensional reconstruction of sliced image data from the Visible Human project to build a 3D liver model.

The study provides insights into consumers' perceptions of the desired role of technology in the shopping experience. It determines what would be the "ideal" shopping experience from the customer's perspective. The findings offer implications for retail practice in the twenty-first century.

Factors such as convenience, information availability, and the lack of social interaction contribute to this sense of control and freedom. While experiential shopping exists online, it is less prevalent, and online retailers need to balance goal-oriented and experiential features to cater to diverse consumer needs.

The research methodology involved conducting nine focus groups with a total of 64 participants. These groups included both online and offline focus groups, with participants recruited from various sources, including MBA students, staff, and

Harris Interactive's online panel. The focus groups aimed to gather qualitative data on consumer perceptions and motivations for online shopping. The data collected was analysed by categorizing and labelling attributes of online shopping, and identifying connections between goal-oriented and experiential motivations.

The main findings of the research indicate that the level of IIT and EA positively affected shopping enjoyment and decreased perceived risk toward the online retailer. Additionally, shopping enjoyment and perceived risk significantly influenced consumers' attitude toward the online retailer. The study used a between-participant experimental design. Participants were college students from a large U.S. Midwestern university. The study involved two stimulus websites with different levels of image interactivity. Data were collected through a questionnaire and analysed using SPSS 14.0 and LISREL 8.72.

## THE RESEARCH GAP

Lies in the limited understanding of these context-specific consumer experiences. While existing research provides valuable insights into general virtual shopping trends and technologies, there's a lack of focused studies that delve into the specific nuances of young consumers' behavior in Bengaluru. Key areas that require further exploration include:

- Contextual Specificity
- Technological Adoption and Usage Patterns
- Impact of Digital Infrastructure
- Post-Pandemic Evolution
- Influence of Social Factors

## OBJECTIVES

1. To analyse the factors influencing virtual shopping adoption and usage patterns among young consumers in Bengaluru
2. To examine the impact of digital infrastructure and technological advancements on the virtual shopping experience of young consumers in Bengaluru
3. To evaluate the role of social factors and online interactions in shaping virtual shopping behavior among young consumers in Bengaluru

## VARIABLES

**Independent Variables:** (Factors that might influence virtual shopping experience)

1. Website/App Design & Usability
2. Product Information & Variety
3. Transaction & Delivery Process
4. Social Influence & Personal Factors

**Dependent Variables:** (Aspects of virtual shopping experience you want to measure or understand)

1. Overall Satisfaction & Engagement

## HYPOTHESES

**H1:** There is a significant positive relationship between website/app usability, visual design, and loading speed and young consumers' overall satisfaction with virtual shopping.

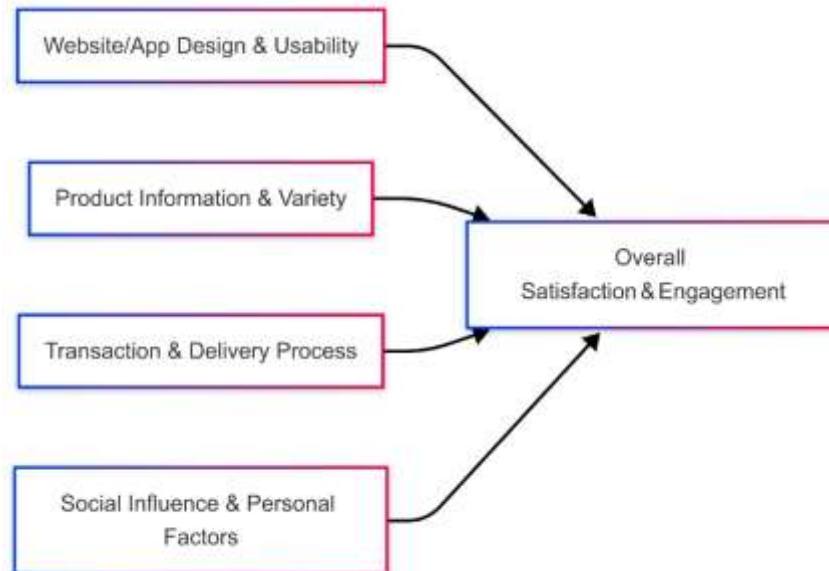
**H2:** Product clarity, variety, and search functionality exhibit a significant positive relationship with young consumers' satisfaction and engagement in virtual shopping.



**H3:** Secure payments, delivery speed, packaging quality, and return convenience have a significant positive relationship with satisfaction and likelihood of repeat usage.

**H4:** Peer recommendations and social influence significantly influence young consumers' virtual shopping behaviour and platform advocacy.

## CONCEPTUAL FRAMEWORK



## RESEARCH METHODOLOGY

A **Quantitative, Survey-Based Design** is adopted, utilizing structured questionnaires with Likert scale items. Data is analysed through Confirmatory Factor Analysis (CFA), ANOVA and Descriptive Statistics to examine direct, indirect, and moderated relationships.

### Sampling Technique

A **Convenience Sampling** is employed, focusing on virtual shopping among young consumers who actively use shopping platforms. A sample size of 221 respondents is targeted to ensure robust statistical power for analysis.

### Data Analysis and Interpretation

- Reliability Test

**Case Processing Summary**

		N	%
Cases	Valid	221	100.0
	Excluded <sup>a</sup>	0	.0
	Total	221	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.927	.928	20

**Interpretation of Case Processing Summary:** The table shows that all 221 cases (100%) were valid for analysis, with no exclusions, indicating complete data availability. Listwise deletion was applied, confirming no missing values across the variables used in the procedure.





Statistics

		Age	Gender	Education Level	Occupation	Monthly Income (INR)
N	Valid	221	221	221	221	221
	Missing	0	0	0	0	0
Mean		2.57	1.51	2.70	2.07	2.25
Mode		2	2	3	2	1
Std. Deviation		1.023	.501	.675	.931	1.183
Variance		1.046	.251	.456	.867	1.399
Skewness		.092	-.027	-.093	.468	.312
Std. Error of Skewness		.164	.164	.164	.164	.164
Kurtosis		-1.159	-2.018	-.140	-.694	-1.427
Std. Error of Kurtosis		.326	.326	.326	.326	.326
Range		3	1	3	3	3

**Interpretation of Reliability Statistics:** Cronbach's Alpha for the 20-item scale is 0.927, exceeding the threshold of 0.7, demonstrating excellent internal consistency. The standardized

• **Descriptive Statistics**

The sample (N=221) had no missing data, ensuring complete demographic analysis. Age (Mean=2.57, SD=1.023) and Monthly Income (Mean=2.25, SD=1.183) showed moderate variability, while Gender (Mode=2, SD=.501) was skewed

item value (0.928) further validates the reliability of the scale for measuring the construct.

toward one category. Education Level (Mean=2.70, Skewness=-.093) and Occupation (Skewness=.468) exhibited near-normal and slightly right-skewed distributions, respectively. Kurtosis values (e.g., -2.018 for Gender) indicate platykurtic distributions, suggesting lighter tails than a normal curve.

• **Hypothesis Testing**

**H1: There is a significant positive relationship between website/app usability, visual design, and loading speed and young consumers' overall satisfaction with virtual shopping.**

ANOVA with Friedman's Test

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig.
Between People	473.823	220	2.154		
Within People					
Between Items	11.439 <sup>a</sup>	4	2.860	22.713	.000
Residual	433.761	880	.493		
Total	445.200	884	.504		
Total	919.023	1104	.832		

Grand Mean = 3.90

a. Kendall's coefficient of concordance  $W = .012$ .

The Friedman's ANOVA test revealed statistically significant differences among the five items assessing website/app usability, visual design, and loading speed ( $\chi^2(4) = 22.713$ ,  $*p < .001$ ), leading to the rejection of the null hypothesis at a 95% confidence level. This suggests that young consumers' satisfaction levels varied significantly across the evaluated factors. However, Kendall's coefficient of

concordance ( $W = .012$ ) indicated weak agreement among respondents, implying limited consistency in their rankings. Despite this, the results support Hypothesis 1, confirming a significant relationship between the tested usability attributes and overall satisfaction in virtual shopping contexts.



**H2: Product clarity, variety, and search functionality exhibit a significant positive relationship with young consumers' satisfaction and engagement in virtual shopping.**

**ANOVA with Friedman's Test**

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between People	443.122	220	2.014	10.674	.005
Within People Between Items	6.166 <sup>a</sup>	2	3.083		
Residual	249.167	440	.566		
Total	255.333	442	.578		
Total	698.456	662	1.055		

Grand Mean = 3.70

a. Kendall's coefficient of concordance  $W = .009$ .

The Friedman's ANOVA test indicated statistically significant differences among the three items assessing product clarity, variety, and search functionality ( $\chi^2(2) = 10.674$ ,  $*p = .005$ ), leading to the rejection of the null hypothesis at a 95% confidence level. This suggests that young consumers' satisfaction and engagement varied significantly across these factors. Kendall's coefficient of concordance ( $W = .009$ )

demonstrated very weak agreement among respondents, highlighting limited consistency in their rankings. Despite the low concordance, the results support Hypothesis 2, confirming a significant positive relationship between the tested product-related attributes and satisfaction/engagement in virtual shopping contexts.

**H3: Secure payments, delivery speed, packaging quality, and return convenience have a significant positive relationship with satisfaction and likelihood of repeat usage.**

**ANOVA with Friedman's Test**

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between People	844.111	220	3.837	8.383	.211
Within People Between Items	4.366 <sup>a</sup>	6	.728		
Residual	686.206	1320	.520		
Total	690.571	1326	.521		
Total	1534.683	1546	.993		

Grand Mean = 3.82

a. Kendall's coefficient of concordance  $W = .003$ .

The Friedman's ANOVA test revealed no statistically significant differences among the seven items assessing secure payments, delivery speed, packaging quality, and return convenience ( $\chi^2(6) = 8.383$ ,  $*p = .211$ ), failing to reject the null hypothesis at a 95% confidence level. This indicates that young consumers' satisfaction and likelihood of repeat usage did not vary significantly across these factors. Kendall's

coefficient of concordance ( $W = .003$ ) further reflected negligible agreement among respondents, suggesting high inconsistency in their evaluations. Consequently, Hypothesis 3 is not supported, as the tested post-purchase attributes did not demonstrate a significant positive relationship with satisfaction or repeat usage in virtual shopping contexts.



#### H4: Peer recommendations and social influence significantly influence young consumers' virtual shopping behaviour and platform advocacy.

ANOVA with Friedman's Test

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig.
Between People	546.814	220	2.486		
Within People					
Between Items	10.974 <sup>a</sup>	4	2.743	20.329	.000
Residual	466.226	880	.530		
Total	477.200	884	.540		
Total	1024.014	1104	.928		

Grand Mean = 3.83

a. Kendall's coefficient of concordance  $W = .011$ .

The Friedman's ANOVA revealed statistically significant differences among the five questionnaire items assessing peer recommendations and social influence ( $\chi^2(4) = 20.329$ ,  $*p < .001$ ), leading to the rejection of the null hypothesis at a 95% confidence level. However, Kendall's coefficient of concordance ( $W = .011$ ) indicated weak agreement among respondents, suggesting minimal consensus in responses. Despite the significance, the low effect size implies that while peer and social factors influence virtual shopping behaviour, their collective impact is modest. Thus, **Hypothesis 4 is supported**, but the weak concordance warrants cautious interpretation of the extent of influence.

## FINDINGS

### Website/App Usability

- The research confirms a statistically significant positive relationship between website/app usability, visual design, and loading speed, and young consumers' overall satisfaction with virtual shopping.
- This finding emphasizes the crucial role of a well-functioning and aesthetically pleasing online platform in shaping consumer satisfaction.
- However, the analysis also reveals a weak Kendall's coefficient of concordance, indicating limited agreement among respondents regarding what constitutes good usability.
- This suggests that while usability is important, consumers have varying and potentially conflicting preferences for specific design elements and functionalities.

### Product Information:

- The study demonstrates a significant positive relationship between product clarity, variety, and search functionality, and young consumers' satisfaction and engagement in virtual shopping.
- This highlights the importance of providing comprehensive and easily accessible product information to facilitate informed purchase decisions and enhance the overall shopping experience.
- Similar to usability, the Kendall's coefficient of concordance is very weak, indicating substantial variability in consumer preferences for product presentation and search tools.

### Post-Purchase Factors

- Contrary to the hypothesized relationship, the research did not find a statistically significant relationship between secure payments, delivery speed, packaging quality, return convenience, and consumer satisfaction or repeat purchase intention.
- This suggests that young consumers in Bengaluru might consider these post-purchase factors as basic expectations rather than key differentiators in their virtual shopping experience.
- The negligible Kendall's coefficient of concordance further supports the idea that there is little consensus on the importance of these factors.

### Social Influence

- The study confirms a statistically significant relationship between peer recommendations and social influence, and young consumers' virtual shopping behavior and platform advocacy.
- This underscores the role of social factors in shaping consumer choices and driving word-of-mouth marketing for virtual shopping platforms.
- However, the Kendall's coefficient of concordance is weak, and the effect size is modest, indicating that while social influence is present, its impact is limited and varies across individuals.

## SUGGESTIONS

### Enhance Website/App Usability:

- Conduct thorough user research, including usability testing and user interviews, to identify specific pain points and areas for improvement in the website/app interface.
- Employ user-centered design principles to create intuitive navigation, clear calls to action, and a seamless browsing experience across different devices.
- Personalize the user experience by incorporating features that allow users to customize the interface, save preferences, and receive tailored recommendations.
- Continuously monitor website/app performance and gather user feedback to identify and address any emerging usability issues.



#### Improve Product Information

- Provide detailed and accurate product descriptions that include key specifications, features, and benefits.
- Use high-quality images and videos to showcase products from multiple angles and provide a realistic representation of their appearance.
- Implement robust search and filtering options that allow users to easily find products based on various criteria, such as price, brand, category, and features.
- Incorporate customer reviews and ratings to provide social proof and assist users in evaluating product quality and suitability.

#### Re-evaluate Post-Purchase Factors

- Conduct further research to explore the nuances of consumer expectations and perceptions regarding post-purchase factors.
- Investigate whether the importance of these factors varies across different product categories or purchase contexts.
- Examine the potential indirect effects of post-purchase factors on other variables, such as customer loyalty, customer lifetime value, or brand reputation.
- Consider implementing strategies to enhance the perceived value of post-purchase services, such as offering transparent shipping updates, proactive customer support, and hassle-free return processes.

#### Leverage Social Influence Strategically

- Develop influencer marketing campaigns to partner with relevant and credible influencers who can promote virtual shopping platforms and products to their followers.
- Integrate social media features into the virtual shopping platform, such as allowing users to share products with their social networks or view recommendations from friends.
- Encourage user-generated content, such as customer testimonials and product photos, to build social proof and enhance the authenticity of the brand.
- Monitor social media conversations and online reviews to understand consumer sentiment and address any negative feedback or concerns.

#### CONCLUSION

This research on virtual shopping among young consumers in Bengaluru highlights the critical influence of website/app usability and product information on their satisfaction and engagement. A user-friendly interface, characterized by intuitive design and fast loading speeds, alongside clear, comprehensive, and easily searchable product details, are paramount for creating positive online shopping experiences. Interestingly, traditional post-purchase factors like secure payment options and efficient delivery, while important for basic functionality, did not emerge as significant drivers of satisfaction in this specific demographic, suggesting they are largely considered standard expectations.

Furthermore, while social influence through peer recommendations does play a role in shaping virtual shopping behavior and platform advocacy, its impact is moderate and varies across individuals. This indicates that while leveraging social cues can be beneficial, a holistic strategy focusing on core elements like usability and product presentation is essential for fostering satisfaction and driving engagement among young consumers in the burgeoning Bengaluru virtual retail market. Ultimately, businesses aiming to succeed in this landscape must prioritize creating seamless, informative, and trustworthy online environments that cater to the specific preferences and expectations of this digitally native generation.

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