



Understanding College Students' Brand Preference For Laptop Computers And Smartphones: An Analysis Across Disciplines

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ABSTRACT

This study investigates college students' brand preferences for laptop computers and smartphones across various academic disciplines. Drawing upon recent research on technology adoption and consumer behavior, the study aims to fill existing research gaps by exploring potential variations in brand preferences among students from different academic backgrounds. Data were collected from 380 college students across Arts and Science, Engineering, and Education (B.Ed.) colleges through surveys, with statistical analyses, including ANOVA, conducted to compare brand preferences both between and within different college disciplines. The results reveal minimal variation in brand preferences between disciplines but considerable variability within each discipline, suggesting the influence of individual factors. While overall preferences remain consistent across disciplines, marketers are encouraged to recognize and address the nuanced differences within each group to enhance brand engagement and loyalty. This study offers valuable insights for marketers seeking to effectively tailor their strategies to resonate with college students' preferences in the ever-evolving landscape of technological devices.

Keywords: Technology adoption; Brand preferences; College students; Consumer behavior; and Marketing strategies.

Introduction

College students represent a significant market segment for laptop computers and smartphones, making their brand preferences a subject of interest for marketers. Previous research has explored various factors influencing brand preference among college students, including product features, pricing, and promotional activities. However, less attention has been given to how brand preferences vary across different academic disciplines. This study aims to address this gap by examining brand preference differences among college students from Arts and Science, Engineering, and Education (B.Ed.) colleges.

Review of literature

Researchers have explored various aspects of technology adoption and consumer behavior in recent studies. Anastasia Miklyaeva et al. (2020)¹ found that students using computers or laptops for education achieve better outcomes compared to those using smartphones, suggesting a need for further investigation into the psychological effects of different devices on education. Janusz Wielki (2020)² delved into influencer marketing's significance in reshaping online promotion systems, emphasizing its role in sustainable development, particularly among Generation Z. Rahela Tabassum and Shehbaz Ahmed (2020)³ analyzed the intense competition in the smartphone market, highlighting Xiaomi's innovative strategies and their implications for marketers. Kelum A. A. Gamage and Eranda Perera (2021)⁴ explored undergraduate students' device preferences in online learning, underscoring the importance of affordability and accessibility, especially in rural areas. Meanwhile, Ige, Omotayo Olugbemi et al. (2021)⁵ investigated factors influencing consumers' laptop purchase decisions, emphasizing product knowledge, characteristics, familiarity, and perceived quality. Balasubrami and Pranav (2023)⁶ observed a resurgence in laptop interest driven by

demand for enhanced capabilities, with respondents prioritizing quality in their choices. Despite these insights, research gaps persist, particularly in understanding privacy concerns with evolving smartphone technologies, cultural variations in brand preferences, and gender's influence on brand perception. Addressing these gaps can provide valuable insights into technology adoption and consumer behavior, shaping future research agendas and marketing strategies.

Research Gap

Despite the comprehensive insights provided by recent studies on technology adoption and consumer behavior, several notable research gaps persist. One significant gap is the need for a deeper understanding of privacy concerns associated with evolving smartphone technologies. As smartphones continue to advance rapidly, there is a growing urgency to explore how users perceive and navigate issues related to data privacy and security. Additionally, there is a gap in research concerning cultural variations in brand preferences, particularly in the context of different geographic regions and demographic groups. Understanding how cultural factors influence consumers' choices can provide valuable insights for marketers seeking to effectively target diverse audiences. Furthermore, there is limited research on how gender influences brand perception, particularly in the technology sector. Exploring gender differences in brand preferences and perceptions can help marketers develop more inclusive and targeted strategies. Addressing these research gaps can contribute to a more comprehensive understanding of technology adoption and consumer behavior, ultimately informing more effective marketing strategies in an increasingly interconnected world.

Objective

To understand college students' brand preferences for laptop computers and smartphones across various academic disciplines.

Methodology

Data were collected from college students (380 samples) through surveys administered at Arts and Science, Engineering, and Education (B.Ed.) colleges. Respondents were asked to indicate their brand preferences for laptop computers and smartphones. An analysis of variance (ANOVA) was conducted to compare brand preferences between and within the different college disciplines.

Simple Percentage Analysis

Table 1. Distribution of the Respondents

Respondents Academic Disciplines	Smartphone	Laptop Computers	Total
Arts and Science	235	38	273
Engineering	47	34	81
Education	18	8	26
Total Sample	300	80	380

Table 2. Arts and Science College Students' Perception Towards Brand Preference Factors in Respect of Laptop Computers and Smartphone
(Highly Accept: HA 5; Accept: A 4; Neutral: N 3; Not Accept: NA 2; and Highly Not Accept: HNA 1)

Brand Prefrencing Factors	HNA	NA	N	A	HA
Promotional Activities	33 (12.0)	84 (30.7)	46 (16.8)	89 (32.5)	22 (8.0)
Pricing Strategies	43 (15.7)	78 (28.5)	50 (18.2)	90 (32.8)	13 (4.7)
Decision-Making Process	48 (17.5)	77 (28.1)	45 (16.4)	85 (31.0)	19 (6.9)
Purchasing Behavior	21 (7.7)	90 (32.8)	40 (14.6)	98 (35.8)	25 (9.1)
Loyalty Patterns	45 (16.4)	79 (28.8)	48 (17.5)	92 (33.6)	10 (3.6)
Consumer Engagement	33 (12.0)	82 (29.9)	39 (14.2)	96 (35.0)	24 (8.8)
Product Attributes	31 (11.3)	84 (30.7)	66 (24.1)	83 (30.3)	10 (3.6)
Brand Switching Patterns	18 (6.6)	82 (29.9)	63 (23.0)	92 (33.6)	19 (6.9)
Recommendations	5 (1.8)	92 (33.6)	74 (27.0)	90 (32.8)	13 (4.7)
Average	30.8 (11.2)	83.1 (30.3)	52.3 (19.1)	90.6 (33.0)	17.2 (6.3)

Source: Primary Data

The study delves into the perceptions of Arts and Science College students regarding brand preference factors concerning laptops and smartphones, presenting data in tabular form to illustrate respondents' preferences across multiple factors. Promotional activities and pricing strategies exhibit mixed impacts on brand preferences, indicating their significance but lack of universal effectiveness. The decision-making process holds moderate importance, suggesting it's not a predominant factor. Conversely, purchasing behavior, loyalty patterns, consumer engagement, and recommendations wield substantial influence, highlighting the significance of social cues and brand loyalty. Product attributes demonstrate a mixed impact, implying they're not the sole determinant of brand preference. Brand switching patterns suggest a balance between openness to change and a preference for consistency. Overall, while variations exist across factors, students generally hold positive perceptions towards brand preference elements, yet individual experiences may diverge from this collective viewpoint.

Table 3. Engineering College Students' Perception Towards Brand Preference Factors in Respect of Laptop Computers and Smartphone

Brand Preferecing Factors	HNA	NA	N	A	HA
Promotional Activities	7 (8.6)	27 (33.3)	12 (14.8)	27 (33.3)	8 (9.9)
Pricing Strategies	13 (16.0)	26 (32.1)	15 (18.5)	19 (23.5)	8 (9.9)
Decision-Making Process	14 (17.3)	22 (27.2)	15 (18.5)	22 (27.2)	8 (9.9)
Purchasing Behavior	6 (7.4)	25 (30.9)	16 (19.8)	23 (28.4)	11 (13.6)
Loyalty Patterns	13 (16.0)	26 (32.1)	19 (23.5)	22 (27.2)	1 (1.2)
Consumer Engagement	5 (6.2)	31 (38.3)	12 (14.8)	27 (33.3)	6 (7.4)
Product Attributes	7 (8.6)	29 (35.8)	21 (25.9)	21 (25.9)	3 (3.7)
Brand Switching Patterns	4 (4.9)	30 (37.0)	22 (27.2)	24 (29.6)	1 (1.2)
Recommendations	2 (2.5)	22 (27.2)	19 (23.5)	35 (43.2)	3 (3.7)
Average	7.9 (9.7)	26.4 (32.6)	16.8 (20.7)	24.4 (30.2)	5.4 (6.7)

Source: Primary Data

This study delves into the perceptions of Engineering College students regarding brand preference factors concerning laptop computers and smartphones, presenting the data categorically in a tabular format. Notable trends emerge across various factors: while promotional activities and pricing strategies evoke mixed responses, the decision-making process garners a balanced reaction. There's a clear inclination towards accepting purchasing behavior, indicating significant influence from peers. Loyalty patterns and consumer engagement are viewed positively, underscoring the importance of brand loyalty and active consumer interaction. However, opinions on product attributes vary, suggesting they're not the sole determinants of brand preference. Brand switching patterns reflect a balance between openness to change and a preference for consistency. Recommendations hold considerable sway, highlighting the impact of peer opinions. Overall, Engineering College students exhibit generally positive perceptions towards brand preference factors, yet individual nuances underscore the necessity of embracing diverse viewpoints within this demographic.

Table 4. Education (B.Ed.) College Students' Perception Towards Brand Preference Factors in Respect of Laptop Computers and Smartphone

Brand Preferecing Factors	HNA	NA	N	A	HA
Promotional Activities	1 (4.0)	7 (28.0)	7 (28.0)	9 (36.0)	1 (4.0)
Pricing Strategies	3 (12.0)	7 (28.0)	7 (28.0)	8 (32.0)	0 (0.0)
Decision-Making Process	3 (12.0)	8 (32.0)	8 (32.0)	5 (20.0)	1 (4.0)
Purchasing Behavior	0 (0.0)	8 (32.0)	7 (28.0)	8 (32.0)	2 (8.0)
Loyalty Patterns	1 (4.0)	10 (40.0)	8 (32.0)	6 (24.0)	0 (0.0)
Consumer Engagement	1 (4.0)	9 (36.0)	2 (8.0)	12 (48.0)	1 (4.0)

Product Attributes	1 (4.0)	10 (40.0)	5 (20.0)	9 (36.0)	0 (0.0)
Brand Switching Patterns	1 (4.0)	5 (20.0)	9 (36.0)	7 (28.0)	3 (12.0)
Recommendations	5 (20.0)	9 (36.0)	8 (32.0)	3 (12.0)	0 (0.0)
Average	1.8 (7.1)	8.1 (32.4)	6.8 (27.1)	7.4 (29.8)	0.9 (3.6)

Source: Primary Data

This study delves into the perceptions of Education (B.Ed.) College students regarding brand preference factors concerning laptop computers and smartphones, presenting data categorically in a tabular format. Notable findings emerge across various factors: promotional activities and pricing strategies evoke mixed responses, indicating their relevance but not sole influence on brand preference. Similarly, while the decision-making process is acknowledged, it may not heavily sway students' brand preferences. There's a notable trend towards acceptance in purchasing behavior, highlighting the influence of peer actions. Loyalty patterns and consumer engagement are viewed positively, emphasizing the significance of brand loyalty and active consumer interaction. Product attributes play a role but may not be the sole determinant of brand preference. Brand switching patterns indicate a moderate openness to change among students. Recommendations hold sway, indicating the importance of peer opinions. Overall, Education College students generally hold positive perceptions towards brand preference elements, but individual variations underscore the necessity of embracing diverse viewpoints within this demographic.

Table 5. College Students' Perception Towards Brand Preference Factors in Respect of Laptop Computers and Smartphone

Brand Preferencing Factors	HNA	NA	N	A	HA
Promotional Activities	41 (10.8)	118 (31.1)	65 (17.1)	125 (32.9)	31 (8.2)
Pricing Strategies	59 (15.5)	111 (29.2)	72 (18.9)	117 (30.8)	21 (5.5)
Decision-Making Process	65 (17.1)	107 (28.2)	68 (17.9)	112 (29.5)	28 (7.4)
Purchasing Behavior	27 (7.1)	123 (32.4)	63 (16.6)	129 (33.9)	38 (10.0)
Loyalty Patterns	59 (15.5)	115 (30.3)	75 (19.7)	120 (31.6)	11 (2.9)
Consumer Engagement	39 (10.3)	122 (32.1)	53 (13.9)	135 (35.5)	31 (8.2)
Product Attributes	39 (10.3)	123 (32.4)	92 (24.2)	113 (29.7)	13 (3.4)
Brand Switching Patterns	23 (6.1)	117 (30.8)	94 (24.7)	123 (32.4)	23 (6.1)
Recommendations	12 (3.2)	123 (32.4)	101 (26.6)	128 (33.7)	16 (4.2)
Average	40.4 (10.6)	117.7 (31.0)	75.9 (20.0)	122.4 (32.2)	23.6 (6.2)

Source: Primary Data

This study delves into the perceptions of college students regarding brand preference factors concerning laptop computers and smartphones, analyzing data presented in a tabular format with responses categorized across different factors. Key findings emerge across various dimensions: promotional activities and pricing strategies garner a mixed response, indicating their relevance but not universal influence. The decision-making process is recognized but doesn't heavily sway preferences. There's a clear trend towards acceptance in purchasing behavior, indicating peer influence. Loyalty patterns and consumer engagement are positively viewed, emphasizing brand loyalty and active consumer interaction. Product attributes play a role but may not be the sole determinant. Brand switching patterns suggest a moderate openness to change. Recommendations hold sway, highlighting peer opinions' significance. Overall, while variations exist across factors, college students generally perceive most brand preference elements positively, though individual differences underscore the importance of embracing diverse viewpoints within this demographic.

College-wise perceptions towards brand preference factors concerning laptop computers and smartphones

1. Arts and Science College: The data suggests that students in this college generally have positive perceptions towards most brand preference factors. They show a mixed response towards promotional activities and pricing strategies, indicating their relevance but not sole importance. There's a clear trend

towards acceptance in purchasing behavior, loyalty patterns, and consumer engagement, suggesting a strong influence of peer actions and brand loyalty. Product attributes and recommendations also hold significant sway. Overall, while there are variations across factors, students in Arts and Science College tend to have favorable views towards brand preference elements.

2. Engineering College: Similar to Arts and Science College, students in Engineering College exhibit positive perceptions towards most brand preference factors. They show a balanced response towards promotional activities and pricing strategies, recognizing their significance but not universal influence. There's a notable trend towards acceptance in purchasing behavior, indicating peer influence. Loyalty patterns and consumer engagement are also positively viewed. Product attributes play a role, though they may not be the sole determinant. Brand switching patterns suggest a moderate openness to change. Recommendations hold sway, indicating the importance of peer opinions. Overall, students in Engineering College share similar perceptions with Arts and Science College students, with slight differences in emphasis on certain factors.

3. Education (B.Ed.) College: In contrast to the other colleges, students in Education College exhibit slightly different perceptions towards brand preference factors. While there's still a positive view overall, there's a greater emphasis on acceptance in purchasing behavior and consumer engagement. Loyalty patterns are also viewed positively, indicating the importance of brand loyalty. However, there's a more mixed response towards promotional activities and pricing strategies, suggesting a slightly lower influence of these factors compared to the other colleges. Product attributes still play a role, but recommendations hold less sway compared to the other colleges. Overall, while there are similarities, students in Education College show nuanced differences in their perceptions towards brand preference factors.

Table 6. Overall Responses of college students towards brand preference of laptop computers and smart phone

BRAND PREFERENCE	College Type			Total
	Arts and Science	Engineering	Education (B.Ed.)	
Very Low Response	40 (14.6)	8 (9.9)	2 (8.0)	50 (13.2)
Low Response	75 (27.4)	28 (34.6)	8 (32.0)	111 (29.2)
Moderate Response	42 (15.3)	14 (17.3)	6 (24.0)	62 (16.3)
High Response	105 (38.3)	27 (33.3)	9 (36.0)	141 (37.1)
Very High Response	12 (4.4)	4 (4.9)	0 (0.0)	16 (4.2)
Total	274 (100.0)	81 (100.0)	25 (100.0)	380 (100.0)

Source: Primary Data

The table offers a comprehensive overview of college students' collective responses regarding brand preference for laptop computers and smartphones, organized by college type (Arts and Science, Engineering, and Education). Key insights from the data include the prevalence of High and Moderate response levels across all colleges, underscoring a substantial engagement and interest in brand preference for these technological devices. While Arts and Science College exhibits the highest number of High responses, followed closely by Engineering College, Education (B.Ed.) College demonstrates a comparatively lower count in the High category but a relatively higher one in the Moderate category. Nonetheless, there's a consistent pattern of preferences across all colleges, with High and Moderate responses prevailing, indicative of a generally positive attitude towards brand preference for laptops and smartphones among college students, irrespective of their academic background. Although a minority of students express Very Low or Very High attitudes, these extreme responses represent a smaller proportion of the total, suggesting that polarized views on brand preference are less common within this demographic. Overall, the table underscores the optimistic outlook of college students towards brand preference for technological devices, with nuanced variations observed across different college types.

Therefore, the researcher felt that there is no significant variances among the respondents between the factors. The researcher foot forth the null hypothesis as: there is no significant variances among the college students studying in various broad field. Hence, the researcher adopts the one-way ANOVA to identify the level of significance.

Table 7. College students' brand preference of laptop computers and smart phone (ANOVA)

ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.027	2	.014	.010	.990
Within Groups	512.173	377	1.359		
Total	512.200	379			

Source: Primary Data

The analysis of variance (ANOVA) conducted on college students' brand preference for laptop computers and smartphones provides insights into the variation in preferences across different groups. The results indicate that there is minimal variation between the groups, as evidenced by the small F-value (0.010) and the non-significant p-value (0.990) for the between-groups comparison. This suggests that the differences in brand preferences among college students across different groups (such as Arts and Science, Engineering, and Education) are not statistically significant. However, within each group, there is considerable variability in brand preferences, as indicated by the relatively large sum of squares within groups (512.173) and the corresponding mean square. This suggests that individual differences within each group play a significant role in shaping brand preferences. Overall, while there may be minor differences in brand preferences among college students from different disciplines, the overall variation is primarily driven by individual differences within each group rather than differences between the groups themselves.

Results

The ANOVA results revealed minimal variation in brand preferences between the different disciplines, indicating consistency in preferences across academic backgrounds. However, within each discipline, there was considerable variability in brand preferences, suggesting the influence of individual factors.

Discussion

The findings suggest that while college students' brand preferences for laptop computers and smartphones are generally consistent across disciplines, marketers should recognize the importance of individual differences within each group. Tailoring marketing strategies to resonate with the specific preferences and needs of college students within each discipline can enhance brand engagement and loyalty.

Conclusion

This study has provided valuable insights into college students' brand preferences for laptop computers and smartphones across various academic disciplines. While the overall findings suggest consistency in preferences across disciplines, with minimal variation between them, there is notable variability within each discipline, highlighting the influence of individual factors. Marketers should recognize the importance of tailoring strategies to resonate with specific preferences and needs within each academic background to enhance brand engagement and loyalty effectively. Moreover, there is a pressing need for further exploration of privacy concerns associated with evolving smartphone technologies, understanding cultural variations in brand preferences, and examining the influence of gender on brand perception. Addressing these research gaps will be crucial for developing more inclusive and targeted marketing strategies that resonate with diverse college student populations. Overall, this study underscores the dynamic nature of consumer behavior in the technology sector and emphasizes the importance of ongoing research to inform evolving marketing practices in an increasingly digitalized world.

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