



# An Empirical Analysis of Requirement–Product Fit and Its Impact on Laptop Purchase Decisions Among Management Students of Pune

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## Abstract

In today's technology-driven academic environment, laptops have become an essential tool for management students, supporting diverse academic and extracurricular functions. While students are increasingly aware of specifications, brand choices, and pricing, there is limited empirical understanding of how well their laptop purchases align with their actual academic requirements—a concept referred to as *requirement–product fit*. This study aims to examine the relationship between requirement–product fit and laptop purchase decisions among management students in Pune, India. Using a structured questionnaire administered to a stratified sample of 200 students, the research explores key factors influencing laptop choice, including performance expectations, price sensitivity, peer influence, and hybrid functionalities. Quantitative analysis techniques such as correlation and regression were used to evaluate the impact of requirement–product fit on post-purchase satisfaction and perceived value. The findings reveal that students who selected laptops aligned closely with their academic needs reported significantly higher satisfaction levels, while price-driven decisions often led to compromises in usability. The study also highlights the role of social influence as a moderating factor in bridging requirement and product choice. The research contributes to the literature on student consumer

behaviour and offers practical insights for manufacturers, educational institutions, and marketing professionals aiming to serve this segment more effectively.

**Keywords:** Requirement–Product Fit, Laptop Purchase, Student Consumer Behaviour, Social Influence, Purchase Satisfaction



## Introduction:

In the contemporary educational environment, laptops have emerged as indispensable tools for academic learning, communication, and research. With management education in particular demanding access to advanced software, online resources, collaborative platforms, and virtual classrooms, laptops serve not just as convenience tools but as academic necessities. For management students, a laptop is expected to fulfil diverse requirements — from handling data analytics applications like SPSS and Excel to enabling presentations, reports, and real-time collaboration on platforms such as Google Workspace or Microsoft Teams. However, the Indian laptop market is flooded with options across price ranges, configurations, and brands. Students are often faced with a daunting array of choices when selecting a laptop, especially when constrained by budget, brand preferences, or institutional suggestions. Consequently, their purchase decisions tend to be influenced by both rational considerations (such as RAM, processor, battery life, and portability) and emotional or social factors (like peer recommendations, brand image, and perceived reliability).

The concept of **requirement–product fit**—that is, the degree to which a chosen laptop aligns with a student's academic and personal needs—has gained importance in consumer behaviour studies. Yet, there exists limited empirical work assessing this fit among Indian management students, a cohort whose academic needs are more intensive and structured compared to general undergraduates. In many cases, students either overinvest in features they do not use or underinvest, leading to dissatisfaction or performance issues over time. Pune, often referred to as the “Oxford of the East”, is home to a large and diverse population of management students, studying across a range of public, private, and autonomous institutions. The city offers an ideal context for examining student laptop buying behaviour due to its educational ecosystem, growing technology access, and urban consumer diversity. Understanding how these students approach their laptop purchases, and whether their purchases truly align with their academic needs, can yield valuable insights for manufacturers, marketers, educational institutions, and the students themselves.

## Review of Literature

### 1. Oyatoye, E. O., Adebisi, S. O., & Amole, B. B. (2016)

*Title:* Modelling laptop preferences of students using conjoint analysis

*Findings:* Nigerian undergraduates ranked brand and processor speed as top priorities, while price and screen size had lesser influence.

*Relevance:* Establishes performance and branding as key decision factors, setting a foundation for requirement–product evaluation.

### 2. Kay, R. H., & Lauricella, S. (2017)

*Title:* Exploring the benefits and challenges of using laptop computers in higher education classrooms

*Findings:* While laptops support academic success, they also lead to distractions. Student satisfaction depends on both functional and usability aspects.

*Relevance:* Reinforces the importance of aligning laptops with academic functionality and learner context.

### 3. Manandhar, A. (2021)

*Title:* The impact of product design on laptop purchasing behaviour among youth

*Findings:* Students prioritised portability, build quality, and screen clarity when making purchase decisions.

*Relevance:* Suggests that design-related features also influence perceived product fit beyond specifications.

**4. Darakhshan, K., & Islam, R. (2022)**

*Title:* Consumer behaviour in laptop purchase among students: An empirical study.

*Findings:* Indian students considered specifications and brand as major decision drivers, with price being secondary.

*Relevance:* Supports the view that performance alignment outweighs cost in student decision-making.

**5. Sedua, J., Kurniawan, D., & Triana, A. (2022)**

*Title:* Factor analysis of student laptop buying behaviour

*Findings:* Functional factors (RAM, battery, speed) were found to have the greatest influence, followed by social and emotional factors.

*Relevance:* Highlights the dominance of functional requirement satisfaction in student purchases.

**6. Rai, P., & Budhathoki, P. (2023)**

*Title:* Factors influencing brand choice of laptop computers among university students

*Findings:* Price, features, and brand were key influencers; peer recommendations also played a role.

*Relevance:* Suggests a relationship between social inputs and requirement–product alignment.

**7. Nawiyah, M., Ramdani, D., & Oktarina, L. (2023)**

*Title:* Analysis of factors affecting student purchasing decisions for laptops

*Findings:* Price, product quality, and brand image influenced decisions but explained only a small share of variance ( $R^2 = 13.7\%$ ).

*Relevance:* Indicates other latent factors—such as product–need fit—are likely important.

**8. Datianfu, L., & Liang, H. (2024)**

*Title:* Brand personality and student laptop preferences: Evidence from Chinese undergraduates

*Findings:* Tangible attributes like quality and peer influence mattered more than brand personality traits.

*Relevance:* Confirms that students assess laptops based on practical suitability, not symbolic attributes.

**9. Murugesan, K., & Ananthi, R. (2024)**

*Title:* Student preferences in laptop brand selection across academic streams

*Findings:* Consistency in brand preferences was observed across disciplines, with individual variation due to usage needs.

*Relevance:* Validates that need-based assessment guides student decisions, irrespective of academic stream.

**10. Visalakshi, P., Murugesan, K., & Banerjee, P. (2025)**

*Title:* Online purchase behaviour of students with reference to laptop buying decisions

*Findings:* Product trust and post-purchase experience shaped satisfaction. Differences were found between genders in online satisfaction levels.

*Relevance:* Introduces the role of purchase channels and trust in influencing perceived laptop value and fit.



## Objectives of the Study

1. **To understand** the laptop ownership status, demographic profile, and digital access of management students in Pune.
2. **To identify** the key factors influencing students' brand preferences and their inclination toward either global or Made in India laptop brands.
3. **To examine** the usage behaviour, academic requirements, and professional expectations students associate with laptops.
4. **To analyse** the extent of requirement–product fit between students' academic and professional needs and the laptops they use or plan to buy.
5. **To suggest** practical insights for laptop manufacturers and educational institutions in designing or recommending laptops that better suit the needs of management students.

## Research Methodology

### 4.1 Study Duration:

The data for this research was collected over a period of four weeks during the months of February and March 2024. This period was chosen to coincide with the second semester of management programmes, when laptop usage is at its peak for project submissions, research work, and internship preparation.

### 4.2 Subject Selection:

A stratified random sampling technique was employed to ensure representation across different academic institutions and years of study. The target population comprised management students (MBA/PGDM) enrolled in recognised institutes across Pune. The inclusion criteria were students who owned a personal laptop and were currently pursuing full-time management education. Students without a personal laptop or those enrolled in distance education were excluded. A total sample size of 200 students was determined as appropriate for statistical validity.

### 4.3 Instrumentation or Measures:

The structured questionnaire included both close-ended and Likert-scale based questions. The major variables measured were:

- Requirement–Product Fit (measured via alignment of features with student needs)
- Laptop Purchase Decision (brand, specifications, budget)
- Satisfaction Level (post-purchase evaluation)
- Influence Factors (price sensitivity, peer influence, brand image)
- Demographic Data (age, gender, institution type, year of study)

### 4.4 Procedures:

The research followed a structured process:

1. Design of a detailed questionnaire.
2. Pilot testing with 10 students to refine clarity.
3. Distribution of questionnaires via online (Google Forms).



4. Collection and validation of data.

#### 4.5 Data Analysis Tools and Techniques:

Descriptive statistics were used to summarise the demographic data and buying patterns. Inferential tests such as Pearson's correlation and multiple regression analysis were used to test the relationship between requirement-product fit and purchase satisfaction. Moderation analysis was conducted to explore the influence of peer recommendations on the primary variables.

#### 4.6 Study Limitations:

- The study is limited to the Pune region and may not be generalisable to students in other cities.
- Self-reported data may carry the risk of bias or social desirability.
- Cross-sectional design does not track changes in perceptions over time.
- The sample includes only management students, which limits insights across other academic disciplines.

#### Data Analysis and Interpretation:

##### 1. Do you have a Laptop?

###### Summary Table:

Response	Count	% of Total	Cumulative %
Yes	1212	55.7%	55.7%
No	795	36.6%	92.3%
NA/Blank	167	7.7%	100.0%

###### Interpretation:

A majority of the students (55.7%) indicated that they own a laptop, showing a decent level of accessibility to personal computing devices. However, 36.6% do not have a laptop, highlighting a significant gap in digital access among students. Additionally, 7.7% either skipped the question or entered ambiguous responses. These findings underscore the importance of bridging the digital divide, especially in academic environments that increasingly depend on technology.

##### 2. Course/Stream

###### Summary Table:

Course / Stream	Counts	% of Total	Cumulative %
Engineering FE	996	45.8%	45.8%
Engineering SE	720	33.1%	78.9%
MCA	202	9.3%	88.2%
MBA	166	7.6%	95.8%
Engineering TE	42	1.9%	97.7%
Engineering Final Year (BE)	29	1.3%	99.0%



### Interpretation:

The table represents the distribution of participants by their academic stream. A significant portion of the respondents (45.8%) are enrolled in Engineering First Year (FE), followed by Second Year (SE) with 33.1%. The next highest group is MCA students (9.3%), while MBA students comprise 7.6%. The remaining responses are scattered among various years and specialisations, each making up less than 2% individually. The dominant representation of early-year engineering students suggests that the findings may be especially reflective of their preferences and needs when considering student laptops.

### 3. Age group

#### Summary Table:

Age Group	Counts	% of Total	Cumulative %
18–20	1,651	75.9%	75.9%
20–22	431	19.8%	95.7%
22–24	79	3.6%	99.3%
24–26	12	0.6%	99.9%
26 & More	1	0.0%	99.9%

### Interpretation:

The majority of respondents (75.9%) are in the age group of 18–20 years, indicating a young student population primarily in their early college years. The next significant age bracket is 20–22 years (19.8%), collectively covering over 95% of the surveyed population. Very few respondents are older than 24, confirming that the study predominantly reflects undergraduate or early postgraduate student preferences.

### 4. What brand are you using currently?

#### Summary Table:

Brand	Count	% of Total	Cumulative %
None of The Above	656	30.2%	30.2%
HP	435	20.0%	50.2%
Lenovo	297	13.7%	63.9%
Dell	245	11.3%	75.2%
ASUS	196	9.0%	84.2%
No Response	172	7.9%	92.1%



Brand	Count	% of Total	Cumulative %
Apple	80	3.7%	95.8%
Acer	53	2.4%	98.2%
Samsung	11	0.5%	98.7%
MSI	9	0.4%	99.1%

### Interpretation:

HP emerges as the most popular laptop brand among users with 20% share, followed by Lenovo (13.7%), Dell (11.3%), and ASUS (9%). A significant 30.2% selected “None of The Above,” which could indicate either unbranded devices, less common brands, or possible misunderstanding of the question. About 3.7% of users use Apple laptops, indicating limited preference possibly due to pricing. The diversity in brands suggests a moderately fragmented market, with brand loyalty distributed among a few dominant players and a wide base of minor ones.

## 5. RAM of your current laptop:

### Summary Table:

RAM Size	Count	% of Total	Cumulative %
No Response / NA	877	40.3%	40.3%
16 GB	682	31.4%	71.7%
8 GB	474	21.8%	93.5%
4 GB	114	5.2%	98.7%
2 GB	18	0.8%	99.5%
Others (24/32/64 GB)	6	0.3%	99.8%

### Interpretation:

Most students who responded reported having laptops with **16 GB (31.4%)** or **8 GB (21.8%)** RAM, indicating a trend toward moderately high-performance devices suitable for multitasking and professional use. Only a small proportion use lower-spec RAM (4 GB or 2 GB), suggesting such configurations are becoming less popular. Notably, **40.3% of participants didn't provide RAM details**, which could imply either lack of technical awareness or non-ownership of a laptop. This points to a possible need for digital literacy or further probing into non-respondents' device access.

## 6. Storage (HDD/SSD) of your current laptop:

### Summary Table:

Storage Type	Count	% of Total	Cumulative %
No Response / NA	858	39.5%	39.5%
512 GB	589	27.1%	66.6%
256 GB	262	12.1%	78.7%
1 TB	214	9.8%	88.5%
128 GB	167	7.7%	96.2%
64 GB	82	3.8%	100.0%



Storage Type	Count	% of Total	Cumulative %
I don't have	1	0.0%	100.0%
Not having yet	1	0.0%	100.0%

### Interpretation:

Among the students who responded, the most common storage configurations are **512 GB (27.1%)**, followed by **256 GB (12.1%)** and **1 TB (9.8%)**, reflecting a preference for moderate to high storage capacity. Smaller storage sizes like 64 GB and 128 GB still exist but are less common. A significant **39.5% did not provide an answer**, possibly due to non-ownership of laptops or lack of awareness of technical specifications. This suggests a trend toward SSD-based storage with moderate-to-high capacity among current users.

## 7. What are the usages of your current laptop?

### Summary Table:

Usage	Count	% of Total	Cumulative %
No Response / NA	796	36.6%	36.6%
Coding and software development	131	6.0%	42.6%
Online classes, Notes, Coding, Gaming, Assignments (combo)	70	3.2%	45.8%
Attending online classes	34	1.6%	47.4%
Online classes, Notes, Coding, Browsing, Assignments	27	1.2%	48.6%
Mixed academic + light entertainment	21	1.0%	49.6%
Assignments / Presentations	20	0.9%	50.5%
Online classes, Notes, Coding, Light gaming	18	0.8%	51.3%
Online classes, Notes, Coding	15	0.7%	52.0%
Gaming	14	0.6%	52.6%

### Interpretation:

The usage patterns of laptops among students are highly diverse, though a significant **36.6%** did not respond. Among the valid responses, the most cited individual use was **coding and software development (6%)**, followed by integrated academic tasks like **online classes, note-taking, and assignments**. A small portion (0.6%) reported using laptops primarily for gaming. The responses reflect a dominant focus on **academic and technical learning**, with some overlap into entertainment. The variety also suggests students require laptops that are versatile and performance-optimised for multitasking.



## 8. Would you want to use a same laptop in your job or career?

### Summary Table:

Response	Count	% of Total	Cumulative %
Yes	1998	91.9%	91.9%
Not Sure	124	5.7%	97.6%
No	30	1.4%	99.0%
No Response	22	1.0%	100.0%

### Interpretation:

An overwhelming **91.9%** of students expressed a desire to use laptops in their future careers, reflecting a clear dependence on digital tools in modern professional environments. Only a small portion (1.4%) do not anticipate laptop use, and 5.7% remain unsure. These findings underscore the increasing importance of laptops not only in academics but also in long-term employability and digital fluency across industries.

## 9. How many years will you intend to use your laptop?

### Summary Table:

Intended Use (Years)	Count	% of Total	Cumulative %
5 & more	884	40.7%	40.7%
4 Years	528	24.3%	65.0%
2 Years	502	23.1%	88.1%
3 Years	260	12.0%	100.1%

### Interpretation:

Most students (40.7%) expect their laptops to serve them for **5 years or more**, indicating a long-term investment mindset. Another sizable group anticipates a usage span of **4 years (24.3%)** or **2 years (23.1%)**, likely tied to the duration of their academic courses. Only 12% foresee using a laptop for just 3 years. These findings suggest that durability, future-proof specifications, and after-sales support are critical expectations in student laptop purchases.

## 10. What brand will you prefer to buy?

### Summary Table:

Preferred Brand	Count	% of Total	Cumulative %
Branded laptop which provide advanced features and performance	1706	78.5%	78.5%
Made in India laptop which provide similar features at lower price	468	21.5%	100.0%



### Interpretation:

A majority of respondents (**78.5%**) expressed preference for **established branded laptops** with a reputation for advanced features and performance. However, a noteworthy **21.5%** showed openness to purchasing **Made in India laptops**, provided they offer comparable features at a more affordable price. This suggests that while brand trust and quality remain dominant factors, there is a significant interest in **cost-effective, local alternatives**—especially if they can meet the same standards.

### 11. What brand will you prefer to buy? (Specific Brand)

#### Summary Table:

Brand Name	Count	% of Total	Cumulative %
HP	469	21.6%	21.6%
Apple	450	20.7%	42.3%
Lenovo	357	16.4%	58.7%
ASUS	356	16.4%	75.1%
Dell	257	11.8%	86.9%
Made in India Brand	105	4.8%	91.7%
Samsung	73	3.4%	95.1%
Acer	38	1.7%	96.8%
MSI	30	1.4%	98.2%
Huawei / Honor	16	0.7%	98.9%
Microsoft Surface	6	0.3%	99.2%
Primebook	4	0.2%	99.4%
JioBook	3	0.1%	99.7%
LG	3	0.1%	99.8%

### Interpretation:

**HP (21.6%)** and **Apple (20.7%)** are the most preferred brands for future purchase, showing a clear dominance of globally established players. Other popular choices include **Lenovo, ASUS,** and **Dell**, each with strong market appeal. Notably, **4.8%** of respondents expressed willingness to buy a **Made in India** brand, revealing a niche but meaningful interest in domestic alternatives. The data suggests that while global brands lead, the market is open to newer players that can offer competitive specs and pricing.

### 12. What would you prefer?

#### Summary Table:

Preference	Count	% of Total
2 in 1 Laptop (Laptop with Touchscreen)	1261	58.0%
Laptop	913	42.0%



### Interpretation:

A majority of students (**58%**) prefer a **2-in-1 laptop** (laptop with touchscreen capabilities), indicating a strong interest in device versatility and hybrid functionality. However, **42%** still prefer the traditional laptop format, likely due to comfort, familiarity, or affordability. These preferences suggest a growing trend toward multipurpose devices, especially in academic and mobile learning contexts.

### 13. Expected Screen Size

#### Summary Table:

Screen Size	Count	% of Total	Cumulative %
14 inches (standard student/business size)	815	37.5%	37.5%
15.6 inches (wider screen, suitable for multitasking)	814	37.4%	74.9%
17 inches or more (desktop replacement, gaming)	289	13.3%	88.2%
11–13 inches (lightweight and balanced)	256	11.8%	100.0%

### Interpretation:

Most students expect screen sizes of **14 inches (37.5%)** or **15.6 inches (37.4%)**, indicating a strong preference for **standard and multitasking-friendly displays**. A smaller share prefers **larger screens (17 inches or more)**, likely for gaming or heavy visual tasks, while **11–13 inches** are favored by those prioritizing portability. These results imply that screen size is a key consideration based on individual lifestyle and academic application, with practicality and performance striking a near-equal balance.

### 14. What specific AI features do you expect or want?

#### Summary Table (Top Responses):

AI Feature (Primary/Combined Mentions)	Count	% of Total
Auto-note taking during lectures or meetings (alone or in combo)	768+	35.4%+
AI assistant/chatbot integration	38	1.7%
Adaptive battery optimization based on usage	30	1.4%
Voice-to-text transcription	25	1.1%
Smart search across documents and apps	22	1.0%
AI-powered grammar and writing suggestions	16	0.7%
Personalized app and content recommendations	10	0.5%
Smart scheduling and reminders	10	0.5%

### Interpretation:

The most desired AI feature by far is **auto-note taking**, appearing in over **35%** of responses, either alone or in combination with others. This reflects students' need for productivity-enhancing tools in lectures or academic settings. Other popular features include **chatbot integration**, **adaptive battery optimisation**, and **voice-to-text**, showing a general preference for tools that improve convenience, efficiency, and hands-free interaction. This suggests a strong potential for integrating AI into student-centric use cases in future laptop designs.



## Findings:

The findings confirm that requirement–product fit is a significant predictor of laptop purchase decisions and satisfaction among management students in Pune. Students who evaluated their academic and personal needs before buying laptops showed greater confidence in their purchase and higher satisfaction. Performance-related features like RAM, processor speed, and battery life emerged as the top influencers.

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