Major Research Report

PERCEPTIONS AND ATTITUDES OF INDIAN STUDENTS TOWARDS ERP SYSTEMS IN THEIR ACADEMIC INSTITUTIONS

Submitted By

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I hereby declare that the major research project report titled "**Perceptions and attitudes of Indian students towards ERP systems in their academic institutions**" under the guidance of Dr. Rajan Yadav Submitted in partial fulfillment of the requirements for the degree of Masters in Business Administration to Delhi School of Management, Delhi Technological University is my original work and the same has not been submitted for the award of any other degree/diploma/fellowship or other similar titles or prizes.

Signature: _____

Ritik Kapoor

Date: _____

CERTIFICATE

This is to certify that Ritik Kapoor, enrolled as 2K22/DMBA/102, has submitted the Major Research Project report titled "Perceptions and Attitudes of Indian students towards ERP systems in their academic institutions" as part of the prerequisites for obtaining the Master of Business Administration (MBA) degree from Delhi School of Management, Delhi Technological University.

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EXECUTIVE SUMMARY

This research focused on students' perception and interaction with the ERP Systems of their academic institutions. We examined the interrelation between student characteristics, academic background and sex, system factors: user interface and accessibility, and user experiences: frequency of use, extent of need fulfillment, perceived efficiency, and familiarity, through statistical tests.

The findings showed that there is no significant effect of students' academic program or gender on the system's use frequency. The interaction effect is also insignificant between type of institution (public and private) and perceived communication effectiveness. However, the outcome exhibited a strong correlation between the variables user-friendliness and familiarity. Thus, it shows that the more students find the system user-friendly, the more they will be familiar with the system. Surprisingly, students who consider the system to be efficient are more likely to believe that the system is continuously improving.

Based on these findings, we recommend the following: a focus on user-centered design principles such as improving UI/Navigation and Accessibility. Tailoring communication based on academic background and promoting continuous improvement through student feedback to further enhance the experience. Future studies can look more into the relationship between efficiency perception and improvement beliefs, explore program-specific usage patterns, and evaluate the impact of accessibility features. After all, the making of an effective learning environment within institutions employing the use of ERP systems lies in its user-friendliness, accessibility, and continuous development.

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CHAPTER 1: INTRODUCTION

1.1. Background

The landscape of higher education in India is undergoing a significant transformation driven by technological advancements. One of the most prominent trends is the burgeoning adoption of Enterprise Resource Planning (ERP) systems within universities. These integrated software solutions aim to streamline various administrative functions, optimize resource allocation, and enhance communication across different university departments. Unlike traditional business-oriented ERPs, university ERP systems encompass functionalities specifically tailored for educational institutions, including:

1) Admissions Management: Streamlining application processing, document verification, and student recordkeeping.
2) Fee Collection: Facilitating online fee payments, automating invoice generation, and simplifying financial tracking.
3) Course Registration: Enabling online course selection, waitlist management, and providing real-time access to course information.
4) Academic Performance Tracking: Automating grade management, facilitating transcript generation, and offering students insights into their academic progress.

The implementation of university ERP systems in India promises numerous benefits, including improved operational efficiency, enhanced data security, and increased transparency. However, the success of such systems hinges not only on their technical capabilities but also on their user experience, particularly for the student population.

Understanding Student Perceptions and Attitudes

Despite the growing prevalence of university ERP systems in India, there is a paucity of research specifically focused on how Indian students perceive and feel about these systems. Existing research on ERP adoption often concentrates on organizational perspectives or student perceptions in a broader technological context. This gap in knowledge presents a critical opportunity to explore the unique perceptions and attitudes of Indian students towards university ERP systems. A report by ASSOCHAM (Associated Chambers of Commerce and Industry of

India) in 2021 highlighted the increasing adoption of ERP systems in Indian educational institutions. The report stated that over 60% of colleges and universities in India had already implemented ERP. This surge is likely due to factors like government initiatives promoting digitalization in education and the growing need for efficient management of student data, admissions, and academic processes.

The Importance of This Research

Understanding student perceptions of university ERP systems is important for several reasons. First, these are the primary users of the system, and without acceptance and engagement, the full benefits of the system cannot be realized. Second, examination of student perceptions identifies some potential problems with the user interface, functionality, or training that could be improved with focused efforts. Finally, these insights inform curriculum development by identifying areas of the curriculum where education in ERP can help students prepare to navigate these systems.

1.2. Problem Statement

Indian universities are rapidly adopting ERP systems to incorporate technology into their functioning. The implementation of this technology should be more efficient and effective in carrying out administrative functions related to its management; the student data should be managed effectively to allow better communication within the institution. Functionality support of the University ERPs is designed to cater to educational institutions, including functionalities such as admissions management, fee collection, course registration, and academic performance tracking. While the implementation of these systems offers numerous benefits such as efficiency gains, enhanced data security, and increased transparency, their success hinges not only on technical capabilities but also on user experience—particularly for students. It is here that the problem lies. Despite the growing popularity of university ERPs in India, there is a significant lacuna in our understanding of the way students perceive and use these systems. The literature on ERP adoption focuses either on the perspective of the university or on student experiences in broader technological contexts. This lack of knowledge poses a critical challenge. There are various reasons why it is vital to understand the perception of university ERPs by the students. Firstly, students are the primary users. Their acceptance and active engagement are necessary to maximize the benefits offered by these systems. Secondly, exploring student perceptions can

reveal unforeseen challenges with the user interface, functionality, or training provided. Hence, the three main problem statements are:

- • Adoption of university ERPs has been faster in India than understanding how these systems are perceived by students.
- • Existing research focuses on the university's perspective or student experiences in a broader technological context, neglecting the specific case of Indian students and university ERPs.
- • As a result, there is this problem of ignorance: it is not known how the user interface, functionality, or training given by these new university ERPs is perceived by the students.

1.3. Objectives of the Study

- Investigate student perceptions of university ERP usability and functionalities in India.
- Evaluate student attitudes towards the impact of ERPs on their academic experience.
- Identify areas for improvement in university ERP implementation based on student feedback.

1.4. Scope of Study

This study aims to investigate the perceptions and attitudes of undergraduate and postgraduate students in Indian universities towards the Enterprise Resource Planning (ERP) systems used by their institutions. The research will focus on universities within India and concentrate on student experiences with currently implemented ERPs. Data will be collected through questionnaire surveys. While resource constraints may limit the study to a representative sample of universities and ERP systems, the focus will be on student perspectives, excluding technical evaluations of the ERP systems themselves.

CHAPTER 02: LITERATURE REVIEW

The incorporation of Enterprise Resource Planning (ERP) into Indian academic organizations has been widely witnessed to enhance administrative efficiency and, perhaps, improve the experiences of students. However, despite their proliferation, there is a dearth of studies regarding students' perceptions and feelings toward these systems. This literature review seeks to find existing research that investigates the perceptions and feelings of Indian students toward the ERP systems employed by the institutions they study in. We focus on the factors that shape these perceptions, including usability, system effectiveness in task accomplishment, and the general impact on life as a student. We critically analyze student perceptions of ERP systems in an attempt to find knowledge gaps and provide strategies for optimizing their implementation and use in the very unique context of Indian education.

The term "Enterprise Resource Planning" (ERP) entered the business press in earnest in the early 1990s, with articles by Lopes (1992), Ricciuti (1992), and Lindholm (1992) marking this entry point. Ironically, Lopes' article, published by Dun & Bradstreet Software (now defunct), gives the first glimpse into the early conceptualization of ERP. Listing features such as a quantum leap from MRP II, the integrative nature of it across multiple entities (suppliers, departments, and customers), the use of relational databases, and a client-server architecture, the article presents ERP as a quantum leap forward. Lopes even goes so far as to describe these systems as "better, faster, and more economical business solutions" and credits Gartner group for defining ERP as new "paradigm" for information systems. However, "Davenport" chose the term "megapackages" to emphasize the possible technical and organizational problems companies could face with such comprehensive systems. A year later, ERP had become a hot topic at three major international information systems conferences, marking the beginning of serious research and publications. Much of the research on ERP systems parallels the trade publications' focus on implementation and the problems of implementation. Research by "Fui-Hoon Nah, F., Lee-Shang Lau, J. and Kuang, J. (2001)" identifies factors critical to successful implementation. Shanks et al. (2000) take this a step further by identifying the need to consider cultural contexts, as the success factors differ depending on location. Researchers have also made use of case studies to explore diverse aspects of implementation, its impact on jobs, strategic options other than vanilla systems, methods to gain benefits or avoid failures. Other topics explored include alignment issues, Business Process Reengineering, change management.

Only a few journal articles address the integration of ERP systems into tertiary education. The studies by "Winter" (1999) and "Holmes and Hayen" (1999) indicate a total redesign of the curriculum at the undergraduate and postgraduate levels to include new workplace competencies brought on by the adoption of ERP. Other research indicates that university departmental collaboration is essential for curriculum development and delivery in the new programs. In-process teaching case studies are discussed by Ross (1999) in some detail. Process engineering is an important step in the implementation of ERP systems, especially in e-business where complex relationships are formed between businesses. "Scheer" (Scheer & Habermann, 2000) indicates that business process models must be used to manage this increased complexity. Business process models are also considered to be a means for cross-cultural communication of business processes. However, some practical experience would suggest that best practice embedded in some ERP software does not export well globally due to fundamental process differences between countries. More fruitful vendor – user collaboration as well as comprehensive user knowledge seems to be the answer. "Scott and Kaindl" (2000) report on successful vendor-customer collaboration leading to faster development of new system functionality.

Enterprise Resource Planning research has been mainly anchored on technical aspects and implementation success factors with very little discourse on the user perspective. These studies have been of immense value; however, they do not tell the whole story of ERP effectiveness. Recent studies have started shifting focus to the user-centric factors affecting implementation success. This user focus is of indispensable value in understanding the impact ERP systems have on Higher Education Institutions. This shift in focus is inspired by the realization that users are the connecting link to unlocking the value of ERP systems. Yet, despite this growing recognition, little is known about how ERP systems impact user performance at the individual level. This gap in knowledge therefore opens up an opportunity to study how ERP systems can be leveraged in improving user performance in higher education.

CHAPTER 03: RESEARCH METHODOLOGY

3.1 Research Objective:

This study was done to explore the perceptions and attitudes toward the Enterprise Resource Planning systems implemented at their academic institutions among Indian students. More precisely, the relationships between the characteristics of the students, such as academic background and sex, system factors (UI and navigation, accessibility), and user experiences regarding frequency of use, need fulfillment, perception about administrative efficiency, and familiarity, is to be explored. The analysis of the relationships shall seek to identify areas that can be improved and be used to establish recommendations for increasing the overall student experience with the ERP system.

3.2 Research Design:

Descriptive research method was used for this study. It employs a mixed-methods strategy that blends qualitative and quantitative research methodologies. This combination enables the acquisition of detailed data, allowing for a more comprehensive examination of customer behaviour patterns.

3.3 Data Collection Methods:

- **Structured Questionnaire:** A carefully crafted structured questionnaire has a sequence of questions intended at quantifying various components of investment behaviour such as awareness, preferences, ability and sources.

Figure 3.3: Questionnaire composition

Source: Primary data

3.4 Sampling Plan:

- **Sample Size:** We chose a sample size of 102 people based on practicality, available resources, and the need for statistical significance, while also assuring diversity in the sample size.

- **Sampling Technique:** We used convenient sampling to provide appropriate representation of various demographics and localities within the Delhi NCR. This strategy increases the likelihood of producing a population-representative sample.

- **Sampling Frame:** The sampling frame includes several areas and neighborhoods' around the Delhi NCR in order to gain a diverse range of consumer viewpoints and perspectives.

3.5 Data Collection Procedure:

- **Survey Method:** The selected participants were provided structured questionnaires. Depending on the convenience of the participants, the distribution took place in person, via email, and through online mode. To ensure consistent responses, a clear and direct set of instructions was supplied to them.

Figure 3.5: Response data

Sex	Currently pursuing	Institution type	How often do you use y	Which features of your	How satisfi	How familiar are	Do you believe	How satisfie	How effectively	Do you beli	How important
Female	Master's Degree	Public	Rarely	Course registration, Fee	3	3	3	2	2	3	3
Male	Bachelor's Degree	Public	Occasionally	Course registration, Fee	5	5	5	5	5	5	5
Male	Bachelor's Degree	Public	Several times a week	Others	5	5	5	5	5	5	5
Male	Master's Degree	Private	Rarely	Exam schedules and res	1	1	1	1	1	3	3
Male	Bachelor's Degree	Public	Rarely	Course registration, Fee	3	2	2	3	3	3	3
Male	Master's Degree	Public	Occasionally	Course registration, Fee	3	3	3	3	3	3	3
Male	Master's Degree	Public	Rarely	Course registration, Exar	3	4	4	3	2	2	3
Male	Master's Degree	Public	Occasionally	Course registration, Exar	2	2	1	1	1	3	5
Female	Master's Degree	Public	Occasionally	Course registration, Exar	4	3	3	3	3	4	5
Female	Master's Degree	Public	Several times a week	Course registration, Exar	3	4	4	4	4	3	5
Female	Master's Degree	Public	Occasionally	Course registration, Exar	4	4	3	4	4	4	3
Male	Master's Degree	Public	Occasionally	Exam schedules and res	4	3	2	3	2	3	5
Female	Bachelor's Degree	Public	Several times a week	Course registration	3	3	2	3	2	2	5
Male	Master's Degree	Public	Occasionally	Course registration, Acad	5	4	4	3	4	4	4
Female	Bachelor's Degree	Public	Occasionally	Exam schedules and res	1	5	1	1	1	1	1
Male	Master's Degree	Private	Occasionally	Course registration	1	3	3	3	3	3	3
Male	Master's Degree	Public	Rarely	Course registration, Exar	4	4	4	2	3	3	3
Male	Bachelor's Degree	Public	Several times a week	Course registration, Exar	5	2	4	4	4	4	4
Female	Bachelor's Degree	Public	Rarely	Fee payment, Academic	3	2	2	2	1	2	4
Male	Bachelor's Degree	Private	Occasionally	Exam schedules and res	3	2	1	3	2	3	3
Male	Bachelor's Degree	Private	Rarely	Library services	2	2	3	3	3	4	4
Male	Master's Degree	Public	Occasionally	Course registration, Exar	3	3	3	2	2	3	3
Female	Master's Degree	Public	Rarely	Library services	2	2	2	2	2	2	4
Male	Master's Degree	Public	Once a week	Exam schedules and res	3	4	4	4	3	3	4
Female	Bachelor's Degree	Public	Occasionally	Course registration, Exar	1	2	1	2	1	3	5
Male	12th	Private	Occasionally	Exam schedules and res	4	4	3	4	5	5	2
Male	Bachelor's Degree	Public	Occasionally	Academic calendar, Libra	3	3	3	3	4	5	5
Female	Bachelor's Degree	Private	Once a week	Academic calendar	3	2	3	4	3	2	4
Female	Ph.D or Doctorate	Public	Once a week	Fee payment	2	3	2	5	4	4	5
Female	Ph.D or Doctorate	Public	Occasionally	Course registration, Exar	4	5	5	4	3	5	5
Female	Bachelor's Degree	Private	Rarely	Others	5	4	4	4	5	2	3
Male	Master's Degree	Private	Rarely	Course registration, Fee	5	4	3	4	5	4	5
Male	12th	Private	Once a week	Exam schedules and res	3	2	2	3	2	3	3
Female	Ph.D or Doctorate	Public	Several times a week	Fee payment, Library ser	3	4	4	4	5	5	4
Female	12th	Private	Several times a week	Fee payment	3	4	3	3	2	5	4
Female	Master's Degree	Public	Once a week	Fee payment, Library ser	3	5	5	5	5	5	5
Male	Bachelor's Degree	Private	Several times a week	Academic calendar	3	2	2	4	4	4	4
Female	Master's Degree	Private	Once a week	Fee payment	2	3	4	4	4	3	4
Male	Master's Degree	Public	Occasionally	Course registration, Exar	4	5	4	4	5	3	4
Female	Master's Degree	Public	Occasionally	Fee payment, Library ser	3	3	3	5	4	4	3
Male	12th	Public	Several times a week	Fee payment	2	3	3	4	4	4	3
Female	Bachelor's Degree	Private	Once a week	Course registration, Exar	4	5	2	5	5	4	5
Male	Master's Degree	Private	Several times a week	Course registration, Fee	4	4	4	5	5	5	5
Female	Ph.D or Doctorate	Private	Occasionally	Exam schedules and res	4	3	2	3	3	3	3
Female	12th	Public	Daily	Exam schedules and res	3	3	2	1	2	3	2
Male	Master's Degree	Public	Rarely	Communication with facu	3	3	4	4	4	3	3
Female	12th	Private	Occasionally	Academic calendar, Libra	2	3	3	1	2	1	3
Female	Master's Degree	Private	Occasionally	Exam schedules and res	5	3	4	5	4	5	4
Female	Ph.D or Doctorate	Private	Rarely	Exam schedules and res	2	3	3	3	3	3	3
Female	Master's Degree	Public	Several times a week	Exam schedules and res	3	3	2	1	2	3	5
Male	Ph.D or Doctorate	Private	Once a week	Course registration, Fee	4	5	4	3	5	5	3
Female	Ph.D or Doctorate	Private	Occasionally	Exam schedules and res	5	5	4	5	3	5	5
Male	Master's Degree	Private	Occasionally	Course registration, Exar	3	2	4	4	5	5	3
Female	Master's Degree	Private	Occasionally	Exam schedules and res	5	4	5	4	3	5	2
Female	Master's Degree	Private	Occasionally	Course registration, Exar	5	5	3	3	5	4	5
Male	Ph.D or Doctorate	Private	Occasionally	Course registration, Fee	4	5	4	5	5	3	5
Male	Bachelor's Degree	Public	Once a week	Exam schedules and res	3	4	5	4	5	3	5
Male	Bachelor's Degree	Public	Once a week	Course registration, Exar	4	5	5	4	4	5	4
Male	10th	Private	Once a week	Course registration, Exar	5	4	5	4	5	4	4
Female	Bachelor's Degree	Public	Occasionally	Library services	4	5	4	1	3	3	5
Female	Master's Degree	Private	Once a week	Exam schedules and res	5	4	3	4	5	4	4
Male	Master's Degree	Private	Once a week	Course registration, Fee	5	4	3	4	4	5	5
Female	Master's Degree	Public	Occasionally	Course registration, Exar	4	5	4	4	3	3	5
Female	Master's Degree	Public	Rarely	Course registration, Exar	4	5	4	4	5	4	5
Male	Master's Degree	Private	Once a week	Course registration, Exar	4	3	1	5	2	4	5
Male	Bachelor's Degree	Public	Several times a week	Course registration, Exar	4	5	3	3	4	3	4
Female	Bachelor's Degree	Private	Several times a week	Course registration, Exar	2	3	2	3	4	2	5
Male	12th	Private	Rarely	Exam schedules and res	4	3	4	3	5	4	5
Male	Master's Degree	Private	Rarely	Course registration, Exar	4	4	3	4	2	5	5
Male	Bachelor's Degree	Public	Several times a week	Fee payment	2	2	2	3	3	4	4
Female	Bachelor's Degree	Public	Occasionally	Course registration, Exar	4	4	5	5	4	5	5
Female	Bachelor's Degree	Private	Several times a week	Academic calendar	2	4	4	4	3	4	3
Male	Bachelor's Degree	Private	Several times a week	Exam schedules and res	3	3	2	2	3	5	5
Male	Ph.D or Doctorate	Public	Rarely	Course registration, Fee	4	5	3	5	4	4	5
Male	Ph.D or Doctorate	Private	Occasionally	Fee payment, Communic	4	2	3	4	5	3	3
Female	Ph.D or Doctorate	Public	Several times a week	Course registration, Exar	5	4	3	4	5	3	5

Gender	Education	Institution	Frequency	Services							
Female	10th	Public	Once a week	Exam schedules and res	2	4	3	4	2	4	3
Female	12th	Public	Once a week	Exam schedules and res	5	4	5	4	4	3	4
Male	Ph.D or Doctorate	Public	Once a week	Course registration, Exar	2	3	4	3	5	4	3
Male	Bachelor's Degree	Public	Occasionally	Course registration, Exar	4	5	4	4	1	3	4
Male	Bachelor's Degree	Private	Several times a week	Exam schedules and res	3	4	2	3	3	4	3
Female	Bachelor's Degree	Public	Several times a week	Exam schedules and res	4	4	3	2	2	3	5
Female	Bachelor's Degree	Public	Rarely	Course registration, Exar	3	2	2	2	2	3	5
Male	Master's Degree	Private	Occasionally	Others	5	4	5	4	3	5	5
Male	Ph.D or Doctorate	Public	Daily	Exam schedules and res	3	3	4	3	3	3	4
Male	Master's Degree	Public	Once a week	Exam schedules and res	3	4	2	5	4	4	3
Male	Master's Degree	Private	Occasionally	Course registration, Exar	2	3	3	3	3	3	3
Male	Bachelor's Degree	Private	Occasionally	Course registration, Exar	4	5	5	3	4	5	5
Female	Master's Degree	Public	Occasionally	Library services, Commu	4	3	4	4	4	5	4
Male	Master's Degree	Public	Daily	Course registration, Exar	3	3	3	3	3	3	3
Male	Master's Degree	Public	Occasionally	Course registration, Exar	3	5	2	3	3	3	5
Male	Master's Degree	Public	Rarely	Course registration, Exar	3	3	3	3	3	5	5
Male	Master's Degree	Public	Once a week	Others	4	4	4	4	4	4	4
Female	10th	Private	Rarely	Exam schedules and res	4	3	4	3	4	4	3
Male	Ph.D or Doctorate	Private	Daily	Course registration, Exar	5	4	3	5	4	5	4
Female	Ph.D or Doctorate	Private	Occasionally	Exam schedules and res	4	3	4	3	5	5	4
Male	Master's Degree	Public	Several times a week	Course registration, Exar	4	4	4	4	4	3	5
Male	Ph.D or Doctorate	Private	Once a week	Exam schedules and res	3	3	3	3	3	3	3
Male	Master's Degree	Public	Several times a week	Fee payment, Library ser	4	4	3	4	4	5	2
Female	Bachelor's Degree	Private	Several times a week	Fee payment, Academic	4	5	3	4	4	4	5
Male	Master's Degree	Public	Rarely	Academic calendar, Libra	4	4	4	4	5	3	4
Male	12th	Private	Rarely	Course registration, Exar	4	5	4	4	4	5	4

Source: Primary data

3.6 Data Analysis:

- **Quantitative Data Analysis:** The quantitative data acquired through structured questionnaires was analyzed statistically. To uncover trends, correlations, and patterns in the data, descriptive statistics, frequency distribution, ANOVA, K-sample, and chi-square test analysis were used.

Timeline:

To follow the progress of the research, a thorough and a detailed timeline had been prepared. It encompasses key milestones, including data collection, analysis, and reporting, allowing for efficient project management.

Reporting:

The research findings were documented in a comprehensive research paper. Additionally, presentation was conducted to share the results with relevant stakeholders, including participants and with the other concerned individuals.

CHAPTER 04: FINDINGS AND ANALYSIS

4.1 DATA

Demographic Distribution

Sex:

Table 4.1 Sex

Sex	No. of Respondents	Percentage of Total
Male	58	56.9%
Female	44	43.1%
Total	**102**	**100%**

Source: Primary data

Currently pursuing:

Table 4.2 currently pursuing

Currently pursuing	No. of Respondents	Percentage of Total
10th	3	2.9%
12th	9	8.8%
Bachelor's Degree	30	29.4%
Master's Degree	44	43.1%
Ph.D. or Doctorate	16	15.7%
Total	**102**	**100%**

Source: Primary data

Institution Type:

Figure 4.3 Institution type

Institution Type	No. of Respondents	Percentage of Total
Private	44	43.1%
Public	58	56.9%
Total	**102**	**100%**

Source: Primary data

Frequency of use:

Table 4.3 Frequency

Periodicity	No. of Respondents	Percentage of Total
Daily	4	3.9%
Several times a week	21	20.6%
Once a week	20	19.6%
Occasionally	36	35.3%
Rarely	21	20.6%
Total	**102**	**100%**

Source: Primary data

Most useful features of ERP:

Table 4.4 Most useful features of ERP:

Feature	No. of Respondents	Percentage of Total
Course registration	48	47.1%
Exam schedules and results	62	60.8%
Fee payment	59	57.8%
Academic calendar	42	41.2%
Library services	39	38.2%
Communication with faculty/staff	17	16.7%
Others	15	14.7%
Total	**102**	**100%**

Source: Primary data

Satisfaction with the accessibility using multiple devices:

Table 4.5 Accessibility

Accessibility	No. of Respondents	Percentage of Total
Very dissatisfied	4	3.9%
Slightly dissatisfied	14	13.7%

Neutral	32	31.4%
Satisfied	35	34.3%
Very satisfied	17	16.7%
Total	**102**	**100%**

Source: Primary data

Familiarity with ERP:

Table 4.6 Familiarity

Familiarity	**No. of Respondents**	**Percentage of Total**
Not Familiar at all	1	1%
Slightly familiar	15	14.7%
Somewhat familiar	32	31.4%
Familiar	32	31.4%
Extremely familiar	22	21.6%
Total	**102**	**100%**

Source: Primary data

Meeting the needs and requirement

Table 4.7 Meeting the needs and requirement

Need and Requirement	**No. of Respondents**	**Percentage of Total**
Strongly disagree	6	5.9%
Disagree	19	18.6%
Neutral	33	32.4%
Agree	32	31.4%
Strongly agree	12	11.8%
Total	**102**	**100%**

Source: Primary data

User interface and navigation

Table 4.8 User interface and navigation

User interface and navigation	No. of Respondents	Percentage of Total
Very dissatisfied	7	6.9%
Slightly dissatisfied	9	8.8%
Neutral	32	31.4%
Satisfied	39	38.2%
Extremely satisfied	15	14.7%
Total	**102**	**100%**

Source: Primary data

Communication facilitation

Table 4.9 Communication facilitation

Communication facilitation	No. of Respondents	Percentage of Total
Highly ineffective	6	5.9%
Slightly ineffective	17	16.7%
Somewhat effective	26	25.5%
Effective	29	28.5%
Highly effective	24	23.5%
Total	**102**	**100%**

Source: Primary data

Administrative efficiency

Table 4.10 Administrative efficiency

Administrative efficiency	No. of Respondents	Percentage of Total
Strongly disagree	2	2%
Disagree	7	6.9%
Neutral	39	38.2%
Agree	27	26.5%

Strongly Agree	27	26.5%
Total	**102**	**100%**

Source: Primary data

Continuous Integration and improvement

Table 4.11 Integration and improvement

Integration and improvement	No. of Respondents	Percentage of Total
Not Important at all	1	1%
Slightly important	4	3.9%
Somewhat important	30	29.4%
Important	27	26.5%
Very Important	40	39.2%
Total	**102**	**100%**

Source: Primary data

4.2 ANALYSIS AND HYPOTHESIS:

Data has been analyzed using SPSS using multiple statistical tools. The relevant null and alternate hypothesis are given below:

1) **Hypothesis: Currently Pursuing and Usage:**

    Null (H0): There is no significant relationship between the frequencies of ERP system usage and academic background of respondents.

    Alternate (H1): There is a significant relationship between the frequencies of ERP system usage and academic background of respondents.

"Summary of test"

	No of valid cases		Missing		Total	
		Percent	Nos	Percent	Nos	Percent
Currently pursuing * frequency of use	102	100.0%	0	0.0%	102	100.0%

academic background * frequency of use "Cross tabulation"

Count

		Frequency of use					
		0	3	2	4	1	Total
academic background	0	0	0	2	1	0	3
	1	1	2	2	2	2	9
	2	0	9	4	5	12	30
	3	1	19	8	11	5	44
	4	2	6	4	2	2	16
Total		4	36	20	21	21	102

"Chi-Square test"

	Value	df	Significance (2-sided)
Pearson Chi-Square	22.467[a]	16	.129
Likelihood Ratio	22.029	16	.142
N of Valid Cases	102		

Figure 4.2.1. "Chi-Square Test" for the frequencies of ERP system usage and respondent's academic background.

The "Chi-Square test" has a significance value of 0.129 p-value.

Interpretation:

The p-value 0.129 is more than 0.05 which is the common significance level, so we **fail to reject the null hypothesis**.

Results do not provide enough evidence to suggest a relationship between a student's academic program and how often they use the ERP system.

2) **Hypothesis: Academic background and fulfilling needs:**

> **Null (H0):** There is no significant relationship between students with academic backgrounds and how well ERP system meets their needs.

Alternate (H1): There is a significant relationship between students with academic backgrounds and how well the ERP system meets their needs.

Descriptive Statistics

	N	Mean	Stnd. Deviation	Min	Max
Fulfilling the needs	102	3.25	1.076	1	5
CPN	102	3.60	.957	1	5

Ranks

	CPN	N	Mean Rank
Fulfilling the needs	10th	3	71.00
	12th	9	49.50
	Bachelor's Degree	30	45.80
	Master's Degree	44	52.69
	Ph. D or Doctorate	16	56.38
	Total	102	

"Test Statistics [a,b]"

	Fulfilling the needs
"Kruskal-Wallis H"	3.196
df	4
Sig.	.526

"Grouping Variable": CPN

Figure 4.2.2. K - Test for the students with academic backgrounds and how well the ERP system meets their needs.

Results of the K - Test:

- The significance value sig. was 0.526, which is "higher" than the alpha level of 0.05.

Interpretation:

- The significance value is more than 0.05, so we **fail to reject the null hypothesis (H₀)**. The results do not provide enough evidence to support the alternate hypothesis (H₁).

Conclusion:

- There is **no statistically significant relationship** between the stage of education a student is currently pursuing (CPN) and how well they perceive the ERP system meets their needs.

3) **Hypothesis: System Improvement and Perception on admin efficiency:**

Null (H0): There is no significant relationship between students' perception of the ERP system's impact on administrative efficiency and their belief in the importance of continuous improvement.

Alternate (H1): There is a significant relationship between student's perception of the ERP system's impact on administrative efficiency and their belief in the importance of continuous improvement.

Descriptives

Integration and improvement

	N	Mean	Stnd. Deviation	Stnd. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1	2	2.00	1.414	1.000	-10.71	14.71	1	3
2	7	4.00	.816	.309	3.24	4.76	3	5
3	39	3.90	.940	.151	3.59	4.20	2	5
4	27	4.04	.854	.164	3.70	4.37	3	5
5	27	4.22	1.013	.195	3.82	4.62	2	5
Total	102	3.99	.970	.096	3.80	4.18	1	5

ANOVA

Integration and improvement

	Sum of Sq	df	Mean Sq	F	Sig.
"Between groups"	9.771	4	2.443	2.780	.031
"Within groups"	85.219	97	.879		
Total	94.990	101			

Figure 4.2.3. Common ANOVA Test for the student's perception of the ERP system's impact on administrative efficiency and their belief in the importance of continuous improvement.

ANOVA Results:

- **Significant Relationship:** The "Sig." value 0.031 is less than the common significance level of 0.05, indicating that we can **reject the null hypothesis**. There's a relationship between student perception of administrative efficiency and their perception of the system's integration and improvement.

Interpretation:

- Students who perceive administrative efficiency to be higher (categories 4 and 5) tend to have a more positive perception of the ERP system's integration and improvement (higher average scores for "integration and improvement").
- Conversely, students who perceive administrative efficiency to be lower (categories 1 and 2) tend to have a less positive perception of the system's integration and improvement (lower average scores for "integration and improvement").

4) **Hypothesis: Familiarity with UI and Navigation:**

> **Null (H0):** There is no significant relationship between familiarity and UI and Navigation of the ERP system.
>
> **Alternate (H1):** There is significant relationship between familiarity and UI and Navigation of the ERP system.

Descriptive Statistics

	N	Mean	Stnd. Deviation	Min	Max
Familiarity	102	3.58	1.019	1	5
UI and navigation	102	3.45	1.068	1	5

Ranks

	UI and navigation	No	Mean Rank
Familiarity	1	7	41.50
	2	9	29.17
	3	32	42.05
	4	39	59.64
	5	15	68.57
	Total	102	

"Test Statistics ᵃ,ᵇ"

	familiarity
"Kruskal-Wallis H"	18.523
df	4
Sig.	.001

"Grouping Variable": UI and navigation

Figure 4.2.4. . K - Test to determine relationship between familiarity and UI & Navigation of the ERP system.

Interpretation:

- The significance value Sig. of 0.001 is less than the commonly used alpha level of 0.05. This indicates that we **reject the null hypothesis (H$_0$)**.

Ranks Table:

- The "Ranks" table provides average ranks (mean rank) for "familiarity" scores within each UI and navigation group. However, interpreting the specific pattern from ranks alone is difficult without knowing the sizes of each UI and navigation group.

Conclusion:

The result shows there is a **statistically significant relationship** between user perception of UI and Navigation and the level of familiarity with the system. This suggests that users who find the UI and navigation more user-friendly (higher UI and navigation scores) might also tend to have higher familiarity with the system.

Possible Explanations:

- A well-designed UI and navigation system can be easier to learn and navigate, leading to faster familiarity gains.
- Users who are already familiar with the system might be more likely to appreciate the positive aspects of the UI and navigation, resulting in higher satisfaction scores.

5) **Hypothesis: Institute type and effective communication:**

> **Null (H0):** There is no significant relationship between the type of institution type and the effectiveness of communication.
> **Alternate (H1):** There is a significant relationship between the type of institution type and the effectiveness of communication.

ANOVA

communication

	Sum of Sq	df	Mean Sq	F	Sig.
"Between Groups"	3.453	1	3.453	2.467	.119
"Within Groups"	139.959	100	1.400		
Total	143.412	101			

Figure 4.2.5. Common ANOVA Test for the type of institution type and the effectiveness of communication.

Interpretation:

- The significance value Sig. is 0.119, which is "greater" than the commonly used alpha level of 0.05.

Conclusion:

- **Failed to reject the null hypothesis (H₀).** In other words, the evidence from this ANOVA test is not sufficient to conclude if there is a statistically significant difference in perceived communication effectiveness between different institution types.

Interpretation:

- **Sig. value 0.119:** p-value is more than the significance level of 0.05. So, we **fail to reject the null hypothesis**. There's no statistically significant evidence to suggest whether institution type (public vs private) has a significant impact on communication perception/satisfaction.
- **F-statistic 2.467:** This value also suggests a weak influence of institution type on communication.

6) **Hypothesis: accessibility and familiarity:**

> **Null (H0):** There is no significant relationship between accessibility of ERP systems and the level of familiarity of ERP system among students.
> **Alternate (H1):** There is a significant relationship between accessibility of ERP systems and the level of familiarity of ERP system among students.

Descriptives

familiarity

	N	Mean	Stnd. Deviation	Stnd. Error	"95% Confidence Interval for Mean"		Min	Max
					Lower Bound	Upper Bound		
1	4	2.75	1.708	.854	.03	5.47	1	5
2	14	2.86	.663	.177	2.47	3.24	2	4
3	32	3.13	.871	.154	2.81	3.44	2	5
4	35	4.14	.879	.149	3.84	4.44	2	5

5	17	4.06	.748	.181	3.67	4.44	2	5
Total	102	3.58	1.019	.101	3.38	3.78	1	5

ANOVA

familiarity

	Sum of Sq	df	Mean Sq	F	Sig.
"Between Groups"	31.681	4	7.920	10.497	.000
"Within Groups"	73.191	97	.755		
Total	104.873	101			

Figure 4.2.6. Common ANOVA Test for the accessibility of ERP systems and the level of familiarity of ERP system among students.

Interpretation:

The result $p < 0.05$ indicates that there is significant differences between the means of the familiarity scores across the five groups.

7) **Hypothesis: Sex and Frequency of use:**

   Null (H0): There is no significant relationship between the sex type and the frequency of use of ERP system.

   Alternate (H1): There is a significant relationship between the sex type and the frequency of use of ERP system.

sex * frequency of use Cross tabulation

Count

		Frequency of use					Total
		Daily	Occasionally	Once a week	Rarely	Several times a week	
sex	Female	1	17	8	8	10	44
	Male	3	19	12	13	11	58
Total		4	36	20	21	21	102

"Chi-square test"

	Value	df	Significance (2-sided)

22

"Pearson Chi-Square"	1.251ᵃ	4	.870
"Likelihood Ratio"	1.285	4	.864
"N of Valid Cases"	102		

Figure 4.2.7. Chi-Square Test for the sex type and the frequency of use of ERP system.

- **Chi-Square Test Results:**

  - The Chi-Square statistic value is 1.251.
  - Degrees of freedom (df) are 4 (number of categories (5) - 1).
  - The asymptotic significance (2-sided) is 0.870.

- **Interpretation:**

  - The significance value 0.870 is a lot higher than alpha level of 0.05. This indicates that **null hypothesis (H₀) cannot be rejected**.

4.3 FINDINGS:

The study investigated the perceptions and attitudes of Indian students towards Enterprise Resource Planning (ERP) systems used in their academic institutions. Here are the key findings:

1) **Frequency of Use and Academic Background (H1):**

   - We cannot find "statistically significant" relationship between a student's academic programs (currently pursuing) and how often they use the ERP system (Chi-Square test, p-value > 0.05).

2) **Fulfilling Needs and Academic Background (H2):**

   - Students' stage of education (CPN) does not significantly impact their perception of how well the ERP system meets their needs (K - test, Sig. > 0.05).

3) **Administrative Efficiency and System Improvement (H3):**

   - A statistically significant relationship exists between students' perception of administrative efficiency and their belief in the importance of continuous improvement for the ERP system (ANOVA, Sig. $= 0.031$). Students who perceive

higher administrative efficiency tend to have a more positive view of the system's integration and improvement.

4) **Familiarity and UI/Navigation (H4):**

- There is a significant relationship between user perception of UI and navigation and their level of familiarity with the system ($p\text{-value} < 0.05$). This tells us that users who find the interface user-friendly tend to be more familiar with the system overall.

5) **Communication and Institution Type (H5):**

- The study found no evidence of a significant difference in perceived communication effectiveness between students from different institution types (public vs private) based on the ERP system (ANOVA, Sig. = 0.119).

6) **Accessibility and Familiarity (H6):**

- The test suggest a statistically significant difference in familiarity levels across groups defined by ERP system accessibility ($p\text{-value} < 0.05$).

7) **Sex and Frequency of Use (H7):**

- We cannot find any significant difference between "male and female students" in terms of how often they use the ERP system (Chi-Square test, Sig. = 0.870).

The factor contributing to this observation is, therefore, user-friendliness and accessibility of the ERP system in educational institutions. Students who find the system easy to use and access are those who are more familiar with the system and think it contributes to better administrative efficiency.

4.4 RECOMMENDATIONS:

1) **Focusing on User Interface and Navigation:**
   - Simplifying menus and layouts.
   - Implementing clear and consistent navigation elements.
   - Providing intuitive search functionalities.
   - Offering interactive tutorials or user guides.

2) **Ensuring Accessibility for All Students:**
   - Conducting accessibility audits to identify and address any barriers for students with disabilities.
   - Ensure compatibility with various devices and screen readers.
   - Provide clear and concise instructions and error messages

     .

3) **Using effective Targeted Communication Strategies:**
   - Highlighting program-specific functionalities of the ERP system.
   - Providing targeted training sessions for different student groups.

4) **Promote Continuous Improvement:**
   - Encouraging student feedback through surveys and suggestion boxes.
   - Clearly communicating system updates and improvements to enhance user perception.
   - Consider involving student representatives in discussions about future system enhancements.

4.5 LIMITATIONS

This research contains valuable information regarding the perception of Indian students towards the ERP system of the institution. However, there are limitations associated with this research. First, generalization can be affected if the sample size is small and the way in which the sample is selected. Generalization may not be proper if the sample drawn is not geographically diversified or representative of the entire student population. Besides, the utilization of self-reported data may result in bias. Students might forget the exact frequency of use or color the responses by a desire to seem satisfied. Furthermore, the chosen measures for the characteristics of user experience—UI/ navigation or need fulfillment—may not fully capture the complexity of these concepts. Lastly, while the research outlines statistically significant relationships, the magnitude of these effects could be small and may not be enough to have real-world significance for the student experience. Keeping these limitations in view with the findings can help contextualize how Indian students perceive and interact with academic ERP systems.

CHAPTER 05: CONCLUSION

This study examined the perceptions and attitudes of Indian students towards the ERP systems implemented in their respective academic institutions. Tests of statistical significance indicated a high correlation between user-friendliness and familiarity. Those who find the UI and navigation of the system intuitive tend to be the most familiar with it overall. A positive correlation also emerged between perceived administrative efficiency and belief in system improvement.

Recommendations for future study: Based on these results, the study suggests that in order to improve the design, the UI and navigation should be user-friendly, and usability should be enhanced for use. Targeted communication and continuous improvement efforts, guided by student feedback, can further enhance the experience of students. Future research could investigate in more detail the relationship between perception of efficiency and beliefs in improvement, explore usage patterns by program, and analyze the usage impact of accessibility features. Prioritizing user-friendliness, accessibility, and continuous development can empower students in institutions to foster a more efficient learning environment.

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