EXPLORATORY CHALLENGES FACED BY RAILWAY PASSENGERS IN THE USAGE OF IRCTC

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Keywords	Abstract
NVIVO, Word Cloud, Text Mining, Exploratory, Railways, IRCTC.	In the Indian railway ecosystem, the Indian Railway Catering and Tourism Corporation (IRCTC) is a crucial organization that provides millions of passengers nationwide with ticketing, catering, and tourism services. The railway industry has seen tremendous change in recent years, driven by changes in customer expectations and technological breakthroughs. The quality of service offered by IRCTC becomes crucial as more and more travelers depend on trains for their transit requirements. The purpose of the current research is to explore the challenges faced by railway passengers in the usage of IRCTC. The technique used in this study is Text mining using the qualitative tool NVIVO 12. The findings of the study indicated that the major challenges faced by Railway passengers in usage of IRCTC are E-ticket error, Tatkal unavailability, Poor customer support, and Portal linking issue. Moderate challenges are seen as Group booking problem, Hidden charges, Slow loading, and Maintenance downtime. Whereas, minor challenges App crash, Payment failure, Refund delays, Seat selection issue, and Language barrier.

1. INTRODUCTION

In India, the vast majority of people use Indian Railways as a means of transportation. In comparison to the 8107 million passengers carried in 2015–16, IR carried 8116 million passengers in 2016–17. Thus, in comparison to 2015-16, the revenue from passengers increased ~by 4.5% (or Rs. 1997 crore)} in 2016-17. Every year since 1950, Indian Railways' market share has grown steadily. Both urban and suburban populations make up Indian Railways' market in general. The trains used for these two

segments are distinct (mail, express, and ordinary trains, for example) and have various coach classes (upper class, second class, and ordinary class). (Yadav, M. K., & Kumar, D. 2019).

A public sector organization directly overseen and controlled by the Ministry of Railways, IRCTC is in charge of overseeing the management of both on-board and off-board catering services in practically every train and railway platform across the Indian Railway network, in addition to tourism-related operations. Indian Railways first handles every aspect of operations, including catering and baggage handling. Indian Railways, however, recognised after years of experience that it needed to have a special catering strategy and a suitable system in place to better meet the needs of all types of passengers. Commuters' grievances, namely regarding the Indian Railways' food services, led to this self-discovery. These grievances are rapidly combining the Indian complaint redressal framework. (Yadav, M. K., & Kumar, D. 2019).

Indian railways have been a popular and favoured mode of transportation since its founding (Patel and Grover, 2010). This is primarily because they have no competition, effectively enjoying a monopoly. Due to technical improvements, Indian Railways began using the IRCTC portal to offer an online e-ticketing system in 2002. This helped to cut down on the amount of time consumers had to wait to book their train tickets. Both those who use the internet from home and those who wait at the reservation counter continue to have network connectivity issues. As technology advanced and high-speed network connectivity became available in 2014, IRCTC introduced IRCTC Rail Connect, a mobile ticket purchasing app that was deemed more comfortable, convenient, and straightforward to use. Over the years, IRCTC's user base has grown significantly, but there haven't been any significant concerns or issues with users' technological challenges. In addition to assisting consumers with booking train tickets, this application makes it easier for users to monitor train status, enquire about PNRs, check train timings, book meals, and more. IRCTC asserts that the payment system is completely safe and that saved data is protected. Naturally, any minor problems were found and fixed promptly (Business Line, 2016; Mithun, 2018; Live Mint, 2020; The Hindu, 2020). Additionally, IRCTC encourages tourism by providing both domestic and international travellers with alluring promotional schemes, tour packages, special trains, and coaches.

2. REVIEW OF LITERATURE

2.1 Sakthipriya, E., et al. (2024)

The purpose of the study is to find out how passengers feel about the services that the Indian Railway Catering and Tourism Corporation (IRCTC) offers at Coimbatore Junction. Passengers identified several areas for improvement, especially in the areas of hygiene and customer service, according to the survey. Resolving these problems is essential to improving overall service quality and optimising operations. The study underscored the significance of consistently observing passenger attitudes and modifying services to satisfy changing demands.

2.2 Castanha, J., et al. (2022)

The goal of the study was to determine the main elements affecting Indian consumers' adoption and sustained use of the IRCTC application, especially in Goa. The study found that the main predictors of users' behavioural intention to adopt and utilise the IRCTC program were perceived trust, performance anticipation, hedonic motivation, and habit. Sixty-five percent of the variance in behavioural intention was explained by the suggested model. IRCTC management can improve the

application with the help of the findings, which will guarantee increased user engagement and long-term adoption.

2.3 Silva, P. F. P. da, & Mendes, J. (2020)

The purpose of the study was to examine how comfortable passengers felt in railway cars while taking noise, temperature, vibration, and available space into account. The study emphasised how crucial comfort and safety are when travelling by train, and Sperling's approach, ISO 2631, and EN 12299 are common criteria for assessing ride comfort over an extended period of time. Further, most recent research concentrated on enhancing passive safety through creative interior design patterns that reduce second-impact injuries after collisions.

2.4 Ranjan, Rajeev Kumar, et al. (2020)

The study's objective was to evaluate the elements that affect Indian Railways passengers' satisfaction, with a particular emphasis on safety protocols, employee education, and train management. According to the study, the cleanliness of the restrooms, the state of the train windows, the cleanliness of the train compartments, and the operation of the fans and air conditioners were the main elements influencing passenger happiness.

2.5 Divya, A. M. (2020)

The study sought to evaluate how satisfied passengers were with Indian Railway services, with a particular emphasis on Madurai City's offerings. Punctuality, cleanliness, facility availability, and safety were all determined to be important variables in determining passenger satisfaction. The state of the restrooms, delays, and inadequate hygiene were among the issues that travellers were found to be unhappy with.

2.6 Anantha Lakshmi, M., and G. Murugesan. (2018)

This study focused on physical infrastructure, train timing, and customer service to uncover service quality deficiencies in Indian Railways. According to the study, passengers' expectations were not fulfilled in several areas, such as the speed of services, punctual train operations, and physical facilities. It implied that to bridge these gaps and raise the calibre of its services, Indian Railways needs to take crucial action.

3. OBJECTIVES OF THE STUDY

(I) To explore the challenges faced by railway passengers in usage of IRCTC.
(II) To give appropriate suggestions to overcome these challenges.

4. RESEARCH METHODOLOGY

Table 1: Research Methodology

Research Design	Qualitative and Exploratory
Research Approach	Inductive Approach
Data Collection Method	Face-to-face interviews
Sample Size	90 Railway Passengers
Location	North Mumbai Region
Sampling Technique	Non-random Convenience Sampling

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Analysis Tool	NVIVO 12
Analysis Technique	Text Mining (Mind Map, Word Frequency, and Word Cloud)

4.1 Data Analysis and Interpretation:

Table 2: Summary table of Challenges faced By Railway passenger in usage of IRCTC

Word	Length	Count	Weighted Percentage (%)
E-ticket error	6	30	9.06
Tatkal unavailability	14	30	9.06
Poor customer support	15	29	8.76
Portal linking issue	13	26	7.85
Group booking problem	12	25	7.55
Hidden charges	13	25	7.55
Slow loading	11	25	7.55
Maintenance downtime	11	22	6.65
App crash	8	20	6.04
Payment failure	14	20	6.04
Refund delay	6	19	5.74
Seat selection issue	13	18	5.44
Language barrier	8	12	3.63

As per table no: 2 the most frequent keywords generated towards exploring Challenges faced by Railway passengers in usage of IRCTC. E-ticket error with 30 counts and a weighted percentage of 9.06, Tatkal unavailability with 30 counts and a weighted percentage of 9.06, Poor customer support with 29 counts and a weighted percentage of 8.76, Portal linking issue with 26 counts and a weighted percentage of 7.85, Group booking problem with 25 counts and a weighted percentage of 7.55, Hidden charges with 25 counts and a weighted percentage of 7.55, Slow loading with 25 counts and a weighted percentage of 7.55, Maintenance downtime with 22 counts and a weighted percentage of 6.65, App crash with 20 counts and a weighted percentage of 6.04, Payment failure with 20 counts and a weighted percentage of 6.04, Refund delay with 19 counts and a weighted percentage of 5.74, Seat selection issue with 18 counts and a weighted percentage of 5.44, and Language barrier with 12 counts and a weighted percentage of 3.63

Figure 1: Word cloud

A word cloud is a graphic representation of text data in which the size of phrases indicates their frequency, with larger words denoting more common keywords. It facilitates swiftly identifying important themes or phrases in a dataset. As per Figure no: 1 it is seen the major challenges faced by Railway passengers in usage of IRCTC are E-ticket error, Tatkal unavailability, Poor customer support, and Portal linking issue. Moderate challenges are seen as Group booking problem, Hidden charges, Slow loading, and Maintenance downtime. Whereas, minor challenges App crash, Payment failure, Refund delay, Seat selection issue, and Language barrier.
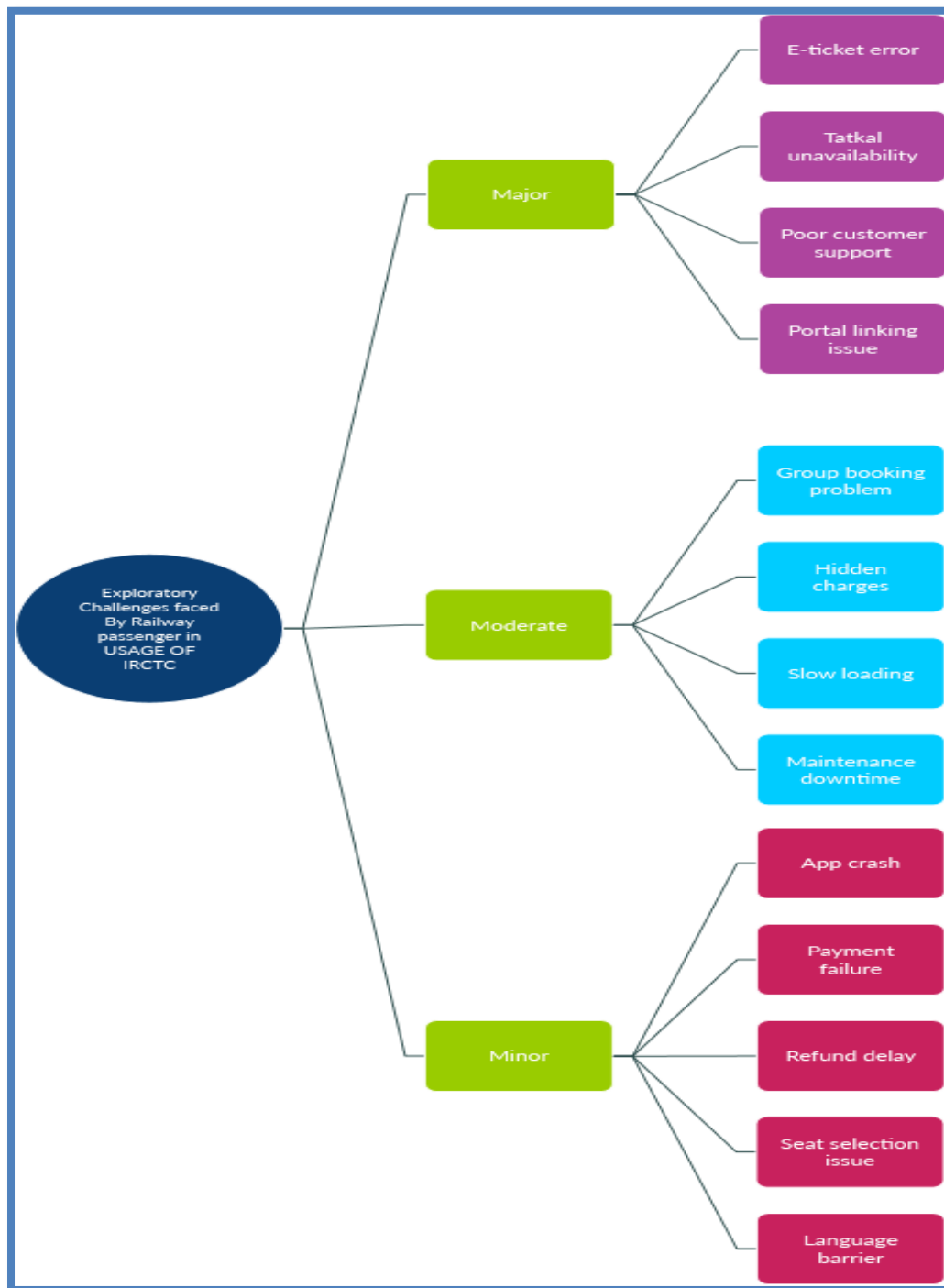

Figure 2: Mind map

As per Figure no: 2 it is seen the major challenges faced by Railway passengers in usage of IRCTC are E-ticket error, Tatkal unavailability, Poor customer support, and Portal linking issues. Moderate challenges are seen as Group booking problem, Hidden charges, Slow loading, and Maintenance downtime. Whereas, minor challenges App crash, Payment failure, Refund delays, Seat selection issue, and Language barrier.

5. CONCLUSION

According to the analysis, using IRCTC creates a lot of challenges for railway passengers, starting with inefficient service to technical issues. Major issues including e-ticket errors, tatkal unavailability, poor customer service, and portal connecting issues have a significant negative influence on the user experience. Moderate problems including difficult group reservations, hidden costs, slow loading times, and maintenance interruptions exacerbate passenger annoyance. It is more difficult to use the service smoothly when there are minor issues like app crashes, unsuccessful payments, delayed refunds, trouble selecting a seat, and language limits. Resolving these problems is necessary to increase the overall efficacy and user happiness of IRCTC services.

6. SUGGESTION

Several improvements can be made to solve the challenges that train passengers have when using IRCTC. Simplifying the platform and expanding server capacity can reduce technical difficulties, slow loading times, and portal connection issues. The effectiveness of Tatkal booking can be raised with improved slot allocation and AI-based queue management. Customer service will be more user-friendly if chatbots, 24/7 multilingual assistance, and speedier question resolution are implemented. A more dependable payment system that enables quicker refunds and integrates easily can decrease transaction failures. Clear pricing and a more understandable presentation of all service costs will ease worries about hidden costs. Using a dedicated interface to streamline group reservations and reduce maintenance downtime during busy hours will further improve accessibility. The platform will also be easier to use with real-time seat selection options, frequent app updates to avoid crashes, and increased language support. By taking these steps, IRCTC will become more dependable and efficient overall, giving passengers a more seamless booking experience.

7. AUTHOR(S) CONTRIBUTION

The authors agreed to have no connections or engagements with any group or body that provides financial and non-financial assistance for the topics and resources covered in the article.

8. CONFLICT OF INTEREST

The authors declared that no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

9. PLAGIARISM POLICY

The authors declare that any kind of violation of plagiarism, copyright, and ethical matters will be handled by all authors. Journalists and editors are not liable for the aforesaid matters.

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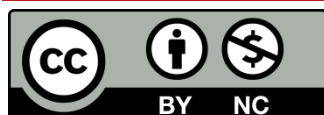
REFERENCES

[1] J Anantha Lakshmi, M., and G. Murugesan. (2018) "Customer Satisfaction on Service Quality in Indian Railway with Reference to Virudhunagar." Journal of Emerging Technologies and Innovative Research, vol. 5, no. 8, 2018, pp. 701-05.

[2] Business Line (2016). IRCTC hacking: Railways claims no leakage of 'sensitive' data. Access on 28 June 2020. Retrieved from https://www.thehindubusinessline.com/economy/i rctc-hacking-railways-claims-no-leakage-ofsensitive-data/article8561744.ece

[3] Castanha, J., Prabhu, M., Kizhakanveatil Bhaskaran Pillai, S., Indrawati, I., & Pimentel, T. D. (2022). Behavior intention to adopt IRCTC application for railway ticket reservation service: A case study of Goan consumers. Journal of Multidisciplinary Academic Tourism, 7(2), 19–30. https://doi.org/10.31822/jomat.2022-7-2-19

[4] Divya, A. M. (2020). A Study on Passengers Satisfaction towards Indian Railway Services (With Special Reference to Madurai City). Shanlax International Journal of Management, 8(2), 79-84.

[5] Live Mint (2020). Software developer who hacked IRCTC train tickets online caught. Access on 28 June 2020. Retrieved from https://www.livemint.com/news/india/softwaredeveloper-who-hacked-irctc-train-tickets-onlinecaught-11579665921480.html

[6] Patel, A., & Grover, I. (2010). Map-based interaction for inputting in mobile phones. Proceedings of the India HCI 2010 / Interaction Design & International Development 2010 (IHCI), Organized by Indian Institute of Technology Mumbai and British Computer Society, March 2024 2010, pp 60-64. Access on 28 June 2020. Retrieved from https://www.scienceopen.com/hosteddocument? doi=10.14236/ewic/IHCI2010.8

[7] Pirani, S. (2024). Simplifying statistical Decision Making: A Research Scholar's Guide to parametric and Non-Parametric Methods, International Journal of Multidisciplinary Research & Reviews, Vol 03, No. 03, pp. 184-192.

[8] Rajeev Kumar Ranjan, Nitin Thapar, Shoaib Alam Siddiqui & Arun Kant Painoli. (2020)"Assessing the Service Quality Attributes Affecting the Satisfaction of the Northern Railway Passengers: An Empirical Study." Journal of New Business Ventures, vol. 1, no. (1-2), pp. 110-24.

[9] Sakthipriya, E., Sudhakar, K., & Menaka, M. R. (2024). A Study On Passengers Perception Towards IRCTC Services In Coimbatore Junction. Educational Administration: Theory and Practice, 30(5), 10498-10501.

[10] Silva, P. F. P. da, & Mendes, J. (2020). Passengers Comfort Perception and Demands on RailwayVehicles: A Review. 257–270. https://doi.org/10.18502/KEG.V5I6.7039

[11] The Hindu (2020). Man held for 'hacking' in to IRCTC tatkal portal. Access on 28 June 2020. Retrieved from https://www.thehindu.com/news/cities/Visakhapa tnam/man-held-for- hacking-into-irctc-tatkalportal/article30825471.ece

[12] Yadav, M. K., & Kumar, D. (2019). A conceptual study of IRCTC's catering paradigm and passenger satisfaction in Indian railway. Journal of Management Value & Ethics, 11.