# Perception of Passengers about Online Services Offered by Indian Railways with Special Reference to Salem Junction

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## ABSTRACT

The rapid growth of the travel industry requires sophisticated information technologies (ITs) for managing the increasing volume and quality of travel traffic. The emergence of new travel services and products, coupled with a rapid increase in travel demand, has driven the wide-scale adoption of ITs in general, and in particular, the Internet as an electronic intermediary. In other words, the Internet serves as a new communication and distribution channel for e-travelers and suppliers of travel services and products. The researcher has emphasized the perception of passengers about online services offered by Indian railways. A finding of the study reveals that the respondents feel online is very useful to buy a ticket and it is very easy to learn. The study suggests that the Indian Railway should take necessary steps to reduce the traffic during peak hours and should provide fast retrieval of information to save more time.

*Keywords--* Perception, Online services, Indian Railways, Passengers

## I. INTRODUCTION

Among the various public transportation services, Railways is one of the important modes of transport. The Indian Railways provides services both in onboard and at stations. Indian Railways also provides online services to its passengers.Now a day's online services plays vital role in every field. Online service is nothing but, itis an organization that provides an information service over the Internet. Before the Internet was offered to the general public, online services such as AOL and CompuServe contained a unique mix of databases and resources available via dial-up modems. If e-mail was provided, it could only be sent to members of the same service.After the internet became popular, all the proprietary services provided web access to their content. Online services provide an infrastructure in which subscribers can communicate with one another, either by exchanging e-mail messages or by participating in online conferences (forums). In addition, the service can connect users with an almost unlimited number of third-party information providers. Subscribers can get up-to-date stock quotes, news stories hot off the wire, articles from many magazines and journals, in fact, almost any information that has been put in electronic form.

## II. ONLINE SERVICES OF INDIAN RAILWAYS

Indian Railway is becoming technologically advanced and the fact that people can book their tickets online confirms the statement. Today, a person can book tickets and can even cancel them online. The people who know how to access internet on computers, can easily get reservation done on the internet itself. Indian Railway Online Booking has certainly changed the system of reservation in India. The finest thing about this service is that one can get reservation done, sitting at home before the computer. Reserved railway Tickets can be booked through the website of Indian Railway Catering and Tourism Corporation Limited, and also through mobile phones and SMS. Tickets booked through this site are categorised into eTickets and iTickets.

People can book their tickets at IRCTC's online reservation site www.irctc.co.in. IRCTC is a subsidiary or the marketing division of Indian Railways. On 3rd August 2002, the system of online reservation was launched in collaboration with the Centre for Railway Information Systems. Earlier, people used to stand in long queues before the counters at the reservation centers, but online ticket booking has made things easier to a great extent.

## III. IMPORTANCE OF THE STUDY

On account of various transportations, many services are available in the world to carry people and goods and the public transportation service provides effective service to the people. Online services have been provided by the railways for the convenience and comfort of the passengers for ticket booking. In this study, the researcher has made an attempt to know the perception of passengers about online services offered by Indian Railways. Reasons for using online services and the problems faced by the passengers were identified.

## IV. STATEMENT OF THE PROBLEM

The queues in front of the ticket counters in railway stations have been drastically increased over the period of time. In order to reduce the rush of daily commuters and to avoid overcrowding at ticket counters, Indian Railways has offered online ticket booking services.Ticket reservation through counter is not sufficient and convenient for the passengers. The passengers are struggling to get tickets in time from ticket counters. So they like to switch over online ticket booking. There are so many services available to book train tickets through online. Hence, the researcher in this study has made an attempt to evaluate the perception of the respondents about online services.

## V. REVIEW OF LITERATURE

**Rust and Kannan (2003)** focused e-service is a customer-centric concept, and thus, the strategic and tactical components of an e-service orientation focus on increasing value defined at the customer level, and at the strategic level, e-service orientation calls for moving the emphasis from products and transactions to service and relationships, and building customer equity. They concluded that firms must take full advantage of net-based e-service opportunities, particularly in the transition of products to services, to garner long-term customer relationships and loyalty.

A study by **Ghoshet al., (2004)** analysed e-service and found that it can be usefully conceptualized as an interactive information service. The study pointed out information provided by or collected from and about customers can be gathered and analyzed by the e-service provider, and used as the basis for the customization of the service that the organization offers to the customer. The study found that the online service experience integrates service delivery and marketing communications, both of which are achieved through exchange of information.

**Jennifer Rowley (2006**) made an attempt to point out recent advances in technology that has created a surge in technology-based self-service or e-service and increasing recognition of its role in differentiation and customer interfaces. The study concluded that to understand e-service experiences, it is necessary to go beyond studies of e-service quality dimensions inherent characteristics of e-service delivery along with the factors differentiate one service experience from another.

**Jamie and Aron (2010)** examined the relationships among e-service quality, consumer satisfaction, attitudes towards the web site and behavioural intentions in the context of content driven web sites. Electronic service, or e-service as it has become more commonly known, is now recognized as one of the key determinants for successful e-business. They suggested that positive evaluations of e-service quality influences positive levels of consumer satisfaction, consumer attitudes towards the web site and behavioural intentions within the specific service context of content-driven professional sports web sites. With the increase of e-service adoption in business field, the importance of measuring and monitoring e-service quality in the virtual world has been recognized.

According to **Sangeetha Sahney et al., (2010),** e-ticketing is widely popularized due to advanced technology, consumer behaviour (both psychographic and demographic) and also of its user-friendliness and computer proficiency. They concluded that techno-know-how people and those who want to avail the related tourism services go for e-ticketing.

**Vijetha S. Shetty (2014)** focused the consumers' perspectives towards IRCTC's e-ticketing services. This study showed that the consumers' perception towards IRCTC e-ticketing services is positive; however there are some glitches which need to be overcome. They concluded that IRCTC can improve by focusing on overcoming technical glitches, enhancing more user friendly interface, with comprehensive plans to tie up with more banks and to offer new services in new areas, constantly innovating in tune with new age websites and providing a positive and enriching customer experience. With the focus on digital inclusion with everyone having access to technology, a new paradigm will be set altogether in which IRCTC will have to strengthen its forte of rail ticketing and operate successfully.

## VI. OBJECTIVES OF THE STUDY

The purpose of this research is to study the perception of passengers about the online services of Indian Railways. Hence, the study is aimed at the following objectives:
1. To evaluate the perception of the respondents about online services.
2. To analyse the reasons for using online services.
3. To identify the problems while using online services.
4. To offer suggestions on the basis of the perception of the respondents.

## VII.    RESEARCH METHODOLOGY

The research design applied for the study is of descriptive nature. A non-probability convenience sampling technique was adopted for selecting the sample size for the research paper. A sample size of 400 respondents was drawn for the study.  The sampling area of the study was Salem junction. Salem Junction railway station is a chief division of Southern Railways and serves 15 districts of Tamil Nadu. The data required for the study were purely primary data collected through the personal survey by preparing structured questionnaires. The secondary data was also used and collected from published articles, text books, Indian Railway websites and magazines. The study was carried out from January 2017 to February 2017.The statistical tools applied for the study for drawing statistical inferences are, descriptive statistics and Chi-square analysis.

## VIII.    DEMOGRAPHIC PROFILE OF THE RESPONDENTS

The demographic characteristics of the respondents such as Age, Gender, Educational Qualification and Occupation were studied with the help of simple percentage analysis.

**TABLE 1**
**CLASSIFICATION OF THE RESPONDENTS BASED ON PERSONAL FACTORS**

| S.No. | Personal Factors | | Frequency | Percentage |
|---|---|---|---|---|
| 1 | **Age** | Below 30 years | 254 | 63.5 |
| | | 30-45 years | 103 | 25.8 |
| | | 45-60 years | 32 | 8.0 |
| | | Above 60 years | 11 | 2.7 |
| 2 | **Gender** | Male | 205 | 51 |
| | | Female | 195 | 49 |
| 3 | **Educational Qualification** | No formal education | 7 | 1.8 |
| | | School level | 54 | 13.5 |
| | | College level | 219 | 54.7 |
| | | Professional qualification | 115 | 28.7 |
| | | Others | 5 | 1.3 |
| 4 | **Occupation** | Private employees | 131 | 32.8 |
| | | Government employees | 113 | 28.2 |
| | | Professional | 60 | 15.0 |
| | | Businessmen | 34 | 8.5 |
| | | Housewives | 60 | 15.0 |
| | | Others | 2 | 0.5 |
| **Total** | | | **400** | **100.00** |

The above table shows the distribution of respondents on the basis of their demographic profile. It is observed from the table, that out of 400 respondents, 205 are male which is 51% and the remaining 195 are female which forms 49% of the sample respondents. It is evident that in the sample surveyed majority of the respondents are male.

It is observed from the age wise classification of the respondents, out of 400 total respondents 63.5% are in the age group of below 30 years, 25.8% fall in the age group of 30-45 years, 8% are between 45-60 years and the remaining 2.7% are above60 years of age. To summarise, maximum respondents are belonging to the age group of below 30 years old.

The educational qualification of the respondents is concerned, 54.7% of them have college level education, 28.7% are professionals, 13.5% have school level education, 1.8% of the respondents has no formal education and considered as illiterates and 1.3% of the respondents belong to other categories such as diploma and other certificate courses. It is understood that the majority of the respondents are having college level education.

As per the occupation wise classification of the respondents, It is observed that out of 400 respondents, 32.8% are Private employees,28.2% are Government employees, 15% are professionals, 15% are housewives, 8.5% are businessmen and the remaining 0.5% belong to other categories such as agriculturists and retired persons. It is clearly known that the majority of the respondents are private sector employees.

## IX.     PERCEPTION OF PASSENGERS ABOUT ONLINE SERVICES

The emergence of the internet in the mid-1990s as well as the development of Intranets and Extranets forced Indian Railways to refocus their strategy on technological innovations in order to enhance their competitiveness. IR identified the online marketing as a major opportunity to tackle distribution costs and to re-engineer the structure of the industry. In this perspective, the perception of passengers about online services is needed to be analysed. Here, the perception is analysed from four aspects, namely measuring usefulness, ease of use, attitude and experience towards online reservation services of Indian Railways.

Respondents were asked to state their perception regarding online reservation services on the five point rating scale. The scale consisted of five point ratings, starting from strongly disagree-1, disagree-2, neutral-3, agree-4 and strongly agree-5. Mean ratings were found for each item.

**TABLE 2**
**PERCEPTION OF THE RESPONDENTS ABOUT ONLINE SERVICES**

| Perception | Factors | Mean | Std. Deviation |
|---|---|---|---|
| Usefulness | Useful to purchase a ticket | 4.39 | 0.64 |
|  | Saves time in purchasing a ticket | 4.31 | 0.76 |
|  | Makes easier to buy a ticket | 4.15 | 0.86 |
|  | Provides information in time | 4.04 | 0.89 |
|  | Reduce the work | 4.15 | 1.04 |
|  | Know the seat availability | 4.19 | 0.89 |
| Ease of use | Easy to learn | 4.20 | 0.71 |
|  | Easy to understand | 4.12 | 0.76 |
|  | Easy to purchase a ticket | 4.18 | 0.85 |
|  | Simple | 4.01 | 0.84 |
|  | Easy to use | 4.07 | 0.85 |
|  | Interaction is clear | 3.96 | 0.89 |
|  | Quick transactions | 3.97 | 0.95 |
| Attitude | It is a good idea to buy a ticket through internet | 4.45 | 0.66 |
|  | I like the idea to get information through internet | 4.29 | 0.71 |
|  | It is pleasant to use | 4.13 | 0.79 |
|  | Using online services is a wise  idea | 4.14 | 0.78 |
|  | Helps to concentrate in some  other work | 4.12 | 0.88 |
| Experience | Buying a ticket through internet is enjoyable | 4.15 | 0.83 |
|  | Interesting | 4.07 | 0.80 |
|  | Joyful activity | 3.90 | 0.91 |
|  | Frustrating | 3.48 | 1.08 |
|  | Waste of time | 2.83 | 1.28 |
|  | Delay in opening of website | 3.64 | 1.03 |
|  | Fear of disconnection during ticket booking | 3.65 | 1.01 |
|  | Too many advertisements make the online booking irritable | 3.64 | 1.03 |
|  | Limited number of seats only can be booked | 3.62 | 1.04 |
|  | Fear of stealing credit/debit card information | 3.60 | 1.04 |

From the above table, it is found that the respondents opine that online services are very useful in various aspects. The mean values of all the statements for usefulness, ease of use and attitude are greater than 4.0which indicate that all the statements are favor to the passengers while they book a ticket by online. In case of experience, it is greater than 2.5which denote all the statements influence the passengers' experience of using e-booking services which are offered by Indian Railways.

In case of Usefulness, the most significant use is 'to purchase a ticket' (4.39), so it is summarised that online services is very useful to purchase a ticket.

In case of Ease of use, the most significant statement is 'easy to learn' (4.20), Hence it is inferred that easy to learn is the most significant factor while availing online services.

In case of attitude, the most significant statement is 'it is a good idea to buy a ticket through internet' (4.45). To conclude, the majority of the passengers feel it is a good idea to buy a ticket through internet.

For perceived experience, the most significant statement is 'buying a ticket through internet is enjoyable' (4.15). It is interpreted that the most significant reason to experience online services is that buying a ticket through internet is enjoyable.

# X.    PERSONAL FACTORS AND OVERALL PERCEPTION ABOUT ONLINE SERVICES

Null Hypothesis: There is no significant association between Personal factors and Overall Perception about online services.

TABLE 3
**CHI-SQUARE TEST FOR PERSONAL FACTORS AND OVERALL PERCEPTION ABOUT ONLINE SERVICES**

| Personal Factors | Level of Perception | Chi-square value | p value | Significance |
|---|---|---|---|---|
| **Gender** | Level of Perceived Usefulness | 9.689 | 0.008** | 1% level of significance |
| | Level of Perceived Ease of Use | 8.000 | 0.018* | 5% level of significance |
| | Level of Perceived Attitude | 11.985 | 0.002** | 1% level of significance |
| | Level of Perceived Experience | 4.536 | 0.104 | Not Significant |
| **Educational Qualification** | Level of Perceived Usefulness | 11.737 | 0.163 | Not Significant |
| | Level of Perceived Ease of Use | 10.902 | 0.207 | Not Significant |
| | Level of Perceived Attitude | 8.302 | 0.405 | Not Significant |
| | Level of Perceived Experience | 9.451 | 0.306 | Not Significant |

The chi-square test is used to find out the significant association between the personal factors such as gender and educational qualification of the respondents and level of overall perception about online services.

In case of gender, the null hypothesis is rejected at5% level of significance for level of perceived ease of use and rejected at 1% level of significance for level of perceived usefulness and level of perceived attitude whereas the null hypothesis is accepted for the level of perceived experience. Hence it is concluded that there is a significant association between the gender of the respondents and level of perceived usefulness, level of perceived attitude and perceived ease of use of online ticket booking. There is no significant association between the gender of the respondents and level of perceived experience.

In case of educational qualification, the null hypothesis is accepted for the level of perceived usefulness, level of perceived attitude, perceived ease of use and level of perceived experience about online

services. Therefore it is concluded that there is no significant association between educational qualification of the respondents and perception about online services.

## XI. REASONS TO USE ONLINE SERVICES OF SOUTHERN RAILWAYS

The IRCTC success story is undoubtedly an inspiration for the entire generation of e-commerce portals in India. However, behind this success story is a firmed up business plan as well as a near flawless execution till the recent past. There is no doubt that online services have revolutionized the travel industry and the passengers feel comfortable to make use of online services. In this table, the reasons why IRCTC became a favorite for passengers is analysed by using Friedman Test.

**TABLE 4**
**FRIEDMAN TEST FOR REASONS TO USE ONLINE SERVICES**

| Reasons | Mean Rank | Chi-square value | p value |
|---|---|---|---|
| Convenient | 3.42 | 259.296 | 0.000** |
| Time saving | 3.18 | | |
| Cost saving | 4.35 | | |
| Buying tickets 24/7 (at any time & from anywhere) | 3.56 | | |
| No long queues | 4.22 | | |
| New technology experience | 4.76 | | |
| Easy access to information | 4.52 | | |

The above table shows the results of Friedman test for reasons to use online services of Indian Railways in the study area. It is identified from the above table, the chi-square value is 259.296 and p value is 0.000 which is less than 0.01 and it is statistically significant at1%. It is concluded that new technology experience is the most significant factor (4.76) which influences the passengers to use online services, followed by easy access to information, cost saving, no long queues, buying tickets 24/7, convenient and time saving is the least influencing factor for the usage of online services in the study area.

## XII. PROBLEMS FACED BY THE RESPONDENTS WHILE USING ONLINE SERVICES

Information Technology plays a vital role not only in a particular field, it provides various kinds of solutions and services to the various problems prevailing in many fields. Indian Railways make use of information technology to the maximum extent. It uses the information technology in an efficient way for providing better passenger services. The online services offered by the Railways need to be improved to satisfy the passengers. Now a day, the customers are technology oriented and would like to do everything through internet, sitting in one place. But, while they use online services, they come up with lot of problems. If the Indian Railways properly assess the problems and inconveniences of the passengers and deliver the service according to their expectation, it will be the most profitable public sector undertaking in India. With this perspective, the Friedman test is used to identify the problems while using online services.

**TABLE 5**
**FRIEDMAN TEST FOR PROBLEMS WHILE USING ONLINE SERVICES**

| Problems | Mean Rank | Chi-square value | p value |
|---|---|---|---|
| Risky to use credit card | 4.32 | | |
| Very busy network | 3.72 | | |

| | | | |
|---|---|---|---|
| Difficulty in cancellation or refund of ticket | 4.73 | | |
| Lack of online payment facility | 4.92 | 289.075 | 0.000** |
| Risk of wrong ticket | 4.87 | | |
| Lack of privacy of personal information | 5.35 | | |
| Do not know how to use | 6.06 | | |
| Complex system | 5.60 | | |
| Expensive | 5.45 | | |

Friedman test is applied for problems faced by the respondents while using online services of Railways and the results are given in the above table. It is stated from the above table, the chi-square value is 289.075 and p value is 0.000 which is less than 0.01 and statistically significant at1%. It is found that the respondents in the study area are facing some problems at the time of using online services which are offered by the Southern Railways. The most significant problem is that they do not know how to use (6.06) and the least significant problem is very busy network (3.72). Hence it is concluded that the flaws in the technology should be eliminated so that the respondents can make use of online services to the full extent.

## XIII.  FINDINGS

➢ Majority of the respondents are male.
➢ Majority of the respondents belong to the age group of below 30 years.
➢ Majority of the respondents are having college level education.
➢ Majority of the respondents are private sector employees.
➢ As per the opinion of the respondents, online services are very useful to purchase a ticket.
➢ While considering the ease of use of online services, easy to learn is the most significant factor.
➢ Majority of the passengers feel it is a good idea to buy a ticket through internet.
➢ Most significant reason to experience online services is that buying a ticket through internet is enjoyable.
➢ There is a significant association between the gender of the respondents and level of perceived usefulness, perceived ease of use and level of overall perceived attitude of the respondents about online services.
➢ There is no significant association between the gender of the respondents and level of perceived experience of the respondents in online services.

➢ There is no significant association between the educational qualification and the level of perceived usefulness, level of ease of use, level of attitude and the level of experience of the respondents in online services.
➢ New technology experience is the most significant factor which influences the passengers to use online services, followed by easy access to information, cost saving, no long queues, buying tickets 24/7, convenient and time saving is the least influencing factor for the usage of online services in the study area.
➢ The most significant problem is that they do not know how to use online ticket booking and the least significant problem is very busy network.

## XIV.  SUGGESTIONS

1. Indian Railways should provide fast retrieval of information to savemore time.
2. Indian Railways may extend the booking facility availability for 24 hours to make it moreconvenient.
3. IRCTC service charges and bank charges should be eliminated.
4. The respondents feel thatonline ticket bookingis a complex system. Thus, efforts should be made to minimize the number of steps in the booking process.
5. Too many banners, animation effects on the home page also distract the mind of the users. So the service providers should provide a single spot for advertisement.
6. Awareness should be created among the general public about online reservation procedures in train services, travel concessions available to passengers etc.,

## XV.  CONCLUSION

With the wide adoption of e-commerce in travel industry, the Internet has become an important travel service delivery channel. Online travel service delivery has grown as a popular direct distribution channel in travel industry.It will reduce the time passengers spend standing

in the line, thus making their journey convenient and hassle free. Indian Railways Catering and Tourism Corporation pioneered internet-based rail ticket booking through its website. The research reveals that online services provided by Indian Railways still need improvements.

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