# The Impact of Chat-Bots on the Banking Experience

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## Abstract

The Indian banking sector plays a crucial role in the economy of our country and is constantly evolving and innovating its services to enable and to serve its customers better and round the clock to the fullest of their capacity. One of the most revolutionizing step in this regard is the introduction and implantation of chatbots that is redefining the banking experience in many ways.

A chatbot is an Artificial Intelligence enabled chat messenger that initiates a conversation with a customer solving their queries related to their banking transactions, payment of bills, providing information on products and services that many premier private and nationalized banks have installed in their websites and mobile applications. This research paper envisages to evaluate through the customers perception and response towards the chatbots their banking experience. The purpose of this research is to identify and analyze the customers' perception on the various aspects of Chatbot services.

## Introduction

The Banking Financial Services and Insurance (BFSI) sector is dynamic and the biggest buyer and adapter of technology. The now widely accepted technology in this sector is "Chatbots" which has already begun to make a mark in the Indian Banking Industry as it provides customers quick and personalized responses facilitating banks in retaining their customers. So, what are chatbots? Chatbot is a programme that stimulates human conversation through text or voice command or both. Chatbots have the capacity to smoothen the interaction between any organization and its user through minimum human interaction. It was first introduced by MIT professor Joseph Weizenbaum in 1960's which was named "ELIZA" and since then it has come a long way. Currently chatbots can be broadly classified into two types Rule based and A.I (Artificial Intelligence Based) while the prior can only respond to pre-defined questions with pre-set answers making them not quite responsive, the latter uses machine learning and can answer much more complicated questions, it can go beyond and can provide a human like interaction with a personalized experience. Another advantage of this kind of chatbot is that it is capable of learning from its user experiences and hence performs better with time, a classic example of it is Alexa.

Adopting a chatbot in a bank can provide various benefits to its user banks in the following ways:

## 1- It helps in Answering the Frequently asked Questions-

Frequently asked questions such as-

• What is my bank account balance?

• What are my last 5 transactions?

• What is the loan interest rates?

Can be conveniently answered by Chatbots hence dedicated customer care personals need not employ their time in answering such questions instead they can spend time on solving more complex issues.

## 2- It assists the Banks Marketing Department

Chatbots can help in formulation of better marketing strategies for banks by timely gathering and analyzing customer feedback. Chatbots can also be programmed in a manner as to facilitate a lead or a potential customer of a banking service to be directed to the salesperson of the bank.

## 3- It facilitates Core Banking Activities

State of the Art chat bots can facilitate banks in conducting core banking activities for instance collection of EMI within the chat window. Furthermore, customers could also apply for a loan, transfer money, pay for bills etc. simply by conversing with the chatbot.

## 4-24*7 Customer Care Support

In these dynamic times serving your customers in a personalized way is key to growth and through Chatbots banks can provide a 24*7 customer care support and hence maintain its competitive edge in the market thereby retaining customers.

## 5- Cost Saving

A report released by Juniper stated that chatbots will be responsible for over $8 billion annual cost savings by 2022. Chatbots facilitate banks to save their cost as they require just a one-time investment which is less costly than employing a dedicated customer care executive's.

## 6- Appropriate for Customer Interactions-

Studies show that customers find phone calls tedious and slow whereas they find emails an impersonal mode of communication. In such a case chatbots provide a speedy and personalized experience demanded by customers.

Given the advantages provided by chatbots various Indian Banks are leveraging through them. The following are the popular chatbots adopted by various Indian Banks-

**HDFC Banks's Eva-**HDFC Banks Eva (Electronic Virtual Assistant) is India's foremost and largest A.I powered banking chatbot. The 2017 launched chatbot facilitates in serving customers better and faster by providing information instantaneously simply by conversing with it. It saves the customers from the pain of browsing, searching clicking buttons and making calls to attain information. In the near future it would also have the capacity of handling banking transactions It has the capacity of conversing with over 20,000 customers in a single day and has already served 5 million queries.

**SBI Bank's SIA-**The largest public sector bank of India SBI also launched its Artificial Intelligence based chatbot SIA (SBI Intelligent Assistant) in 2017 which has the capability to respond to 864 million queries a day that relate to education, home, car and personal loans. This multilingual chatbot can respond in 14 languages in text or speech.

**ICICI Bank's iPal-** ICICI Bank deployed an A.I based chatbot in 2017 named iPal that provides instant solution to all customer queries on the mobile banking application iMobile and its website. It supports all vernacular languages, voice support and Application programming interface with platforms such as Google Assistant, Siri and Facebook Messenger.

## Key Words

Artificial Intelligence, Chatbots, Customer perception, Banking.

## Literature Review

*Ameesha Gupta and Deepti Sharma (2019)*

This research paper probes into the role of customers perception and attitude towards the chatbots in the banking industry. It utilizes the correlation theory and analysis to understand the attitude of customer for the acceptance of chatbots in banking industry. The data was collected through a primary survey wherein 100 people were targeted, out of which 72 responded. Concluding a positive correlation between the attitude and the adoption of chatbots the study has made some suggestions and recommendations regarding the implementation of chatbots in the banking industry of India.

**Objective of the Study**

- To study the impact of chat-bots on the banking experience.
- To understand the perception of the customers on banking chat-bots.
- To evaluate the awareness of the banking chat-bots amongst the respondents.

**Research Methodology**

A descriptive research design was adopted to conduct the study. Data collection was done through primary as well as secondary sources.

Primary data was collected with the help of structured questionnaire directly from the respondents. simple random was the sampling design adopted to conduct the survey. In all 80 respondents were approached with a response rate of 100%.

Secondary data was collected with the help of research papers, articles and reports related to the topic.

**Data Analysis**

Authors conducted a research using the questionnaire methodology and have inferred the following from the data gathered.

The results of the questionnaire provided insight into the minds of our participants and here's what we gathered from the sample.

| Variables | N | % |
|---|---|---|
| **Gender** | | |
| Female | 32 | 40 |
| Male | 48 | 60 |
| **Age** | | |
| 18-25 | 45 | 56 |
| 25-35 | 17 | 21 |
| 35-45 | 6 | 8 |
| 45 & above | 12 | 15 |
| **Employment status** | | |
| Full time employees | 29 | 36 |
| Part time employees | 4 | 5 |
| Student | 46 | 58 |
| Unemployed | 1 | 1 |

1.  When the respondents were asked if they used a mobile banking app or website for their banking queries and transactions?
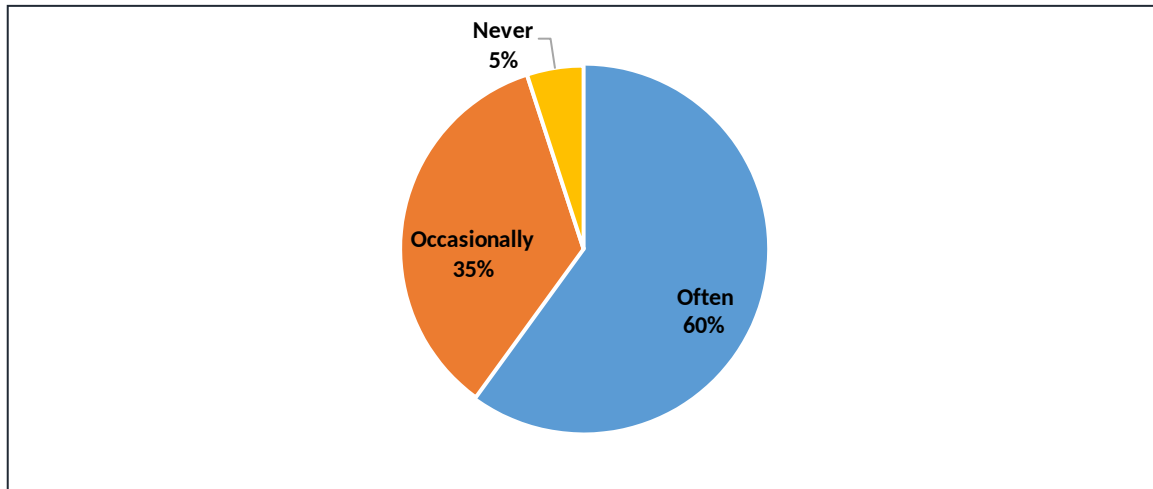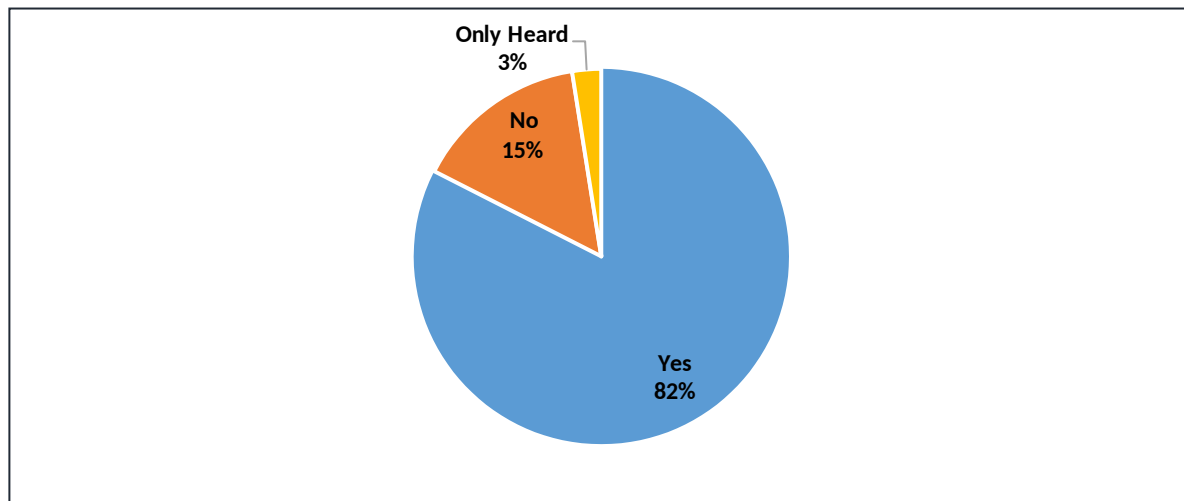


Majority of the respondents that is 48 out of 80 use mobile banking app or website for their banking queries and transactions and hence the scope of chatbots in assisting in the banking experience is wide.

2.  When asked do you find phone calls with a customer service personnel ending up as a frustrating experience?
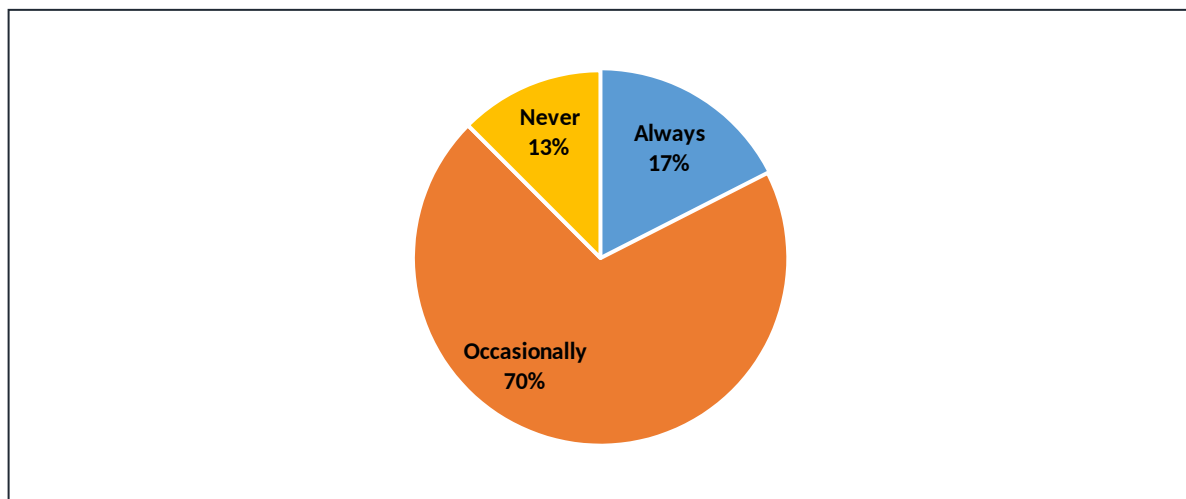


56 out of 80 respondents find phone calls with a customer service personnel ending up as a frustrating experience occasionally while 14 out of 80 respondents find phone calls with a customer service personnel ending up as a frustrating experience always. These high numbers are indicative of the need for a better banking experience.

3. When the respondents were asked are you aware of Chat-Bots? for example EVA of HDFC Bank



66 out of 80 respondents were aware about chat-bots while 12 were not and 2 respondents had only heard about chat-bots. This proves that majority of the respondents were aware about chat-bots and hence the concept of chat-bots is quite popular.

4. Respondents were asked if they had ever tried using Chatbots on a banking website? such as HDFC bank's Eva, ICICI banks IPAL?
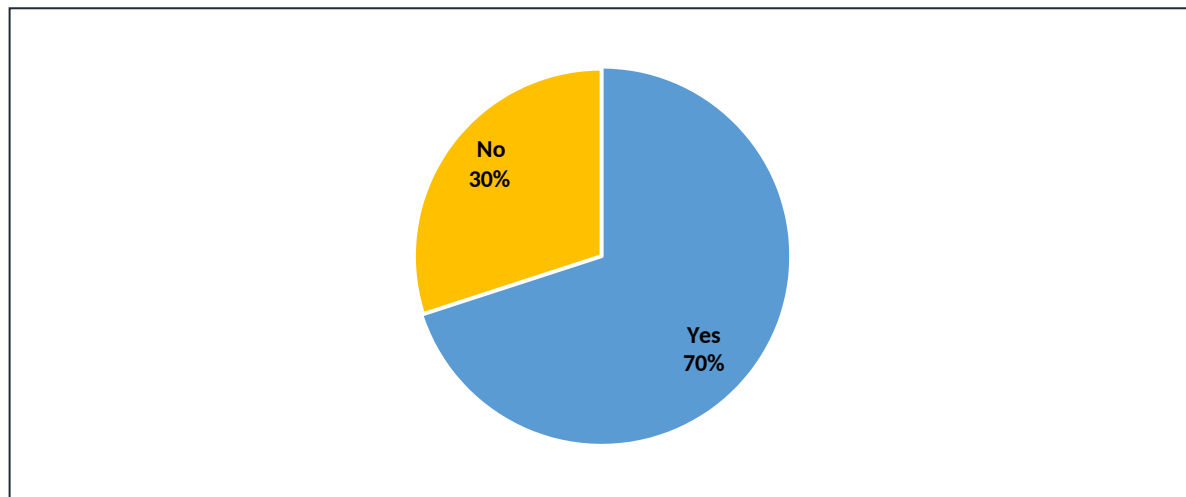


56 out of 80 respondents had used chat-bots while 24 had not since in the future questions were based on the experience the respondents had with the chat-bots the sample size reduced to 56.

5. When asked about their experience in engaging with Chat-bots during a banking query?
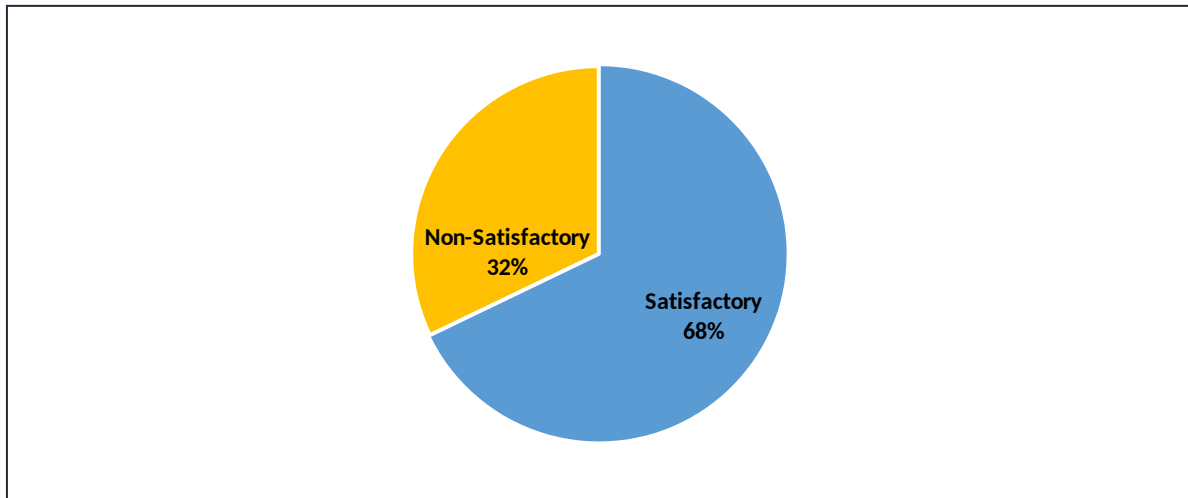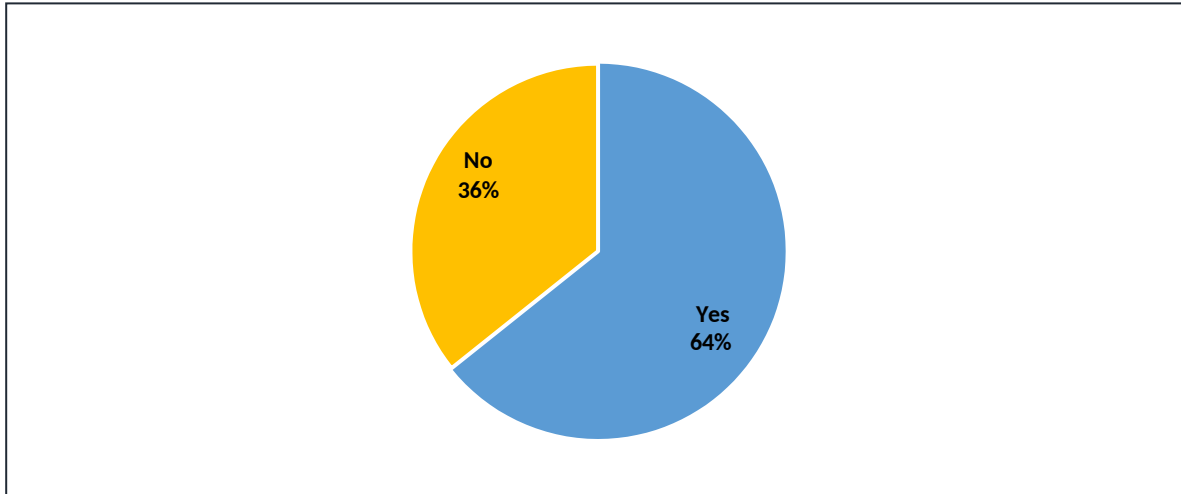
Majority of the respondents had a satisfactory experience in engaging with Chat-bots during a banking query

6. When asked if you have encountered any inconvenience that arose during communication with a Chat-Bot?
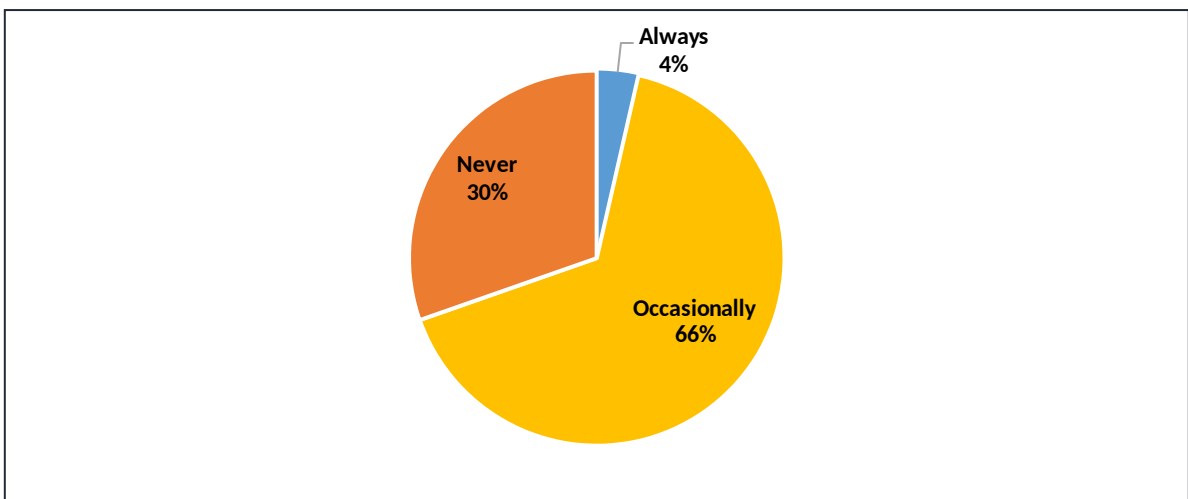


37 out of 56 respondents stated occasionally inconvenience during communication with chat-bots while 17 out of 56 never experienced any inconvenience during communication with chat-bots. This indicates that chat-bots have a scope for improvement.

7. When asked if you have security concerns regarding the use of Chat-Bots with reference to sharing your private information particularly access to your credit card details?



Majority of the respondents have Security Concerns Regarding the use of Chat-Bots with Reference to Sharing their Private Information Particularly Access to their Credit Card Details indicating the lack of trust in chat-bots with respect to privacy.
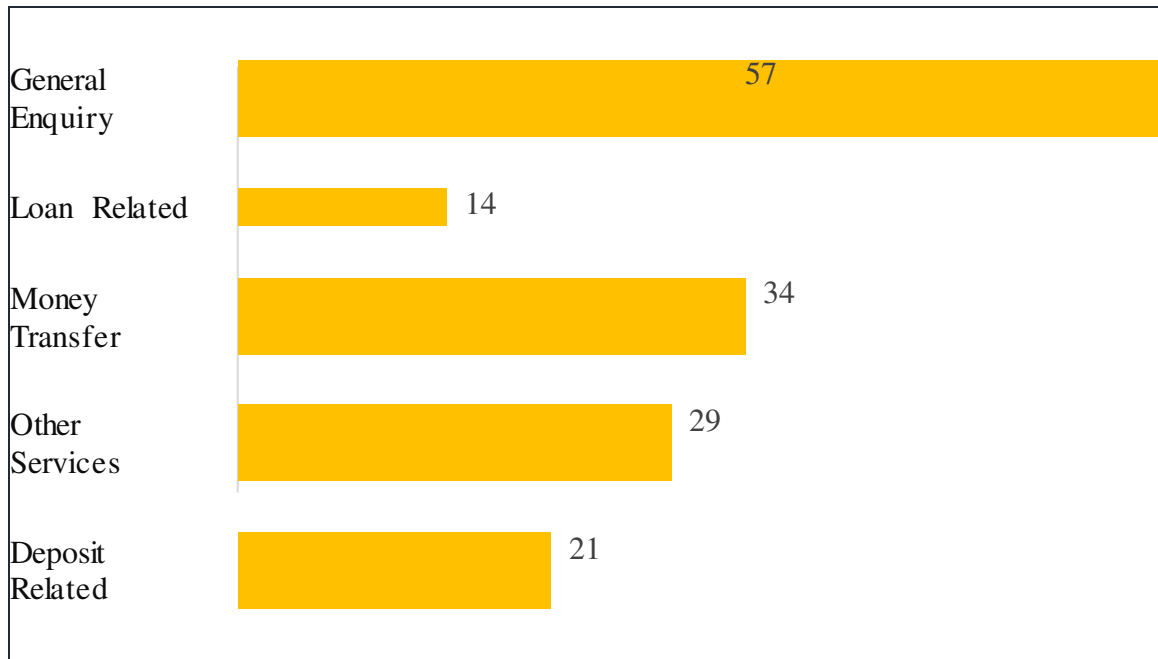
8. When the respondents were asked are you comfortable using Chat-Bots for some basic tasks such as balance checking and making payments?
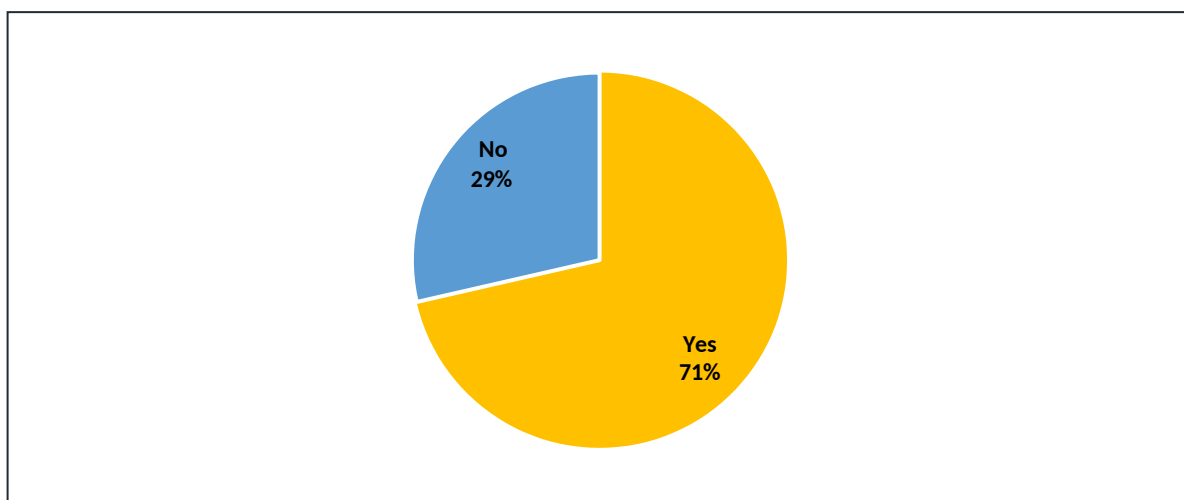


Majority of the respondents are comfortable with using chat-bots for some basic tasks such as balance checking and making payments.

9. When asked what kind of queries do you use Chat-Bots for? (can be more than one)



The survey indicates that majority of the respondents use the services of a chat-bot for general enquiries followed by enquiries on money transfer while only few respondents utilized used chat bots for loan related enquiries.

10. When the respondents were asked how would they describe customer service Chat-bots of solving the purpose for their creation to deliver customer satisfaction round the clock (24*7)
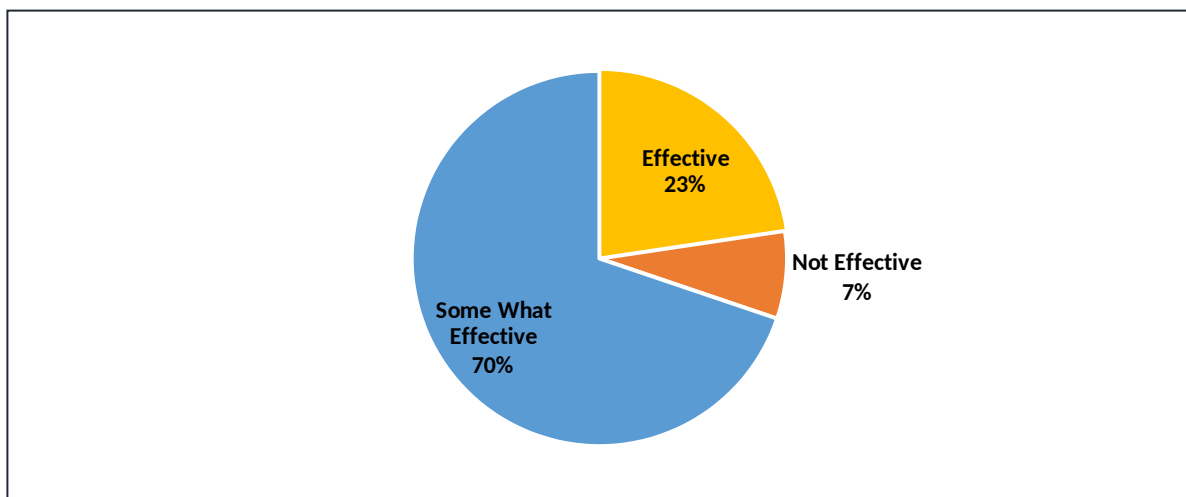


Majority of the respondents stated chat-bots have some what been effective in sucessfuly serving the purpose for their creation to deliver customer satisfaction round the clock.

11. Lastly, when the respondents were asked do you feel Chat-Bots can replace customer service executives in the near future?
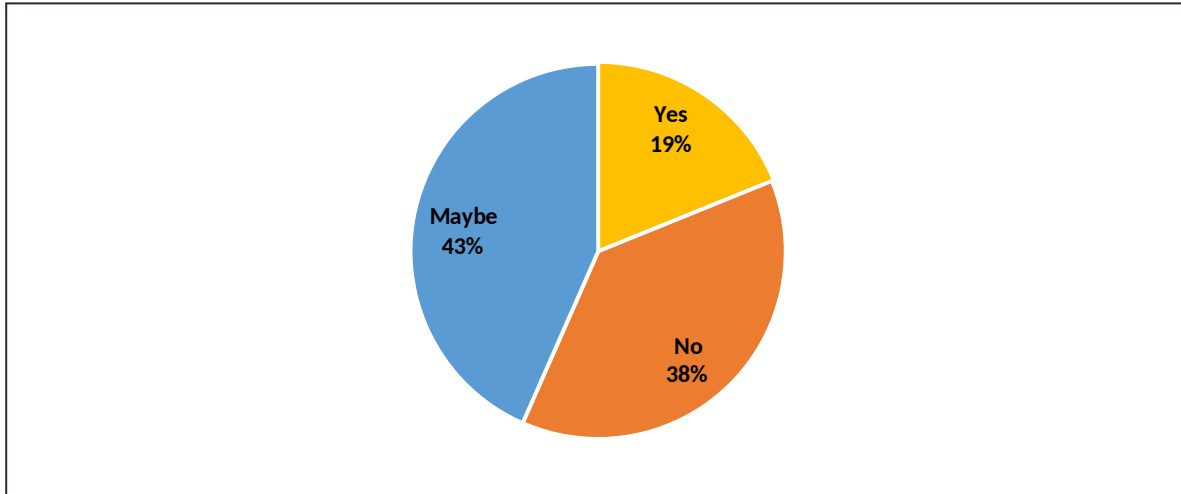


Majority of the respondents feel that there is a possibility that chat-bots could replace customer service executives

**Findings & Suggestions**

The study helped to analyze the impact of chat-bots on the banking experience.

Our primary research was focused on the perceptions and experiences of the respondents on banking chat-bots.

The primary research data manifests the fact that mobile banking apps and websites are commonly operated for banking transactions and queries followed by the fact that major respondents find phone calls with a customer service personnel ending up as a frustrating experience occasionally. This is indicative of the wide scope of chat-bots in assisting in the banking experience . However few respondents were not aware of chat-bots and hence could not avail its services while the ones that were and did experience chat-bots majority of them had a satisfactory experience engaging with them although the respondents do have security concerns with chat-bots. Majority of the respondents believed that chat-bots are somewhat effective in delivering customer satisfaction round the clock and hence believe maybe they can replace customer service executives in the near future.

The secondary data covered the introduction and implantation of chatbots that is redefining the banking experience in many ways.

The research suggests that banks should engage in activities that promote awareness regarding chat-bots and evolve it further to ensure optimum customer satisfaction levels.

### Conclusion

More and more banks that are implementing chat-bots services are on the rise .Many banks are integrating chat-bots in their mobile apps and websites. With further advancement in the Artificial Intelligence filed the quality of the chat-bots will evolve and improve to offer a convenient way for banks to stay in touch with their customers. Moreover, it may also provide a human touch reducing the deployment of customer service personnel in the near future. According to estimations calculated by the Juniper Research in 2023 chat-bot interactions will save 862 million hours for banks which equals to $ 7.3 billion cost savings worldwide. Our research that banking customers are not only aware about chat-bots but are also of the opinion that they are somewhat effective and maybe could replace customer service personnel in the near future.

### Limitations of the Study & Future Scope of the Study

- A larger sample could have resulted in higher reliability of the data.
- Random sampling was done hence individuals from diverse backgrounds and age group participated in the study.
- Another limitation of the research is the fact that not many respondents were aware about chat-bots and hence could not further participate in the survey.

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