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10. A Study on Consumer Perception and Satisfaction Towards Chatbots' at Chennai City

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ABSTRACT:

This study investigates consumer perception and satisfaction towards chatbot in Chennai city, an emerging hub of technology and innovation in India. Chatbot, powered by artificial intelligence, have increasingly become integral to various industries, offering personalized interactions and efficient customer service.

However, understanding how consumers in Chennai perceive and engage with chatbot technology is vital for businesses and organizations seeking to implement or enhance their chatbot services effectively. According to Mater.of.code statistical report says that 1.4 billion people actively use messaging apps. In fact, chatbots experienced a remarkable 92% increase in usage since 2019. In 2022, 88% of users engaged in at least one conversation with a chatbot.

The chatbot market is set to expand at a remarkable 23.3% annually, reaching $15.5 billion by 2028. The highlight of the study is such as language proficiency, cultural sensitivity, and the perceived value of chatbot interactions in shaping consumer attitudes.

Moreover, the study elucidates the relationship between perception and satisfaction, providing valuable implications for businesses and organizations seeking to optimize their chatbot services for the Chennai market. By offering actionable recommendations for improving chatbot usability, enhancing user experience, and fostering greater consumer satisfaction, this research contributes to both academic literature and practical insights for businesses operating in Chennai and beyond. It underscores the significance of understanding local consumer preferences and cultural contexts in the successful deployment of chatbot technology in diverse urban settings like Chennai.

KEY WORDS:

Technology And Innovation In India, Customer Service, Mater.of.code Statistical Report, 1.4 Billion People, Remarkable 92% Increase, Language Proficiency And Shaping Consumer Attitudes.

Introduction:

Chatbots, originally called chatterbots, are AI-powered tools used in messaging apps for simulating human communication through text or voice interactions. They operate online and employ natural language processing and deep learning technologies for engaging conversations. ELIZA, dating back to 1966, is considered the pioneering chatbot. Since its publication in 2022, OpenAI's ChatGPT, alongside alternatives like Microsoft's Bing Chat and Google's Bard, has gained significant attention. Chatbots are extensively used in customer support, virtual assistance, and various specialized scenarios across industries, driving advancements in AI technology.

History of Chatbots:

- ELIZA: Developed in 1966 by Joseph Weizenbaum, ELIZA was the first successful attempt at passing the Turing Test. It used pattern recognition to echo users' words using predetermined templates, notably in applications like DOCTOR.
- PARRY: Created in 1968 by Kenneth Colby, PARRY simulated the actions of a paranoid person, using ELIZA's rule-based architecture but with a more extensive response library and mood variation capabilities.
- A.L.I.C.E. (Artificial Linguistic Internet Computer Entity): Developed by Richard Wallace in 1995, A.L.I.C.E. utilized supervised learning to adapt to various inquiries and statements.
- Jabberwacky/Cleverbot: Created by Rollo Carpenter in the 1980s, Jabberwacky transitioned into Cleverbot in 2008, learning autonomously without human guidance.
- Mitsuku: Created by Steve Worswick in the early 2000s, Mitsuku won the Loebner Prize multiple times and functions similarly to A.L.I.C.E., with developers actively modifying its rules for more human-like interactions.

Review Of Literature:

Muhammad Hasnain Abbas Naqvi, Zhang Hongyu, Mishal Hasnain Naqvi, Li Kun (2024)1 This study aims to determine that whether or not fashion retail brands can maintain their essence by providing personalized care through conventional face-to-face interactions or the use of e-services. The author says that, Chatbots have an impact on consumer loyalty. The quality of a Chatbot's system, service and information are all critical to providing a positive consumer experience.

M. Vijaya Kumar (2024)2 this paper provide insights into the impact of chatbots and virtual assistants on customer experience, satisfaction, and loyalty. The review encompasses various aspects, including the growth and prosperity of chatbots, their impact on customer service, and their integration into wireless services.

The study explores the role of chatbots in enhancing customer engagement in digital marketing and their influence on customer loyalty. This review contribute to a better understanding of the implications of chatbots and virtual assistants in customer engagement, providing valuable insights for businesses and researchers by understanding chatbots and virtual assistants in customer engagement.

Statement of the Problem:

Businesses are adopting chatbot to streamline customer service processes and improve customer satisfaction. However, despite their growing adoption, there remains a need to assess the effectiveness of chatbot in meeting customer needs and enhancing satisfaction levels. It is said that the chatbot are not equalizing the human customer services.

Objectives of the Study:

- To analyse the awareness created by chatbot among consumers.
- To study consumer's perception towards chatbot.
- To identify the satisfaction created by chatbots among consumers.

Sources of Data: The methodology of the study is based on primary and secondary data collection. The data collected administering the structured questionnaire.

Research Design: Research design refers to the blueprint or framework outlining the systematic process and structure of a research study. The period of study January 2024 to March 2024. The data collected were subjected Cornbach's Alpha reliability co-efficient and value is beginning 0.734. The research employs percentage analysis to study the Consumer Perception and Satisfaction towards Chatbot at Chennai City.

Analysis and Interpretation: Percentage analysis in research involves using percentages to analyze and present data collected during a research study. It's a common method for summarizing and interpreting numerical data, making it easier to understand and compare different variables or groups within the research.

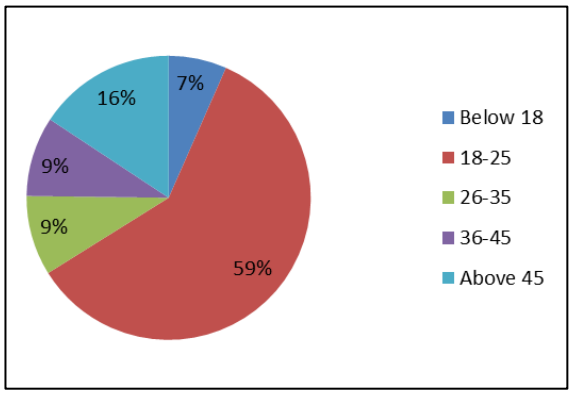
Data Analysis and Interpretation:

Table 10.1: Classification Based on Age

Age	Frequency	Percentage
Below 18	8	6.6
18-25	72	59.5
26-35	11	9.1
36-45	11	9.1
Above 45	19	15.7
Total	**121**	**100.0**

(Source : Primary Data)

Chart 10.1: Age



Interpretation:

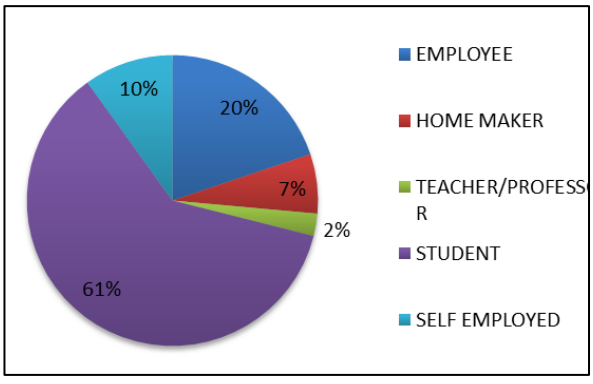
From the table 10.2. It is observed that 7% of the respondents are of below 18 years of age, 59% of the respondents are of 18-25 years of age, 9% of the respondents are of 26-35 years of age, 9% of the respondents are of 36-45 years of age, 16% of the respondents are of above 45 years of age group.

Table 10.2: Classification Based on Occupation

Occupation	Frequency	Pencentage
Employee	24	19.8
Home maker	8	6.6
Teacher/professor	3	2.5
Student	74	61.2
Self employed	12	9.9
Total	**121**	**100.0**

(Source : Primary Data)

Chart 10.2: Occupation



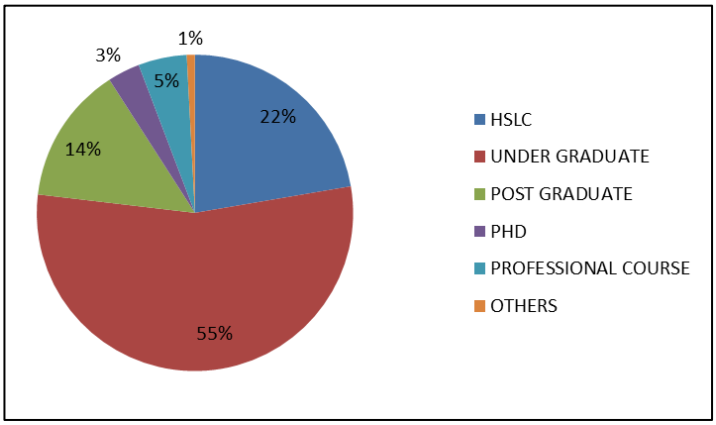
Interpretation: From the following table 10.3. It is observed that 20% of the respondents were employees, 7% of the respondents were homemakers, 2% of the respondents were teacher/professor, 61% of the respondents were students, and 10% of the respondents were self-employed. The majority of the respondents were students.

Table 10.3: Classification Based on Education

Education	Frequency	Percentage
HSLC	27	22.3
Under graduate	66	54.6
Post graduate	17	14
PhD	4	3.3
Professional course	6	5
Others	1	0.8
Total	**121**	**100**

(Source : Primary Data)

Chart 8.3: Education



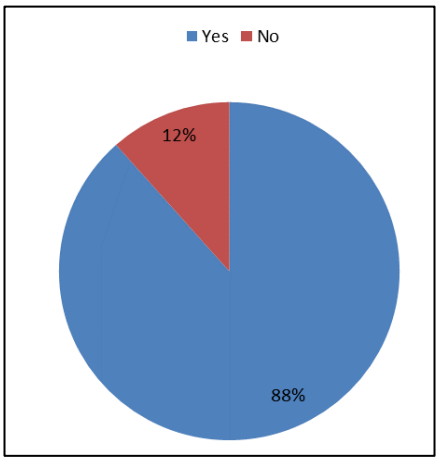
Interpretation: From the following table 10.4 . it is observed that 22% of the respondents belong to receiver of high school leaving certificate (HSLC), 55% of the respondents were under graduates, 14% of the respondents were post graduates, 3% of the respondents were academic PhD, and 5% of the respondents were pursuing professional course . Hence it shows that majority of respondents were under graduates.

Table 10.4: Classification Based on Awareness of Chatbots

Awareness	Frequency	Percentage
Yes	107	88.4
No	14	11.6
Total	**121**	**100.0**

(Source : Primary Data)

Chart 8.4: Awareness of Chatbots In Customers



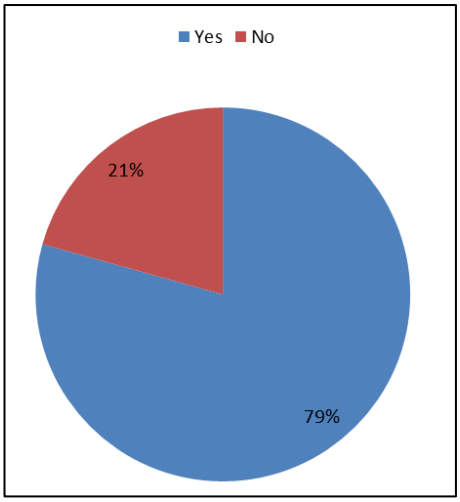
Interpretation: From the table 10.5 . It is observed that 88% of the respondents are aware of chatbot and 12% of the respondents are not aware of chatbot. Hence it shows that majority of the respondents are aware of the chatbot.

Table 10.5: Classification Based on Usage of Chatbots

Used	Frequency	Percentage
Yes	96	79.3
No	25	20.7
Total	**121**	**100.0**

(Source : Primary Data)

Chart 10.5: Usage of Chatbots in Customer



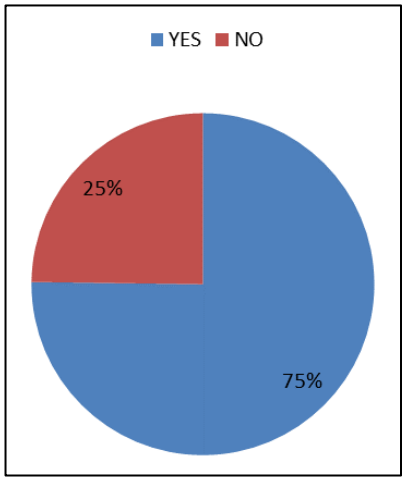
Interpretation: From the table 10.6. It is observed that 79% of the respondents have used chatbot and 21% of the respondents have never used chatbot. Hence it shows that majority of the respondents are using chatbot.

Table 8.6: Classification Based on Trust Towards Chatbots

Trust	Frequency	Percentage
Yes	91	75.2
No	30	24.8
Total	**121**	**100.0**

(Source: Primary Data)

Chart 10.6: Trust Towards Chatbots



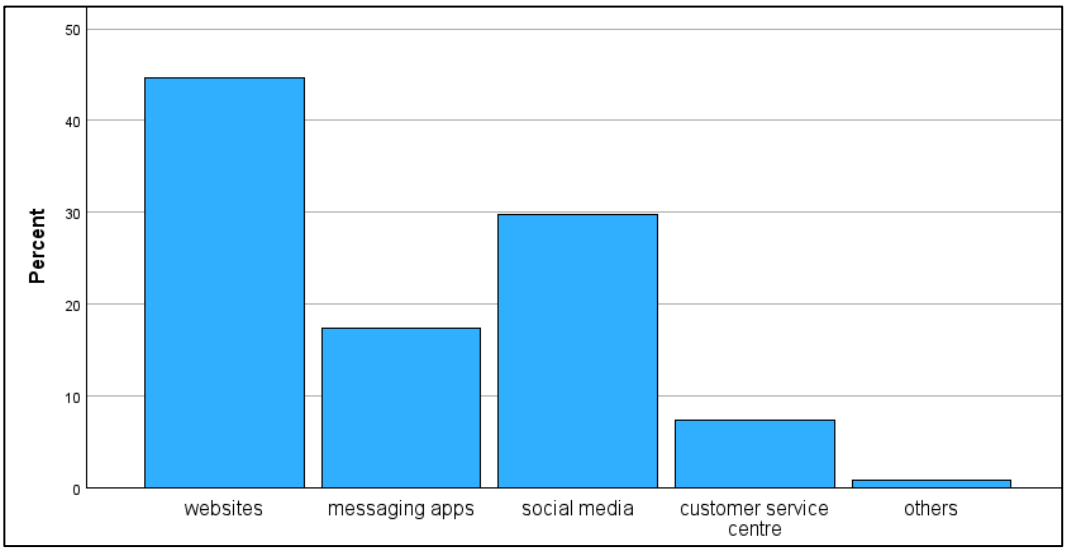
Interpretation: From the table 10.7. It is observed that 75% of the respondents trust chatbot and 25% of the respondents do not trust chatbot. Hence it shows that majority of the respondents trust chatbot.

Table 10.7: Preferred by Customers

Preferred Means	Frequency	Percentage
Websites	54	44.6
Messaging apps	21	17.4
Social media	36	29.8
Customer service centre	9	7.4
Others	1	0.8
Total	**121**	**100.0**

(Source: Primary Data)

Chart 10.7: Preferred Means of Chatbots



Interpretation:

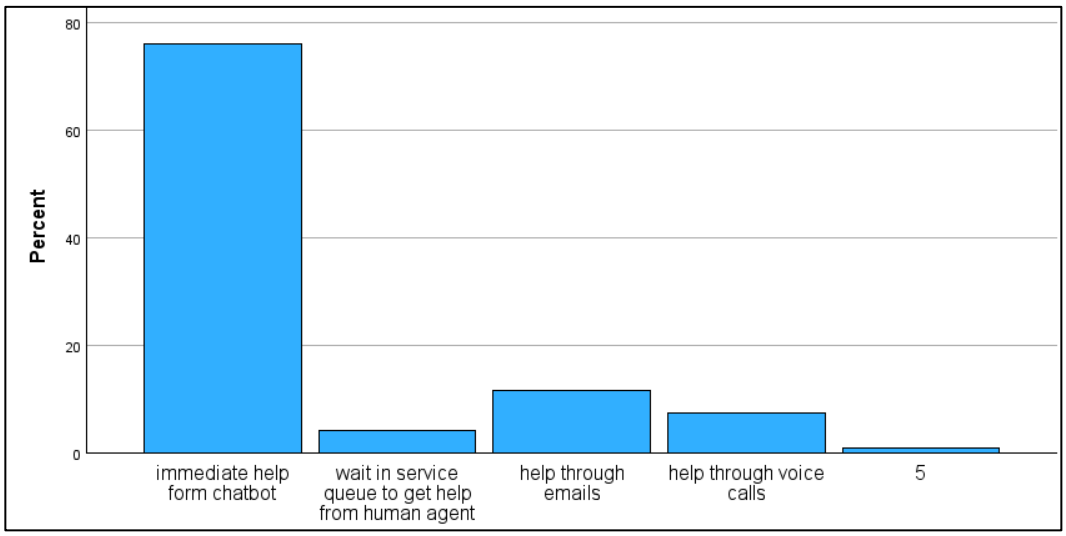
From the following table 10.8. it is observed that 45% of the respondents preferred chatbot in websites, 17% of the respondents preferred chatbot in messaging apps, 30% of the respondents preferred chatbot in social media, 7% of the respondents preferred chatbot in customer care centre, 0.8% of the respondents preferred chatbot in other means . Hence it shows that majority of respondents preferred chatbot in websites.

Table 10.8: Prefered Way Of Communication By Customers In Chatbots

Prefered Comunication	Frequency	Percentage
Immediate help from chatbot	92	76.0
Wait in service queue to get help from human agent	5	4.1
Help through Emails	14	11.6
Help through voice calls	9	7.4
Others (5)	1	0.8
Total	**121**	**100.0**

(Source: Primary Data)

Chart 10.8: Prefered Way Of Communication



Interpretation:

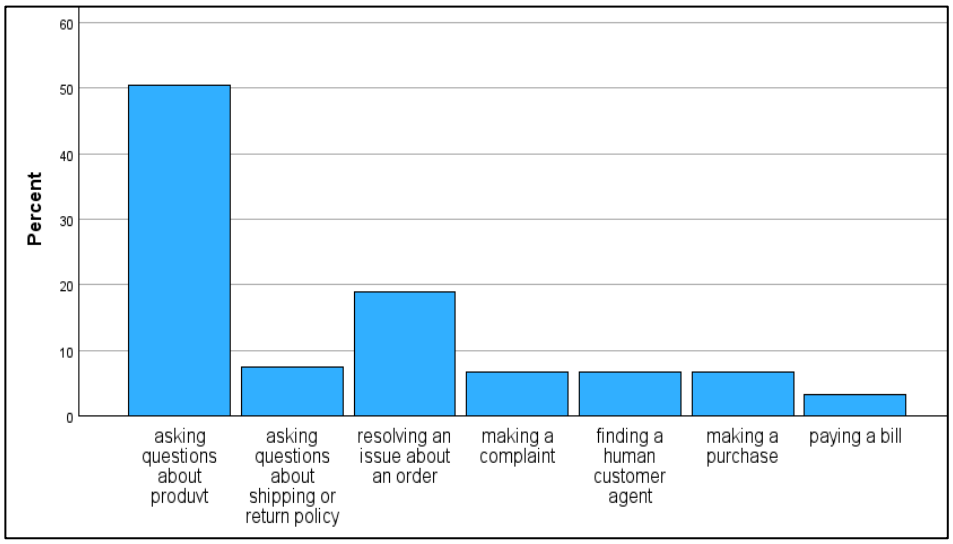
From the following table 10.9. it is observed that 76% of the respondents preferred immediate help from chatbot, 4% of the respondents preferred wait in service queue to get help from human agent, 12% of the respondents preferred help through emails, 7% of the respondents preferred help through voice calls, 0.8% of the respondents preferred other ways of communication . Hence it shows that majority of respondent's preferred immediate help from chatbot.

Table 10.9: Prefered Way of Usage by Customers in Chatbots

Prefered Usage	Frequency	Percentage
Asking questions about product	61	50.4
Asking questions about shipping or return policy	9	7.4
Resolving an issue about an order	23	19.0
Making a compliant	8	6.6
Finding a human customer agent	8	6.6
Making a purchase	8	6.6
Paying a bill	4	3.3
Total	**121**	**100.0**

(Source: Primary Data)

Chart 10.9: Prefered Hauge of Chatbot



Interpretation:

From the following table 8.13 . it is observed that 50% of the respondents preferred chatbot for asking questions about a product, 7% of the respondents preferred chatbot for asking questions about shipping or return policy, 19% of the respondents preferred chatbot for resolving an issue about an order, 7% of the respondents preferred chatbot for making a compliant, 7% of the respondents preferred chatbot for finding a human customer agent, 7% of the respondents preferred chatbot for making a purchase, and 7% of the respondents preferred chatbot for paying a bill. Hence it shows that majority of respondents preferred chatbot for asking questions about a product.

Findings Demographic Profile:

- The majority (59%) of the survey participants are in the 18-25 age range.
- Most of the respondents (55%) are under graduate.
- Most of the respondents (61%) are students.

Other Findings:

- The majority of the respondents (88%) are aware of chatbot.
- The majority of the respondents (79%) have used chatbot.
- The majority of the respondents (75%) trust chatbot
- Most of the responses use chatbot through websites (45%) rather than in messaging apps , social media , customer service centre , and others means.
- As of mode of communication, most of respondents prefer immediate help from chatbot (76%) rather than wait in service queue to get help from human agent , or help through emails, or through voice calls .
- Most of the respondents use chatbot for enquiring about a product (50%)

Suggestions:

- Targeted Marketing: Given that the majority of respondents are in the 18-25 age range and are students, businesses could tailor their marketing efforts towards this demographic to increase chatbot engagement. This could include promoting chatbot features that cater to educational needs or integrating chatbot into educational platforms.
- Enhanced User Education: Despite high awareness and usage rates of chatbot, there may still be opportunities to educate users further on the capabilities and benefits of chatbot. This could involve providing tutorials or demonstrations on how to use chatbot effectively for different purposes beyond simple inquiries.
- Improving Accessibility: Since the majority of respondents prefer using chatbot through websites, businesses should ensure that chatbot are easily accessible and integrated into their websites. They should also consider optimizing chatbot interfaces for mobile devices, as this demographic likely accesses websites through smartphones.
- Prompt Response: Given that most respondents prefer immediate help from chatbots, businesses should prioritize providing quick and efficient responses through chatbot interactions. This may involve optimizing chatbot algorithms to understand and respond to user queries accurately and promptly.
- Diversification of Use Cases: While the study indicates that many respondents prefer using chatbots for educational purposes, there may be opportunities to expand the range of services offered by chatbots to cater to different needs and preferences. Businesses could explore integrating chatbots into customer service centers, social media platforms, or other channels to provide a more comprehensive and versatile user experience.

Conclusion:

The study on consumer perception and satisfaction towards chatbots in Chennai city successfully achieved its objectives by analyzing the impact, perception, and challenges associated with chatbot usage among consumers. Through a thorough examination of the demographic profile and key findings, the study provided valuable insights into the widespread acceptance and utilization of chatbots, particularly among young adults and students. Furthermore, by uncovering consumers' trust in chatbots, preference for educational purposes, and inclination towards immediate assistance, the study illuminated the significant role of chatbots in facilitating convenient and efficient interactions. Additionally, by identifying common difficulties faced by consumers, such as usability issues and communication barriers, the study highlighted areas for improvement in chatbot design and functionality. Overall, these findings contribute to a deeper understanding of the consumer experience with chatbots and provide valuable guidance for businesses aiming to optimize their chatbot strategies to enhance consumer satisfaction and engagement in Chennai city.

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