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Measuring the Impact of Artificial Intelligence on Customer Engagement and Experience in the Digital Era

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Abstract

The rapid rise of Artificial Intelligence (AI) in today's digital world has transformed the way clients engage and immerse themselves in services from many businesses across all sectors. This study evaluates how AI platforms (e.g., chatbots, personalized recommendation engines, automated decision-making tools, predictive analytics) affect how young consumers perceive and interact with brands based on data gathered from 250 participants aged 20 to 25 years of age. In addition to participant responses, the study examines participant levels of interaction (engagement, satisfaction, trust, convenience, emotional connection, loyalty) within each AI platform using both quantitative and qualitative methods. Overall, the results of this study indicate that AI enhances speed, ease of use, and personalised experiences between businesses and their customers. The majority of participants believe that businesses use AI to gain a better understanding of their customers, improve their decision-making capabilities, and facilitate more seamless digital customer journeys.Nevertheless, the research also reveals several areas of concern. Many individuals worry that AI has no human-like empathy, sometimes misunderstands what users want and could lead to a reduced level of emotional satisfaction. Concerns are also high with respect to how data is utilised and stored securely. Participants in the research stressed that being transparent about how you handle data and adhere to ethical AI guidelines are essential elements in establishing trust. Another commonly voiced theme from the study is that people would like to see both AI and humans working together, with AI being used to complete simple tasks, while humans are responsible for resolving more complex and emotional problems.This research adds to our knowledge base by providing an extensive body of evidence for an underrepresented demographic group (India's youth), who are very active users of AI-based services, yet very few academic studies have focused on them. Overall, the research indicates that AI uses significantly impact customer engagement and customer experiences, but for AI to be beneficial over the long term, good data management, continuous improvements in technologies and balanced use of AI and human labour will be essential. The findings from this study will provide companies, governmental bodies and future researchers with valuable direction as they attempt to enhance AI-based customer interactions in an increasingly dynamic digital marketplace.

Keywords: *Artificial Intelligence, customer relationship management, Customer satisfaction, consumer behaviour, Personalisation, Digital Service, chatbot, Brand loyalty, Data ethics and Privacy issues.*

I. INTRODUCTION

In this era of digital technology, artificial intelligence (AI) is dominating as one of the world's most influential technologies. As marketers better understand their customers' behaviours, preferences and online interactions, AI has enabled them to create

an experience for consumers that is increasingly personalized. As more and more technological advancements occur, it becomes easier to develop AI systems that replicate human-like behaviours, such as chatbots that use natural language processing (NLP) to help answer and respond to questions in an expected and realistic manner.

Businesses such as Netflix, Amazon, banks, educational institutions and e-commerce store retailers are utilizing AI-based technology to help personalize their customers' experiences, increase customer convenience, and enhance the total consumer journey. Therefore, it has become an essential tool for managing today's customer experience — especially for consumers under 40 who are tech-savvy.

Overall the growth of digital platforms has led to a significant increase in the number of AI tools being used in marketing and customer-support functions and the way individuals connect with brands on a daily basis. Today's consumers demand speed, ease-of-use, and personalization from service providers, and AI technology is developing to fulfil these demands. By leveraging lots of data and employing machine learning capabilities, AI can identify specific users' interests and provide product recommendations and content suggestions accordingly while assisting individuals with important decision-making. 18-25 year old consumers have been shown to use multiple forms of artificial intelligence (AI) daily as they are often digitally connected to everything around them. Understanding how customers interact with AI helps stores improve the customer experience.

This research looks at students who are consumers of AI platforms daily via their use of streaming services, online shopping, food delivery apps, educational websites, and by using chatbots for customer support. Their high level of comfort with digital devices provides an opportunity to study how people perceive AI as customer service. Using this information will help improve businesses' use of AI-based systems that provide consumers with better and more user-friendly experiences.

Although more people in India are exposed to various forms of AI, there is little research regarding how young Indian consumers view AI in customer service experiences.

Objectives of the Study

1. To understand how AI affects customer experience for young people.
2. To look at how AI influences customer satisfaction and decision-making.
3. To find out what customers think about trust, transparency, and privacy with AI.
4. To identify the difficulties and limits of using AI services.
5. To give suggestions for improving the customer experience using AI.

II. Review literature

The continued emergence of AI technology as a viable form of communication has created a new way for customers and brands to connect digitally. The ability of AI to process data in extreme depth allows it to recognize patterns and deliver tailored, relevant content has substantially changed the way customers identify and interact with the businesses they buy from. Researchers across the globe have focused their studies on the relationship between AI and customer engagement through analyzing the advantages and

disadvantages of using AI for this purpose.

Customers who are engaged with a brand have an emotional, cognitive, and behavioral connection to it, and one way that artificial intelligence advances customer engagement is by providing seamless interactions through predicting users needs, as well as offering personalized recommendations.

Kumar and Pansari (2016): Customer engagement is significantly enhanced by brands offering relevant, timely, and interactive brand experiences, and this is a function that AI does particularly well in digital environments.

Lemon and Verhoef (2016): Customer engagement occurs at a variety of different touchpoints and is improved through using AI to enhance those touchpoints through personalization, automated suggestions, and real-time responses. This suggests that AI will be a key driver of effective customer engagement in today's digital environment.

Grewal et al. (2017): Personalization is one of the strongest drivers of customer engagement. By analyzing user behavior, preferences, and purchase history, AI algorithms can make recommendations tailored to the individual. Engagement rates can be significantly enhanced through the delivery of content via personalized interactions with AI. For example, Netflix and Spotify both implement AI-driven recommendation engines that keep their users continuously engaged.

Van Doorn et al. (2017): Although AI offers speed and accuracy, it has two main limitations— it does not possess emotional sensitivity or empathy, making it less effective for engaging with customers in intricate situations. The combination of AI and a human customer service representative creates an overall superior engagement experience, as humans can deliver the emotional connection that AI lacks.

Prentice et al. (2020): Personalized recommendations resonate particularly well with young consumers because they perceive these types of recommendations as being time-saving, relevant, and convenient. As a result of this connection, they will engage at a higher rate, visit the platform more frequently, and develop a stronger brand connection.

Chung et al. (2020): AI tools (e.g., chatbots, automated customer support systems, and virtual assistants) provide a constant level of customer engagement because they allow for 24/7 accessibility. This level of customer engagement through the use of AI-powered chatbots occurs due to their ability to deliver instant solutions and reduce waiting times through improved responsiveness. Continuous interactions between brands and consumers are a critical component of long-term customer engagement.

Lankton et al. (2015): Trust plays a significant role in customer engagement in AI systems. Lankton et al. state that customer trust in artificial intelligence is impacted by the perceived reliability, accuracy, and fairness of the AI. When customers trust an AI-based system, they are more likely to engage with it and continue to use the AI system.

Boström (2014) and the European Commission (2019): There are issues of trust from customers due to concerns related to data privacy and algorithmic transparency. When customers are concerned that their personal information will not be used properly, or

when they do not understand how the AI system functions, they are less likely to be engaged. Therefore, being transparent about how AI works and ensuring ethical practices will help ensure that the customer remains engaged.

III. Gap Analysis

Since most studies focus on developed countries or specific businesses like hotels, there is a dearth of study on how AI affects consumers in emerging countries, particularly young people in India. Another gap is that prior research typically examines individual AI tools, such as chatbots or personalization features, rather than how various AI tools collectively affect users' interactions with them. People's long-term behaviors, such as continuing to use, trust, and remain loyal to AI, as well as their emotional and cognitive reactions to it, are little understood. Additionally, although these factors may influence how young users utilize AI, they have not received much research. These factors include age, people's comfort level with technology, and privacy concerns. The relationship between using AI and consumer interaction is not well-supported by data safety awareness or a sense of control. Few studies truly ask people directly through surveys to determine their true opinions; instead, many rely on ideas or data from others. By providing firsthand input from young Indian users regarding their AI experiences, your survey-based study contributes to these areas.

IV. Research Methodology

In order to comprehend how AI impacts customer engagement and the overall experience (CX) in the digital age, this study employs a mixed-methods approach. Combining survey data with interviews provides a complete picture of consumer answers because AI affects both quantifiable behaviours (like engagement and satisfaction) and subjective feelings (like trust, emotions, and convenience).

A. Research Design

This research design employs a descriptive approach since it is meant to understand how young consumers feel regarding the use of AI to improve customer engagement. Because a descriptive approach allows for measuring any pre-existing attitudes, behaviour, and relationships, without altering any one thing, this type of research design is appropriate for this study.

B. Variables Used in the Study

The primary target variables in this study are:

Independent Variable: Using AI Tools (including, but not limited to chatbots, recommendation systems, personalization, and automated support).

Dependent Variable: Customer Engagement (the frequency of an individual's interaction, satisfaction, involvement, loyalty, and influence in decisions).

Control Variables: Age, Gender, Occupation, AI frequency.

Understanding how AI relates to various aspects of customer engagement for a group of young consumers is the purpose of using these variables.

C. Sampling Method

The intended participants of the study are customers who are using AI-based digital platforms such as chatbots, recommendation systems, or automated assistants.

To collect the quantitative data required for regression

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analysis, a simple random sample of 250 individuals using AI will be sufficient.

To collect the qualitative data required for this research project, a purposive sample of 12 - 15 individuals who have previously interacted with AI will provide an understanding of the participants' thoughts/attitudes towards AI's impact on customer engagement.

D. Data Collection Methods

- **Primary Data**: Gathered using a structured questionnaire distributed through Google Form. The questionnaire has: - Demographic questions like gender, age, job, and how often they use AI - 25 Likert-scale questions to see how AI affects customer engagement, satisfaction, trust, convenience, decision-making, and the overall experience. Using a questionnaire is a good idea because it lets us get data from a lot of people quickly and gives us answers that are easy to look at.

Gender	Count of Gender
Female	106
Male	144
Grand Total	250

- **Secondary Data**: Secondary data is information that comes from academic papers, industry reports, and company records, such as logs of user activity or how long it takes for a chatbot to respond.

E. Data Analysis

Respondent data was analyzed with Microsoft Excel, a normal program for basic statistics. Methods used to analyze the data included counting how many times an answer was given as well as calculating the percentage of an answer received, placing the results in tables/formats, and finding patterns within the data. Depending on the data presented within a particular group of respondents, cross-tabulation was utilized to compare answers among various groups, providing additional specific information about the connections between responses and the trends present in this data.

The results of this analysis provide information for identifying common responses and learning how AI relates to customer interactions.

V. Data Analysis & Interpretation:

Demographic Variables

1. Gender

Occupation	Count of Occupation
Business Owner	5
Doctor	2
Student	198
Working professional	45
Grand Total	250

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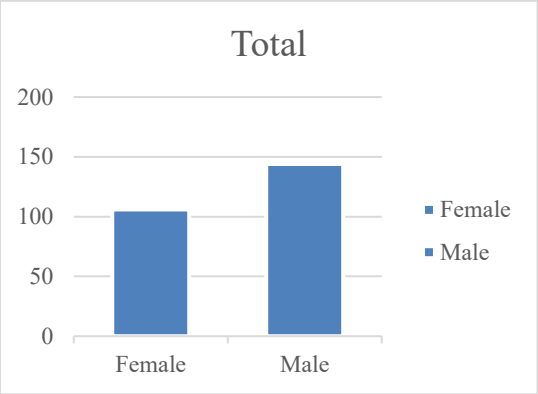
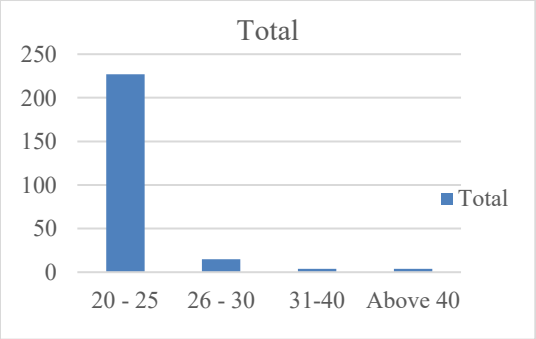


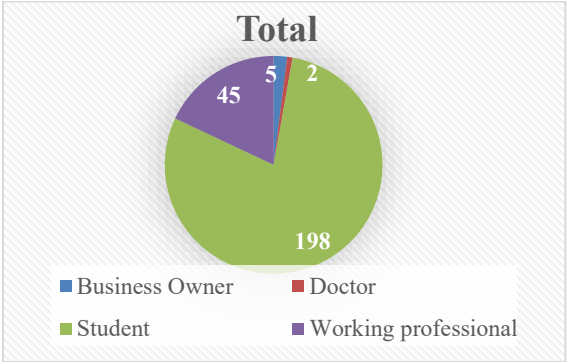
Interpretation:
The majority of respondents are male, indicating that the sample is dominated by young male students. This may reflect higher willingness among this group to experiment with AI-enabled services and participate in surveys.

2. Age Group



Interpretation:
Most respondents fall in the **20–25 age group**, showing that AI adoption is highest among young adults. This age group is tech-savvy and uses AI-enabled platforms extensively for entertainment, shopping, and education.

3. Occupation



Interpretation:
A large proportion are **students**, with few working professionals or others. This indicates that the findings primarily represent the experiences and perceptions of the student community, who frequently use AI for personalized recommendations, learning, and entertainment.

Age Group	Count of Age
20 - 25	227
26 - 30	15
31-40	4
Above 40	4
Grand Total	250

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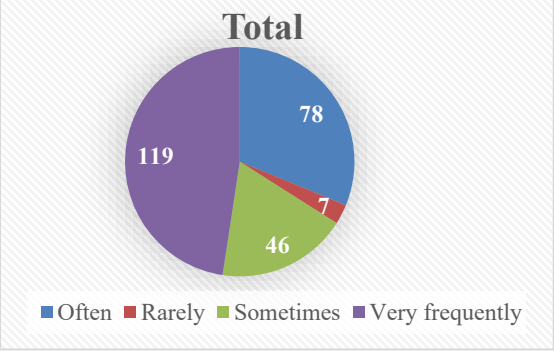
4. Frequency of Using AI-Enabled Services (Netflix, Amazon, Chatbots, etc.)

Scale	Frequency of using AI-enabled services (Netflix, Amazon, ChatGPT, Swiggy, etc.)
Often	78
Rarely	7
Sometimes	46
Very frequently	119
Grand Total	250

Scale	Artificial Intelligence (AI) systems help businesses understand your preferences better.
Agree	147
Disagree	3
Neutral	26
Strongly Agree	74
Grand Total	250

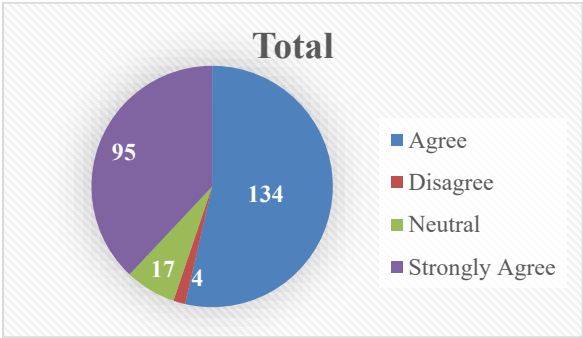


Interpretation:
Most respondents selected **"Very Frequently"** or **"Sometimes"**, indicating moderate to high levels of interaction with AI platforms. AI-enabled services have become integrated into everyday digital habits.

Interpretation of Questions (1–25)

1. AI tools make your interactions faster and more convenient

Scale	Artificial Intelligence (AI) tools (chatbots, assistants) make your interactions faster and more convenient.
Agree	134
Disagree	4
Neutral	17
Strongly Agree	95
Grand Total	250



Interpretation:
AI significantly enhances speed and convenience. Young customers feel AI reduces waiting time and makes interactions smoother. This directly supports Objective 1 — AI improves overall customer experience.

2. Artificial Intelligence (AI) systems help businesses understand your preferences better.

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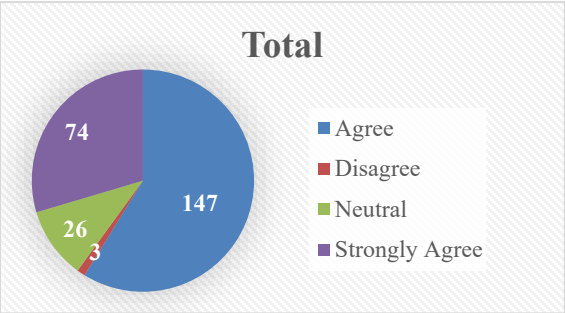
ES (2026) 22, 5(S), 08-28 | ISSN:1505-4683

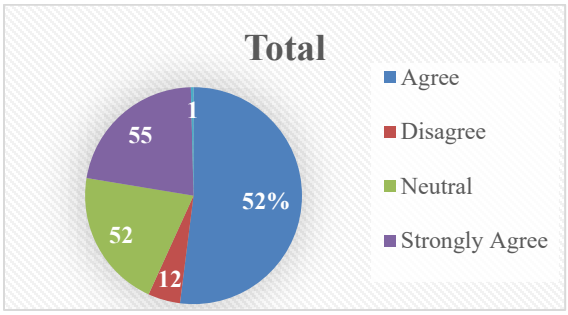


Interpretation:

Most respondents agree that AI accurately tracks preferences (e.g., personalized recommendations). This confirms AI's positive effect on personalization, supporting Objective 2 (customer satisfaction & decision making).

3. You feel more engaged with brands using Artificial Intelligence (AI) in their communication.

Scale	You feel more engaged with brands using AI in their communication.
Agree	130
Disagree	12
Neutral	52
Strongly Agree	55
Strongly Disagree	1
Grand Total	250

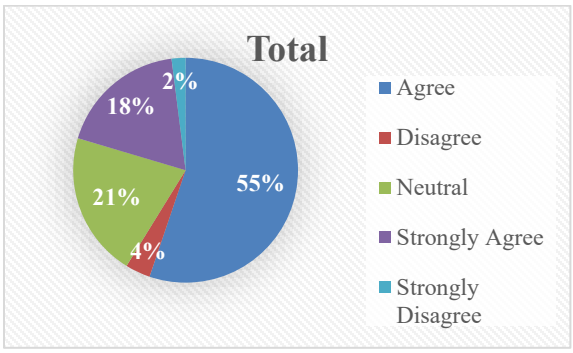


Interpretation:

AI-driven communication (chatbots, personalized messages) increases engagement levels. Young users respond better to brands that use smart technology, supporting Objective 1 & 2.

4. Artificial Intelligence (AI)-driven services enhance your overall satisfaction with the brand.

Scale	Artificial Intelligence (AI)-driven services enhance your overall satisfaction with the brand.
Agree	138
Disagree	9
Neutral	52
Strongly Agree	46
Strongly Disagree	5
Grand Total	250



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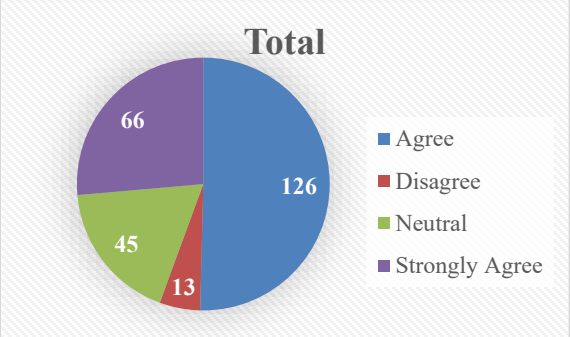
Interpretation:

AI-driven services significantly enhance customer satisfaction with brands, as a large majority of respondents view these technologies positively. Brands that invest in AI technologies are likely to improve customer experiences, strengthen satisfaction levels, and build long-term customer relationships.

5. Personalized recommendations from Artificial Intelligence (AI) increase your interest and involvement with brands.

Scale	Personalized recommendations from Artificial Intelligence (AI) increase your interest and involvement with brands.
Agree	126
Disagree	13
Neutral	45
Strongly Agree	66
Grand Total	250

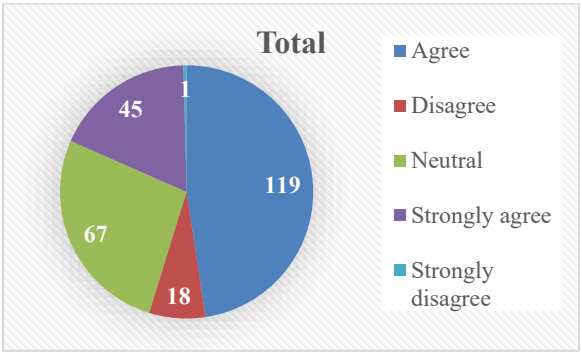


Interpretation:

High agreement means students rely on AI to explore new products (e.g., "Recommended for you").
This shows AI improves product visibility and influences exploration behaviour.

6. Artificial Intelligence (AI) personalization makes you feel that brands care about my individual needs.

Scale	Artificial Intelligence (AI) personalization makes you feel that brands care about my individual needs.
Agree	119
Disagree	18
Neutral	67
Strongly agree	45
Strongly disagree	1
Grand Total	250



Interpretation:

AI significantly reduces search time by filtering unnecessary choices. Respondents believe AI makes shopping/choosing content quicker and more efficient.

7. You trust brands that use Artificial Intelligence (AI) to provide personalized offers or content.

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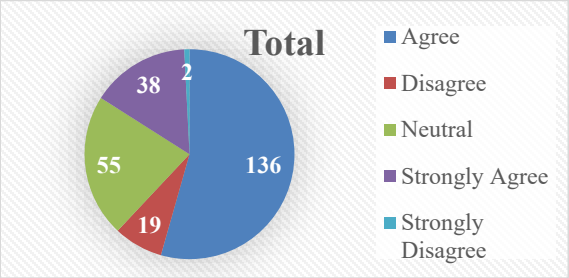
ES (2026) 22, 5(S), 08-28 | ISSN:1505-4683

Scale	You trust brands that use Artificial Intelligence (AI) to provide personalized offers or content.
Agree	136
Disagree	19
Neutral	55
Strongly Agree	38
Strongly Disagree	2
Grand Total	250

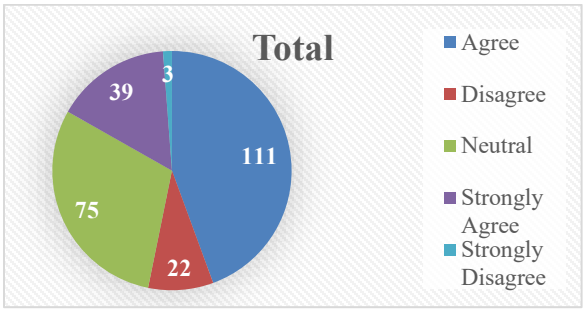


Interpretation:

While many respondents agree, trust is still moderate. Users appreciate personalization but still expect transparency, privacy, and accuracy.

8. You are more likely to remain loyal to brands using Artificial Intelligence (AI) personalization effectively.

Scale	You are more likely to remain loyal to brands using Artificial Intelligence (AI) personalization effectively.
Agree	111
Disagree	22
Neutral	75
Strongly Agree	39
Strongly Disagree	3
Grand Total	250

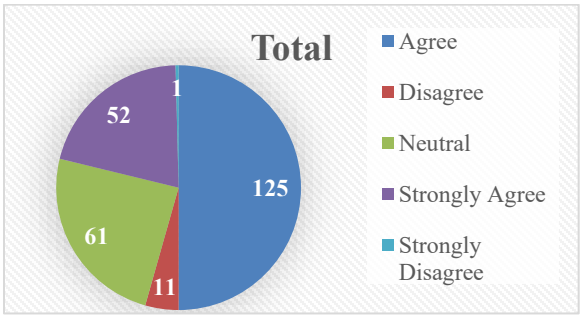


Interpretation:

High agreement suggests that AI contributes directly to satisfaction. Customers appreciate efficiency and personalization.

9. Ethical and transparent Artificial Intelligence (AI) practices strengthen your trust and loyalty toward brands

Scale	Ethical and transparent Artificial Intelligence (AI) practices strengthen your trust and loyalty toward brands.
Agree	125
Disagree	11
Neutral	61
Strongly Agree	52
Strongly Disagree	1
Grand Total	250



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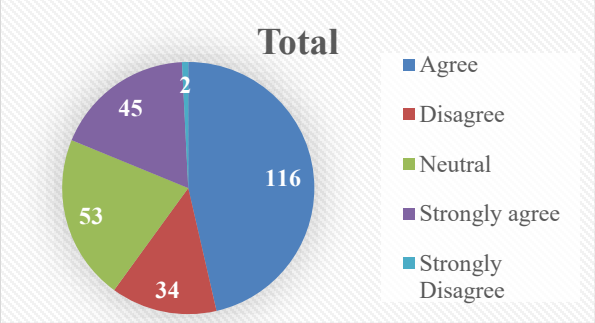
Interpretation:
Users strongly agree that ethical AI (no hidden data usage) boosts brand trust. Transparency about how data is used is extremely important.

10. Artificial Intelligence (AI) personalization helps you to emotionally connect with brands.

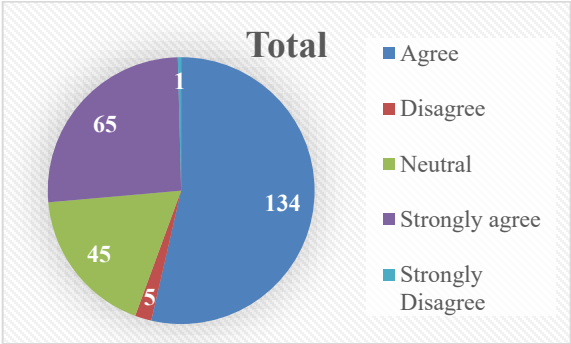
Scale	Artificial Intelligence (AI) personalization helps you to emotionally connect with brands.
Agree	116
Disagree	34
Neutral	53
Strongly agree	45
Strongly Disagree	2
Grand Total	250



Interpretation:
Respondents believe AI enhances convenience, improves satisfaction, and reduces friction across touchpoints such as browsing, purchasing, and support.

11. Artificial Intelligence (AI)-based support provides quicker responses than traditional customer service.

Scale	Artificial Intelligence (AI)-based support provides quicker responses than traditional customer service
Agree	134
Disagree	5
Neutral	45
Strongly agree	65
Strongly Disagree	1
Grand Total	250



Interpretation:
Young users prefer AI interfaces over manual/older systems. Supports AI superiority in decision-making and preference matching — Objective 2.

12. Artificial Intelligence (AI) engagement feels less personal than traditional methods.

Scale	Artificial Intelligence (AI) engagement feels less personal than traditional methods.
Agree	118
Disagree	22
Neutral	59
Strongly Agree	50
Strongly disagree	1
Grand Total	250

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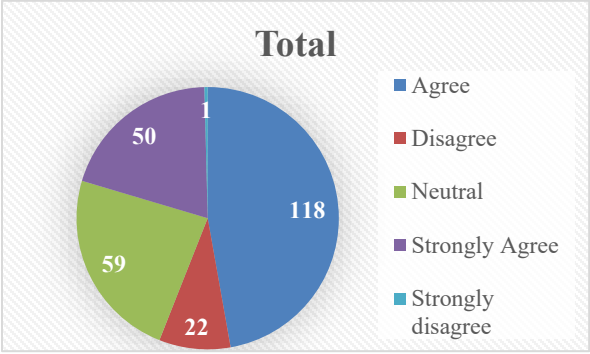
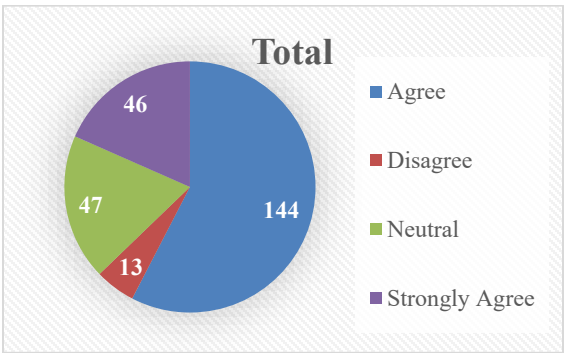


Interpretation:

Most respondents enjoy interactive AI features such as voice search, chatbots, or personalized dashboards, perceiving them as modern and user-friendly.

13. Artificial Intelligence (AI) systems offer more accurate insights into customer preferences than manual methods

Scale	Artificial Intelligence (AI) systems offer more accurate insights into customer preferences than manual methods
Agree	144
Disagree	13
Neutral	47
Strongly Agree	46
Grand Total	250

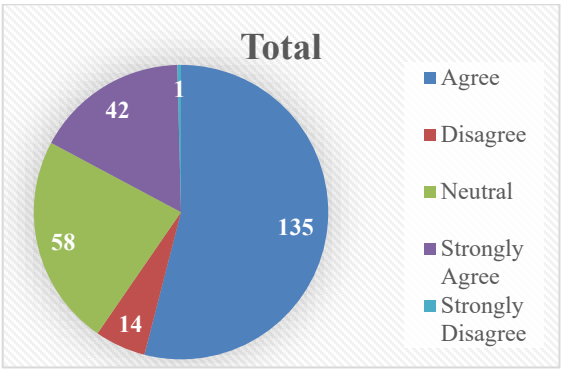


Interpretation:

Respondents believe AI provides quick responses, instant recommendations, and efficient troubleshooting, improving overall user efficiency.

14. Traditional approaches lack the efficiency and convenience provided by Artificial Intelligence (AI).

Scale	Traditional approaches lack the efficiency and convenience provided by Artificial Intelligence (AI).
Agree	135
Disagree	14
Neutral	58
Strongly Agree	42
Strongly Disagree	1
Grand Total	250



Interpretation:

Many respondents feel human-based systems are slower and less personalized. AI is preferred for speed and simplification of repetitive tasks.

15. A balanced mix of Artificial Intelligence (AI) and human interaction ensures the best customer experience.

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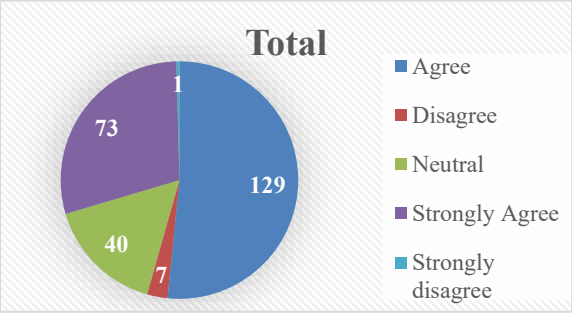
ES (2026) 22, 5(S), 08-28 | ISSN:1505-4683

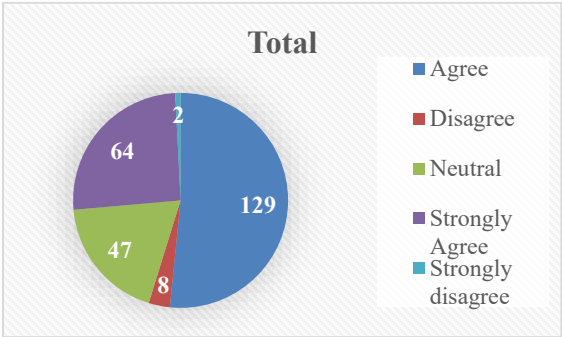
Scale	A balanced mix of Artificial Intelligence (AI) and human interaction ensures the best customer experience.
Agree	129
Disagree	7
Neutral	40
Strongly Agree	73
Strongly disagree	1
Grand Total	250



Interpretation:
Consumers prefer **hybrid service models**—initial AI support with human escalation for complex issues. Balance improves satisfaction.

16. Artificial Intelligence (AI) systems sometimes fail to understand your queries correctly.

Scale	Artificial Intelligence (AI) systems sometimes fail to understand your queries correctly.
Agree	129
Disagree	8
Neutral	47
Strongly Agree	64
Strongly disagree	2
Grand Total	250



Interpretation:

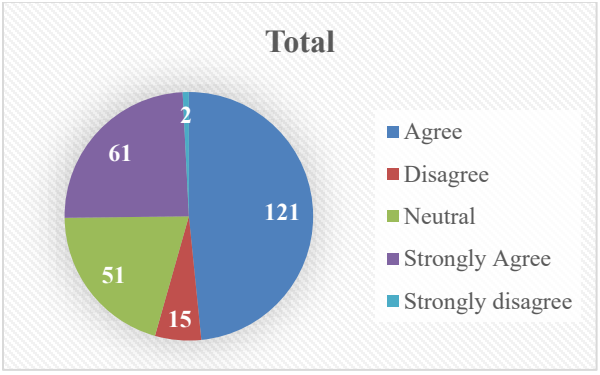
Many agree, showing accuracy-related frustration.

Major limitation: AI is not always accurate —

Objective 4.

17. Lack of human empathy in AI reduces emotional satisfaction.

Scale	Lack of human empathy in Artificial Intelligence (AI) reduces emotional satisfaction.
Agree	121
Disagree	15
Neutral	51
Strongly Agree	61
Strongly disagree	2
Grand Total	250



Interpretation:
Many respondents agree that AI lacks emotional

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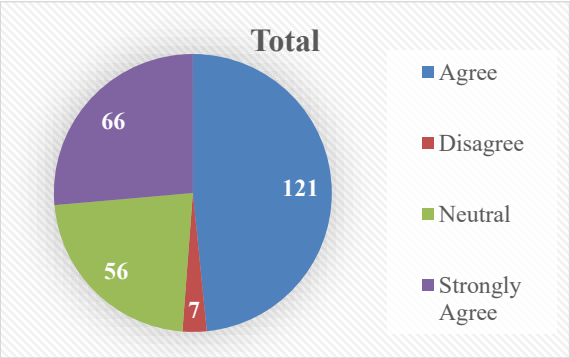
ES (2026) 22, 5(S), 08-28 | ISSN:1505-4683

understanding. AI's inability to show empathy is a major limitation in service interactions.

18. Responsible use of Artificial Intelligence (AI) creates opportunities for more personalized and innovative services

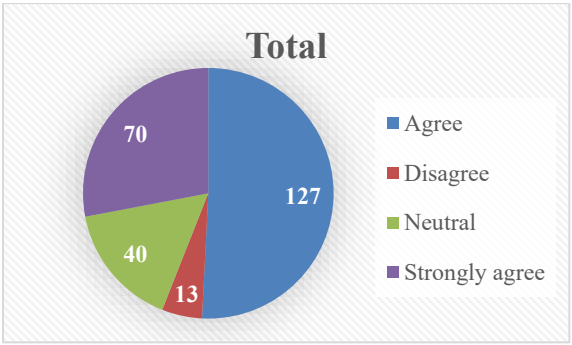
Scale	Responsible use of Artificial Intelligence (AI) creates opportunities for more personalized and innovative services.
Agree	121
Disagree	7
Neutral	56
Strongly Agree	66
Grand Total	250



Interpretation:
Responsible data practices—fairness, transparency, accuracy—are essential. Customers want reassurance that their data is not misused.

19. Data privacy and security are key challenges in Artificial Intelligence (AI)-based engagement.

Scale	Data privacy and security are key challenges in Artificial Intelligence (AI)-based engagement.
Agree	127
Disagree	13
Neutral	40
Strongly agree	70
Grand Total	250



Interpretation:
High agreement: young customers worry about data leakage, tracking, or misuse. Strongly supports Objective 3 — privacy is a barrier.

20. Overreliance on AI may reduce human connection in customer relationships.

Scale	Overreliance on Artificial Intelligence (AI) may reduce human connection in customer relationships.
Agree	126
Disagree	13
Neutral	44
Strongly agree	66
Strongly disagree	1
Grand Total	250

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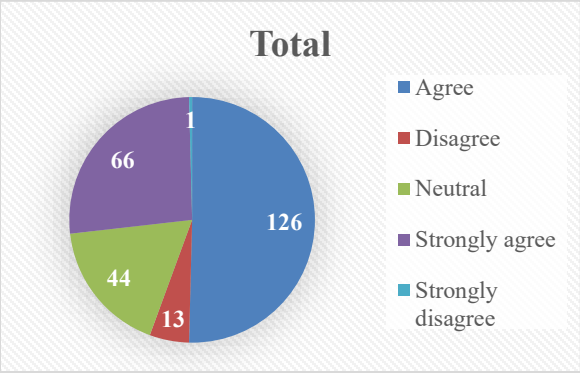
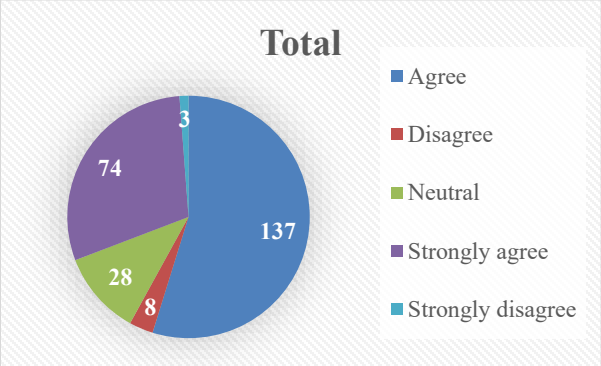


Interpretation:
Respondents fear excessive dependence on AI for decisions, communication, and learning may weaken human analytical or interpersonal skills.

21. AI should complement, not replace humans support in customer service

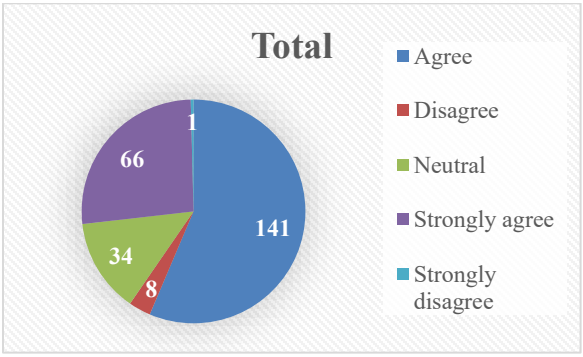
Scale	Artificial Intelligence (AI) should complement, not replace, human support in customer service.
Agree	137
Disagree	8
Neutral	28
Strongly agree	74
Strongly disagree	3
Grand Total	250



Interpretation:
Strong agreement indicates that consumers want AI to **support** humans—not replace human jobs or interactions entirely.

22. Regular feedback can improve AI system performance.

Scale	Regular customer feedback can improve Artificial Intelligence (AI) system performance.
Agree	141
Disagree	8
Neutral	34
Strongly agree	66
Strongly disagree	1
Grand Total	250



Interpretation:
Respondents believe giving feedback helps algorithms improve accuracy and personalization. Users are open to participating in this improvement.

23. Transparency in AI data usage increases customer trust

Scale	Transparency in Artificial Intelligence (AI) data usage increases customer trust.
Agree	134
Disagree	14
Neutral	43
Strongly agree	59
Grand Total	250

Economic Sciences
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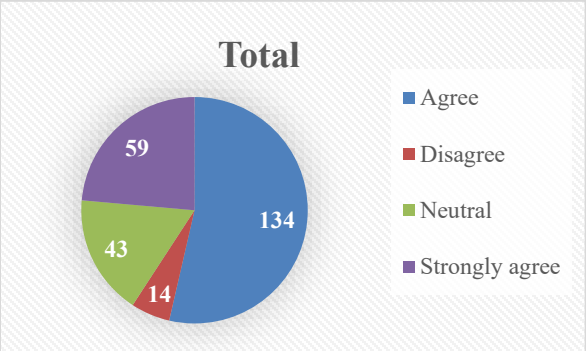
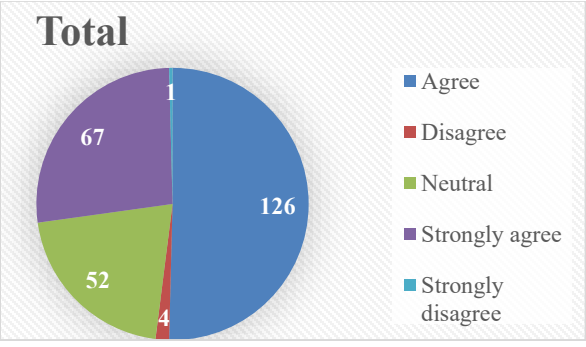


Interpretation:

Most agree: customers want brands to openly communicate how AI uses their data. A clear direction for recommendations — Objective 5.

24. Continuous AI technology enhance satisfaction and efficiency.

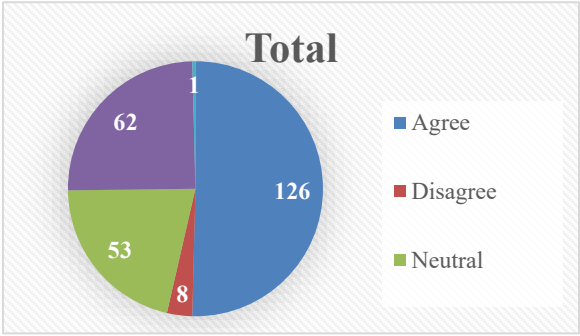
Scale	Continuous updates in Artificial Intelligence (AI) technology enhance satisfaction and efficiency.
Agree	126
Disagree	4
Neutral	52
Strongly agree	67
Strongly disagree	1
Grand Total	250



Interpretation: Users believe regular improvements make AI more reliable and useful. Supports the need for innovation — Objective 5

25. You prefer Artificial Intelligence (AI) to handle routine tasks, while humans manage complex issues

Row Labels	You prefer Artificial Intelligence (AI) to handle routine tasks, while humans manage complex issues.
Agree	126
Disagree	8
Neutral	53
Strongly agree	62
Strongly disagree	1
Grand Total	250



Interpretation:

Clear preference for blended approach: AI handles simple tasks while humans handle sensitive/problematic tasks. Supports Objective 4 and 5 — balanced AI-human model.

7. Finding

Major Observations

1. Most users feel that AI enables services to be delivered faster, easier, and with greater convenience.

2. When AI provides customized recommendations, users feel more compelled to use the service and make decisions with it.
3. Users have concerns about privacy but are more likely to trust brands if the brand can adequately communicate the way their data will be utilized.
4. Users want to use AI for basic tasks, however, they would still prefer assistance from a human for difficult or emotion-based activities.

Trends

a. The use of personalized services increases the likelihood of returning to a particular platform when accurate personalized recommendations are provided.
b. AI provides a considerable amount of time savings, and will enable the user to make simpler decisions.
c. Privacy can result in a loss of trust and have an impact on the total amount of service utilized by the user.
d. Users find it difficult to develop emotional attachment with AI, as it does not possess empathy.

8. Discussion

With the development of artificial intelligence, there are now new opportunities for both consumers and decision-makers alike. Customers are affected by AI because it creates efficiencies in processes, so products and services will be easier to understand and use. However, despite these benefits, AI does present a risk to the independence of consumers' choices and free will because AI is capable of segmenting, targeting, and recommending products or services through data.

Artificial intelligence will enable businesses to analyze their customers' data and hence provide them with a customized experience. By analyzing how customers interact with products and services, through the use of algorithms, businesses can identify behaviours and trends to better predict the needs of their customers, ultimately providing them with a more personalized and engaging experience. The use of AI can provide customer support 24/7 through chatbots, which will increase the level of satisfaction for the customer and lighten the load for customer support teams.

AI contributes to improved customer support, which is evident through increased levels of customer satisfaction. The satisfaction levels of customers show that through using AI as integration with customer support systems, the overall quality of customer service has increased. The levels of customer satisfaction have increased due to AI chatbots being able to answer and resolve a variety of customer service-related inquiries and assist in providing smoother and more effective interactions.

9. Conclusion

This research investigates the impact of Artificial Intelligence on customer engagement and experience in today’s digital world. The findings indicate that AI provides significant improvements to customer convenience, personalization, and overall quality of interaction. Customers, particularly younger adults, regard AI-driven technologies as valuable and helpful

for facilitating satisfaction, engagement, and loyalty to brand names. AI-based features such as recommendation systems, personalized service delivery, and rapid problem resolution enhance the ease with which customers can obtain products/services and create seamless online experiences.

While the findings indicate numerous advantages associated with using AI, the study did uncover additional areas of concern regarding their use, including data protection, emotional limits of AI use, and occasional inaccuracies within AI systems. Results demonstrate that consumers prefer a blended approach that incorporates an automated response (AI) for less complex/simple tasks and human intervention for more complex/sensitive issues.

Overall, the findings of this study support the assertion that AI positively influences customer engagement and experience. Furthermore, the study points to the need for organizations to utilize AI methods very ethically and transparently regarding customer data handling. For businesses, legislators, and researchers looking to enhance the quality of their customer interactions through AI, this study provides relevant data.

10. Recommendations

Companies must build and employ artificial intelligence ethically & in a transparent manner by disclosing to consumers how their data is collected and used. Additionally, companies should strive towards improving the accuracy of personalisation via the use of a broad combination of multiple data sets. There should be an appropriate balance between artificial and human involvement in customer service, and companies should conduct regular reviews of the performance of AI in order to constantly improve its effectiveness. Consumers should have an increased understanding of the capabilities and limitations of AI, and they should also provide organisations that work with AI with the necessary feedback to enhance their operations. Data should be exchanged in a secure manner in order the protect the confidential nature of individual data.

Policymakers must establish robust regulations to ensure that AI is employed in an accountable manner. They must also create transparency for platforms that utilise algorithms and establish strict data protection legislation that complies with worldwide standards. Future researchers should involve people from various cultures and backgrounds in their studies. Furthermore, researchers must study how artificial intelligence influences the emotional and psychological aspects of interaction between individuals. They may utilise advanced techniques such as structural equation modelling and network classification to further their research. Lastly, researchers must examine specific sectors, including healthcare, education, finance, and hospitality, to gain greater insight into the effects of AI technology in these fields.

11. Limitations of the Study

Some limitations of our study include

- The small sample size of only 250 subjects is not sufficiently representative of the entire population of AI users.
- The geographic area of study is limited, and most participants were between 20 and 25 years old; therefore, it may not be applicable to different geographic areas or other age groups.
- The study was completed within a short timeframe, which did not allow enough time to perform a thorough analysis of the data or to identify patterns in the data, nor to employ more complex methodologies.
- The data was obtained through self-reports of the participants, which may be impacted by personal bias or errors made by respondents.
- There was a narrow focus on AI technologies and therefore excluded other important factors such as emotional intelligence, quality of design, cultural differences, and long-term user experience.

12. Future Scope

Even though current studies give us a good understanding of how AI is transforming the ways customers interact with and experience services in a digital environment, a few significant areas that still warrant greater investigation remain unexamined; the answering of the aforementioned gaps will lead to a more complete and clearer understanding of the concept of A.I. as well as provide more guidance for businesses.

A. New areas of research:

Future studies should move from a focus strictly on the basic forms of A.I., such as chatbots, to include newer technologies including Generative A.I.; Agentic A.I.; multimodal or cross-channel assistants; and emotionally intelligent bots. Researchers should also explore how A.I. contributes to the creation of experiences via multiple channels and investigate how A.I. impacts customers' feelings, their concerns regarding ethical issues, fairness, privacy, and overall well-being. Investigating how different cultures respond to A.I. would also add value to this line of inquiry since usage of A.I. may vary from one culture to the next.

B. Methodologies:

Future research should not rely solely upon using surveys as a data collection methodology; rather it should use multiple methods such as in-depth, semi-structured interviews; focus groups; longitudinal studies; A/B testing; and advanced statistical modeling. There is also a need for improved measurement techniques for emotional, ethical, and trust-related components of customer experience with A.I. The application of the principles of psychology, human-computer interaction; behavioral economics; and data science will add completeness and accuracy to theoretical development.

C. Additional or Alternative Dataset Selection

These datasets should also be both larger (i.e., more respondents) and have more variation (i.e., a variety of industries, countries, etc.). Longitudinal datasets have been shown to be great for showing any changes that occur due to changes in trust, loyalty and engagement

over time. Behavioural datasets have also been shown to provide insight into how customers behave as a result of their use of AI/ML tools; examples of these types of datasets include chatbot logs, user travel paths and personalized databases. These three factors combined will allow for improved customer journey modelling driven by AI.

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