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A Study on Investigating the Role of Artificial Intelligence in Enhancing Customer Service Experience in Meesho E- Commerce Business with Special Reference to Engineering College Students, Erode District - Tamil Nadu

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ABSTRACT: The purpose of this study is to thoroughly examine how artificial intelligence may improve the Meesho E-commerce company's customer care offerings, with an emphasis on engineering college students in Tamil Nadu Erode District. In today's corporate environment, online shopping has become a necessary everyday activity and offering customer support has become a crucial differentiation. Artificial Intelligence has the ability to complete the transform customer service operations through task automation, interface personalization and speed response times.

KEYWORDS: Artificial Intelligence (AI), Customer Service Experience and Meesho.

I. INTRODUCTION

Artificial intelligence integration is playing a bigger role in customer care experiences in the quickly changing e-commerce industry. With a focus on engineering college students specifically, this study looks at how AI can improve customer service in the context of Meesho, as well-known social commerce platform. The Global e-commerce has grown at an exponential rate due to a number of causes, include evolving consumer behavior, expanding internet access and technological improvements. Better customer service has become essential as e-commerce businesses look to set themselves apart and keep a competitive edge. However, modern consumers who are digitally expect personalized encounters and quick answers to their questions and traditional customer service approaches frequently find it difficult to keep up with their expectations.

FACTORS OF THE STUDY:

1. Customer Engagement and Satisfaction:

AI-powered chat bots and virtual assistants provide engaging and interactive customer service experiences, making interactions more dynamic and enjoyable for users. Sentiment analysis tools help Meesho understand customer feedback by analyzing reviews, social media mentions, and direct feedback, which allows the company to identify areas for improvement and enhance customer satisfaction.

2. User Experience Enhancement:

NLP capabilities allow AI to understand and respond to user queries in a more natural and human-like manner, improving the overall user experience and making interactions smoother. AI-driven voice assistants can help users navigate the platform, place orders, and answer questions through voice commands, making the service more accessible and convenient, especially for users who prefer verbal interaction.

STATEMENT OF THE PROBLEM:

This project aims to solve the quickly changing e-commerce sector; artificial intelligence (AI) is playing an increasingly important role in improving customer experience. However, little is known about the precise effects and efficacy of AI in this setting, particularly with regard to the targeted populations. Leading e-commerce company Meesho is at the forefront of using AI to enhance customer support processes. With an emphasis on the expectations and views of engineering college students, this study intends to investigate how AI may be used to improve customer service experiences. This group, renowned for its critical comprehension of digital technologies and tech-savings, provides unique insights into the possible advantages and difficulties of implementing AI.

OBJECTIVES OF THE STUDY:

- To examine how AI tools, improve users' overall experiences with customer service.
- To list the AI-driven features or technologies that Meesho has put in place to raise customersatisfaction.
- To evaluate how well AI algorithms, comprehend and handle questions or problems fromcustomers.

RESEARCH METHODOLOGY:**TYPE OF RESEARCH:**

- Descriptive Research

SAMPLE DESIGN:

- Simple Random sampling

SAMPLE SIZE:

- The sample of 100 women's is chosen in this study.

DATA COLLECTION:

- Primary data
- Secondary data

STATISTICAL TOOLS USED:

1. ANOVA
2. Factor Analysis

II. REVIEW OF LITERATURE**AbetarePrebreza, BleronaShala (2022):**

Found that a few things directly affect consumer trust when it comes to online buying. The subject of which factors influence client trust in online shopping is a persistent conundrum in the business. In order to ascertain the relationship between customer trust and certain online buying characteristics, this study analyses customer satisfaction using empirical research conducted on the Kosovo market during the Covid-19 period.

Baljeet Kaur, S. M. (2022):

Discovered that a few key characteristics significantly influence consumer trust when it comes to online buying. The subject of which factors influence client trust in online shopping is a persistent conundrum in the business. In order to ascertain the relationship between customer trust and certain online buying characteristics, this study analyses customer satisfaction using empirical research conducted on the Kosovo market during the Covid-19 period.

Fereshte Rasty, Seyyed Habibollah Mirghafoori (2022):

Using a mix of the FMEA, entropy, and VIKOR approaches in an intuitionist fuzzy environment, 21 barriers that affect consumers' trust in online buying were identified and prioritized. They discovered that social media danger, privacy risk and loss of feel and touch involved with online transactions are the four biggest obstacles to trust. Marketing managers should priorities enhancing and publicizing the infrastructure security of their e-commerce websites, as well as featuring positive customer reviews, to build consumer trust.

David Gefen, E. K. (2021):

I learned that meeting customers' expectations is the key to gain their loyalty. Because the items purchased online are intangible, it's critical to establish client trust. The study's findings support the notion that consumer trust plays a mediating role in enhancing customer loyalty with relation to subsequent purchases and consumption of the specific good or service in an online setting.

III. ANALYSIS AND INTERPRETATION**1. ONE - WAY - ANOVA:****ANOVA test for Gender and Meesho's AI-driven personalized shopping experience**

Ho= There are no significant relationship between gender and Meesho AI-driven personalized shopping experience

H1= There are significant relationship between gender and Meeho AI-driven personalized shopping experience

1.1 Table from the Age and Meesho's AI-driven personalized shopping experience.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Gender	5	200	40	4800		
AI-driven personalized shopping	5	200	40	1510		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0	1	0	0	1	5.317655
Within Groups	25240	8	3155			
Total	25240	9				

INTERPRETATION:

As the P value is lesser than Sig. Value (0.01 and 0.05) all the 2 cases gender the Null Hypotheses are accepted. Hence, it is concluded that there is a statistically significant difference among the gender of the respondents with respect to the AI-driven personalized shopping experience.

ANOVA test for age and AI-driven features and technologies

Ho= There are no significant relationship between age and AI-driven features and technologies

H1= There are significant relationship between age and AI-driven features and technologies

1.2 Table from the age and AI-driven features and technologies.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AGE	5	200	40	1126		
AI-driven features and technologies	5	200	40	2956		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0	1	0	0	1	5.317655
Within Groups	16328	8	2041			
Total	16328	9				

INTERPRETATION:

As the P value is lesser than Sig. Value (0.01 and 0.05) all the 4 cases age the Null Hypotheses are accepted.

Hence, it is concluded that there is a statistically significant difference among the age of the respondents with respect to the AI-driven features and technologies.

2. FACTOR ANALYSIS:

Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business by Using Servqual Scale through Factor Analysis

Students respondents are enquired with the servqual scale modified for the research. The responses are recorded in a five point liker scale ranging from ‘strongly agree’ to ‘strongly disagree’. The items in the scale with the variables studied are given in table 2.

Table 2: Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business students Respondents (Scale Items)

Dimensions	Items in the Scale
1. AI powered customer service tool AI tool customer service inquiries effectively	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
2. AI tool customer service inquiries effectively	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
3. Rate the accuracy of AI driven	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
4. AI tool resolving	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
5. AI powered overall speed issue resolution	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
6. AI driven personalized shopping experience	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
7. AI driven feedback analysis	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree

8. Meesho AI based product search	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
9. AI powered chat bot	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree
10. AI driven future and technology in MEESHO	Strongly agree
	Agree
	Neutral
	Disagree
	Strongly disagree

It is difficult for the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business students Respondents. Exploratory factor analysis is conducted to identify the major students Respondents are concentrate on. The results of the analysis are presented in the following tables.

TABLE: 3 Kmo And Bartlett's Test For Respondents of the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.747
Bartlett's Test of Sphericity	Approx. Chi-Square	363.280
	Df	45
	Sig.	.000

Sampling adequacy is sufficient enough to interpret the results of factor analysis as the Kaiser-Meyer-Olkin (KMO) measure is above 0.5. Chi-square test value of Bartlett's Test of Sphericity is significant enough as the significance value is 0.000 which is lesser than 0.05 at 5 percent level of significance. Factors derived with principal component method with their squared loadings are presented in total variance explained table.

Communalities		
	Initial	Extraction
AI powered customer service tool	1.000	.328
AI tool customer service inquiries effectively	1.000	.641
rate the accuracy of AI driven	1.000	.451
AI tool resolving	1.000	.643
AI powered overall speed issue resolution	1.000	.579
AI driven personalized shopping experience	1.000	.441
AI driven feedback analysis	1.000	.439
Meesho AI based product search	1.000	.553
AI powered chat bot	1.000	.567
AI driven future and technology in MEESHO	1.000	.734

Extraction Method: Principal Component Analysis.

TABLE: 4 Total Variance Explained For students Respondents of the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business.

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.120	31.195	31.195	3.120	31.195	31.195
2	1.241	12.407	43.603	1.241	12.407	43.603
3	1.016	10.165	53.768	1.016	10.165	53.768
4	.987	9.871	63.638			
5	.877	8.775	72.413			
6	.746	7.456	79.869			
7	.602	6.016	85.885			
8	.550	5.504	91.389			
9	.465	4.647	96.037			
10	.396	3.963	100.000			
Total Variance Explained						
Component	Rotation Sums of Squared Loadings					
	Total	% of Variance	Cumulative %			
1	2.428	24.281	24.281			
2	1.502	15.016	39.297			
3	1.447	14.471	53.768			
4						
5						
6						
7						
8						
9						
10						

Extraction Method: Principal Component Analysis.

Total variance explained table explains that 3 factors are extracted as important from the 10 variables identified. The explanatory power of these variables to understand the expectations of women safety devices is to the extent of 53.768percent. The factors identified are extracted by Varimax rotation and explained with the help of rotated component matrix.

Table: 5 Rotated Component Matrix For Respondents Of the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business.

Component Matrix ^a			
	Component		
	1	2	3
AI tool resolving	.727		
AI powered overall speed issue resolution	.701		
AI driven personalized shopping experience	.634		
AI driven feedback analysis	.619		
rate the accuracy of AI driven	.557		
AI powerd customer service	.553		

tool			
Meesho AI based product search	.527		
AI powered chat bot		.657	
AI driven future and technology in MEESHO		.593	.515
AI tool customer service inquiries effectively			.630

Extraction Method: Principal Component Analysis. ^a

a. 3 components extracted.

Rotated Component Matrix ^a			
	Component		
	1	2	3
AI powered overall speed issue resolution	.740		
rate the accuracy of AI driven	.671		
AI driven feedback analysis	.617		
AI driven personalized shopping experience	.578		
AI powered customer service tool			
AI powered chat bot		.736	
AI driven future and technology in MEESHO		.718	
Meesho AI based product search		.602	
AI tool customer service inquiries effectively			.794
AI tool resolving	.553		.578

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. ^a

a. Rotation converged in 6 iterations.

The factors extracted are identified with the loadings (above 0.7) irrespective of sign, and are listed below in the order of extraction. These are the major student's respondents in the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business.

Factor 1: AI powered customer service tool AI tool customer service inquiries effectively

Factor 2: AI tool customer service inquiries effectively

Factor 3: Rate the accuracy of AI driven

Respondents Of the Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business as revealed in the factor analysis are:

The Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business with the servqual scale modified for the research. The responses are recorded in a 5 point likert scale ranging from 'strongly agree' to 'strongly disagree'. It is difficulties for respondents of Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business. Exploratory factor analysis is conducted to identify the major respondents. Total variance explained table explains that 3 factors are extracted as important from the 10 variables identified. The explanatory Role of artificial intelligence in enhancing customer service experience in Meesho e-commerce business power of these variables to is to the extent of 53.768 percent. The major students are: **Factor 1:** AI powered customer service tool AI tool customer service inquiries effectively, **Factor 2:** AI tool customer service inquiries effectively, **Factor 3:** Rate the accuracy of AI driven.

IV. CONCLUSION

The research highlights the revolutionary potential of AI-driven solutions in the field of customer service. Specifically, the study looks at how Meesho's e-commerce platform uses artificial intelligence (AI) to improve the customer service experience for engineering college students in the Erode District of Tamil Nadu. Over the course of the study, it has become more and more clear that artificial intelligence (AI) technologies are revolutionizing many aspects of customer happiness and engagement. Meesho's cutting-edge AI algorithms and machine learning approaches enable it to precisely predict client preferences, offer tailored recommendations, and expedite customer inquiries. Because of their unique demographics—such as high rates of digital literacy and a tendency towards technology adoption—Engineering College Students in the Erode District are given special attention. Consequently, this particular group of people provides an excellent means of testing the effectiveness of AI-powered improvements to customer service.

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