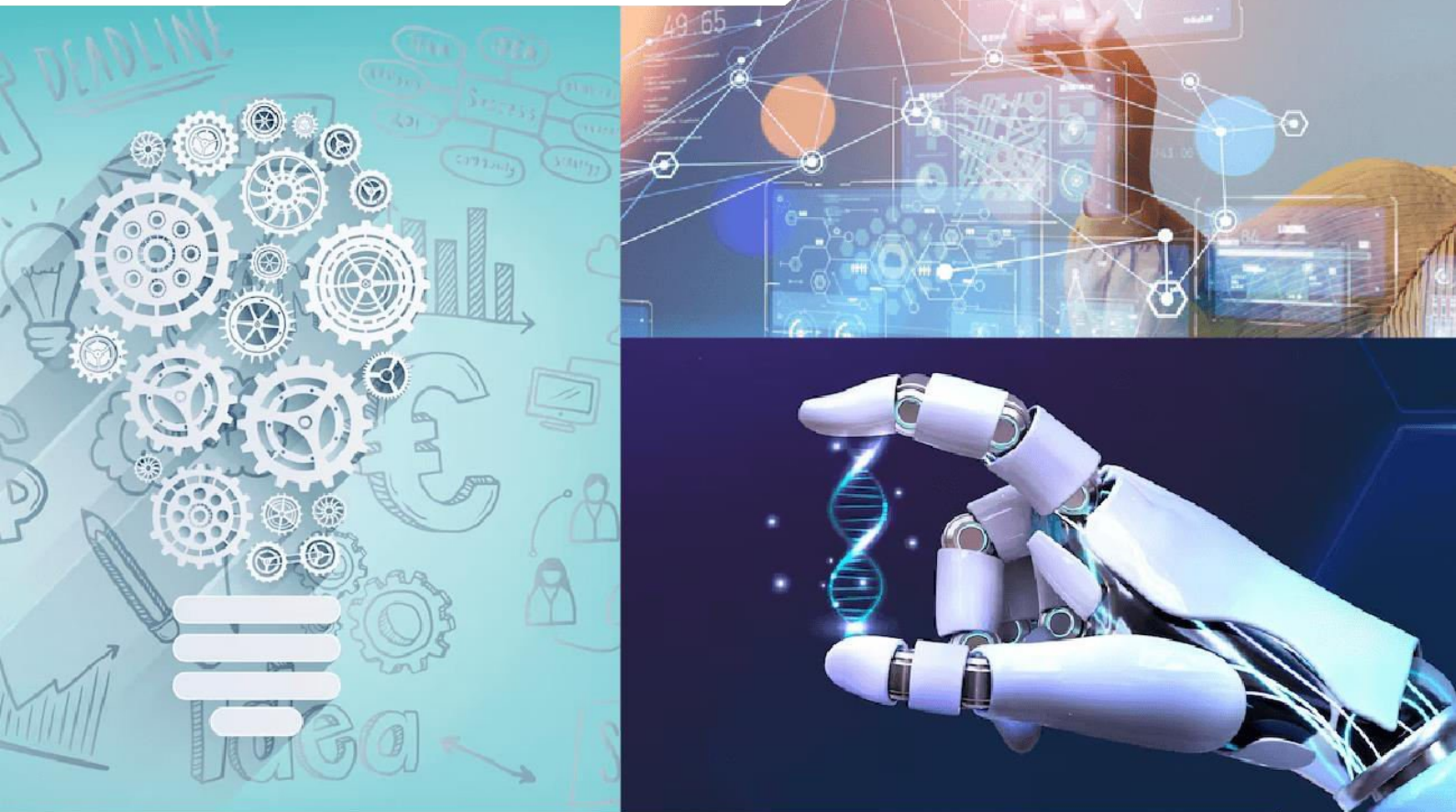




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Role of Technology in Enhancing Customer Service in Public Sector Banks (PSBs)

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ABSTRACT: Technology acts as a key driving force in recent times for transformation in the banking sector particularly in Public Sector Banks (PSBs), where improving customer service has become a strategic priority. This paper studies about the role of technology in enhancing customer service delivery in PSBs by highlighting how technologies such as core banking systems, mobile and internet banking, data analytics, and self-service channels and adoption of various digital banking platforms have significantly improved service efficiency, accessibility, and responsiveness.

This paper further studies about the impact of technology on customer satisfaction, operational effectiveness, and relationship management. With the help of technology, the transaction time has drastically reduced and made easier with personalised services and 24/7 availability but it still has its flaws like the digital illiteracy gap, cybersecurity and resistance from customers to change.(technology, customer service, digital banking services, customer satisfaction, public sector banks)

I. INTRODUCTION

In earlier days, banking activities were limited to just the functions of facilitating deposits and lending loans to their customers backed up with other basic financial services that are provided through their physical branches. Since there has been an entry of private and foreign banks, the customer expectation level has become higher, and the requirement of banks focusing on offering quality services, maintaining customer satisfaction and efficiency is necessary.

The evolution of technology has made way for new concepts such as Core Banking System (CBS), ATM, internet banking, mobile banking, digital payments (UPI, QR code, digital wallet, card, NEFT, RTGS, IMPS), artificial intelligence (AI), and analytics, thus making the banking industry move into a new era.

Although modern banking offers many benefits, such as saving time and cost and providing round-the-clock accessibility, along with more transparency, it also faces a few challenges. Hence banks must have a clear balance between both and maintain trust, reliability and security among its customers.

In light of this, it is essential to understand how technology helps to improve customer service in public sector banks. This paper analyses how the technology influences the quality customer service, customer satisfaction and overall performance of the banks. It mainly concentrates on the merits and demerits of technology in enhancing the customer service.

OBJECTIVES OF THE STUDY:

- To study how technology influences customer satisfaction with technology-enabled services in Public Sector Banks.
- To study the technological tools and digital initiatives adopted by PSBs.
- To analyse the role of technology in improving banking efficiency and service delivery.
- To study the impact of demographic factors on the usage of digital banking services.

II. REVIEW OF LITERATURE

❖ Dua, K. (2025)

Title: *A Comparative Assessment of Digital Banking Quality and Satisfaction Among Rural Users of Private and Public Sector Banks*

The present study has highlighted the importance of customer satisfaction from the digital banking services among rural customers. Although technology has helped to enhance accessibility in rural areas, digital banking is still not widely used because of lower levels of digital literacy among customers. Those who regularly utilized digital banking services were highly satisfied. The necessity to raise awareness about digital banking was highlighted by the researcher.

❖ Saraswati & Netra Pal Singh (2024)

Title: *A Study of E-Banking Services in Public Sector Banks in India*

The study has evaluated the efficiency of using e-banking services in the case of public sector banks in India. It has been noted that digital technologies make it possible to provide customer services through an efficient banking platform where clients are capable of transferring money, paying bills, checking account balance, etc., without going to bank branches. The necessity to develop technology continuously has been mentioned by the author.

❖ Verma, J. P. et al. (2023)

Title: *Comparative Analysis of Online Services of Public and Private Sector Banks of India in Terms of Customer Satisfaction*

This research examined the comparison between customers' satisfaction among public and private sector banks in relation to online facilities provided. The research indicated that digital facilities play an important role in affecting the level of satisfaction among customers. Although private banks had higher scores on the advancement of facilities, there was significant progress made by public banks as well in adopting technology.

III. RESEARCH METHODOLOGY

- **Research Design:** Descriptive study was used to study the quality customer service provided to the customer.
- **Data Sources:** Both primary and secondary data
- **Primary Data Source:** Structured questionnaire divided into 4 parts.
- **Secondary Data Source:** Books, journals, reports, bank publications, websites
- **Sampling Technique:** convenience sampling
- **Sampling size:** The data was collected from 119 respondents.
- **Area of Study:** Tamil Nadu
- **Data Analysis Tools:**
 - Percentage analysis
 - Statistical analysis (regression, correlation, chi-square)

Data Analysis and Interpretation:

Demographic Profile

The study reveals that majority (52.1%) of the respondents are in the below 25 age categories. Around 43.7% of them are students and 42% of respondents are undergraduates. With response to various PSBs, many (37.8% and 35.3%) hold their accounts in Indian Overseas Bank and State Bank of India respectively.

Usage Of Technology

With the help of the study, we can understand that UPI/digital payment services (72.9%) are predominantly used by the customers for the purpose of fund transfers (60.5%) or for payment of bills (54.6%). It is also noticed that around 44.5% of respondents use the services on a daily basis and majority (46.2%) feels comfortable in using the digital banking services.

Customer Experience

Particulars	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Easy to use	41.7	38.3	16.7	0.8	2.5
Saves time	46.7	32.5	18.3	1.7	0.8
Reliability	30	42.5	23.3	3.3	0.8

Secure	25.8	42.5	27.5	0.8	3.3
No errors	18.3	27.5	28.3	18.3	7.5
Better communication	21.7	45.8	19.2	8.3	5

Satisfaction And Issues

It is evident from the study that even though various issues like server issues (73.9%), transaction failures (554%) and app problems (38%) are faced by the customers and there are still concerns over security (16.5%) like cybercrime and privacy, 62.2% of the respondents are satisfied with the services provided to them. It is also noticeable that 47.1% of the people has a future preference of combination of both digital and banking services.

IV. REGRESSION ANALYSIS: CUSTOMER SATISFACTION IN PUBLIC SECTOR BANKS WITH RESPECT TO TECHNOLOGY ENABLED SERVICES.

HYPOTHESIS TESTING:

H0: Technology-enabled banking services have **no significant impact** on customer satisfaction in Public Sector Banks.

H1: Technology-enabled banking services have **significant impact** on customer satisfaction in Public Sector Banks.

Coefficients ^a						
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.101	.350		6.009	<.001
	easy to use	.053	.074	.072	.718	.474
	saves time	.065	.080	.083	.809	.420
	secured	.080	.077	.110	1.036	.302
	reliable	.196	.083	.252	2.371	.019
	works without errors	.143	.052	.254	2.780	.006
	better communication	-.026	.068	-.041	-.384	.702

a. Dependent Variable: customer satisfaction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.513 ^a	.264	.224	.59286

a. Predictors: (Constant), better communication , saves time, works without errors, easy to use , reliable, secured

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.096	6	2.349	6.684	<.001 ^b
	Residual	39.366	112	.351		
	Total	53.462	118			

a. Dependent Variable: customer satisfaction

b. Predictors: (Constant), better communication , saves time, works without errors, easy to use , reliable, secured

INTERPRETATION: Since the significance value ($p < 0.05$) shows that the regression equation is statistically significant, the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is evident that technology-based services have a significant impact on customer satisfaction.

V. CORRELATION ANALYSIS: RELATIONSHIP BETWEEN THE USE OF TECHNOLOGY AND SERVICE QUALITY/EFFICIENCY IN PUBLIC SECTOR BANKS.

HYPOTHESIS TESTING:

H0: There is **no significant relationship** between the use of technology and service quality/efficiency in Public Sector Banks.

H1: There is **significant relationship** between the use of technology and service quality/efficiency in Public Sector Banks.

Correlations

		easy to use	saves time
easy to use	Pearson Correlation	1	.482 ***
	Sig. (2-tailed)		<.001
	N	119	119
saves time	Pearson Correlation	.482 ***	1
	Sig. (2-tailed)	<.001	
	N	119	119

***. Correlation at 0.001(2-tailed)

INTERPRETATION: The correlation analysis shows that there is a positive and significant relationship between how easy it is in using the digital services and the time saved by using the digital services. Hence alternative hypothesis is accepted.

VI. CHI SQUARE TEST: ASSOCIATION BETWEEN AGE GROUP AND PROBLEMS FACED WHILE USING DIGITAL BANKING.

HYPOTHESIS TESTING:

H₀: There is **no significant association** between age group and problems faced while using digital banking.

H₁: There is a **significant association** between age group and problems faced while using digital banking.

Crosstabs

[DataSet1]

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
age group * issues faced	119	100.0%	0	0.0%	119	100.0%

age group * issues faced Crosstabulation

age group		issues faced		Total
		yes	no	
below 25	Count	40	22	62
	Expected Count	40.1	21.9	62.0
	% within age group	64.5%	35.5%	100.0%
25-40	Count	21	8	29
	Expected Count	16.8	10.2	29.0
	% within age group	72.4%	27.6%	100.0%
40-60	Count	11	6	17
	Expected Count	11.0	6.0	17.0
	% within age group	64.7%	35.3%	100.0%
above 60	Count	5	6	11
	Expected Count	7.1	3.9	11.0
	% within age group	45.5%	54.5%	100.0%
Total	Count	77	42	119
	Expected Count	77.0	42.0	119.0
	% within age group	64.7%	35.3%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.541 ^a	3	.468
Likelihood Ratio	2.478	3	.479
Linear-by-Linear Association	.621	1	.431
N of Valid Cases	119		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.88.

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INTERPRETATION: The p-value (0.468) is greater than 0.05, H₀ is accepted, while H₁ is rejected. It can be inferred that there is no significant relationship between the age group and the problems experienced by them while using digital banking. This shows that customers from various age groups face equal problems while using digital banking.

VII. SUGGESTIONS

- ❖ Regular training and awareness programs can be conducted to improve the digital literacy rate of the users, especially the elderly users on the usage of digital banking.
- ❖ Changes on the app's user interface, speed and accessibility must be put as the focal points to provide superior customer service and making them more user friendly.
- ❖ One of the main factors that are to be noted in recent times are the cybersecurity. Hence strong measures are essential to be taken and have to be communicated to the customers to make them feel secure and build trust.
- ❖ Regular upgradations, testing and improvements to be carried forward to have errorless software and for better website/app experience.
- ❖ Continuous interactions with the customers to be maintained so as to collect their personal opinions and feedbacks to make necessary improvements.

VIII. CONCLUSION

From the above study we can understand how introduction of technology has shaped the banking sector over the years. It has brought about a visible change in the economy towards cashless society increasing the dependency over these digital services like UPI, digital payments, mobile banking. These services prove to be easy to use, save time and are convenient.

Despite the various challenges identified like app server down, transaction failures, security concerns, the overall satisfaction among the users remain positive. This indicates that continuous improvements and problems faced are to be addressed faster for enhanced services to be provided.

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