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A STUDY ON IMPACT OF MOBILE BANKING APPS' USABILITY ON CUSTOMER PERCEPTION AND ADOPTION (WITH SPECIAL REFERENCE TO THOOTHUKUDI DISTRICT)

Mr. A. Venkatesan

Reg. No. 21122231011002, Ph.D Research Scholar (Part time – Internal)

PG & Research Department of Commerce,

V.O.Chidambaram College, Thoothukudi – 8, Tamil Nadu, India.

Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 2, Tamil Nadu, India.

Email: venkatesh13com63@gmail.com

Dr. N. Maria Nevis Soris

Head and Associate Professor, PG & Research Department of Commerce,

V.O. Chidambaram College, Thoothukudi – 8, Tamil Nadu, India.

Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 2, Tamil Nadu, India.

Email: mnsoris@yahoo.com

Abstract

This research investigates the impact of mobile banking app usability on customer perception and adoption in Thoothukudi district. As mobile banking continues to grow, its usability plays a significant role in shaping user satisfaction, trust, and the decision to adopt these services. The study identifies key usability factors such as ease of navigation, security, customer service, and the overall user experience. Data from 110 respondents reveals that demographic variables such as age, gender, and occupation influence perceptions and adoption rates. Additionally, barriers such as internet access, security concerns, and app comprehension were identified as major obstacles before adoption. Statistical tests, including ANOVA and Chi-Square, confirm that usability factors, while generally consistent across age and occupation groups, are influenced by certain demographic variables. The findings emphasize the importance of user-friendly design and robust security measures in encouraging wider adoption. This study provides valuable insights for financial institutions to enhance their mobile banking services, ultimately benefiting both users and the industry.

Key words: Mobile banking, trust, E-banking

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Introduction

The swift progress of technology has changed the banking environment, with mobile banking applications becoming a crucial means for financial transactions. In Thoothukudi district, the use of these apps has been shaped by multiple factors, especially ease of use. Usability includes the convenience of use, accessibility, and general user experience of mobile banking apps. As clients progressively depend on digital platforms for their banking requirements, it is crucial to comprehend how usability influences their perception and readiness to embrace these technologies. This research seeks to examine the connection between the usability of mobile banking applications and customer perceptions in Thoothukudi, offering insights into user preferences and behaviors. Through the examination of user input and experiences, the study aims to pinpoint essential usability attributes that improve customer satisfaction and promote adoption rates. The results will not only enhance academic literature but also provide practical suggestions for banks to enhance their mobile services. In conclusion, this study highlights the significance of user-focused design in promoting a favorable banking experience in the digital era.

Statement of the problem

The rise of mobile banking apps has sparked worries about their usability and effects on customer perception and adoption, especially in Thoothukudi district. Even with the increase of these applications, numerous users' express difficulties concerning navigation, accessibility, and general user experience. This lack of consistency in usability may result in frustration, reduced trust, and, ultimately, diminished adoption rates among prospective users. Moreover, the absence of thorough research addressing the unique needs and preferences of Thoothukudi's residents underscores a notable deficiency in grasping how usability affects consumer behavior in this scenario. Tackling these challenges is essential for banks looking to improve their mobile services and fulfill customer expectations. This study aims to determine the main usability elements that influence customer perception and acceptance, offering important insights for both users and financial institutions.

Objectives

- ✓ Identify key usability factors that influence customer satisfaction with mobile banking apps.
- ✓ Assess the relationship between usability and customer trust in mobile banking services.

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- ✓ Evaluate how demographic variables affect user preferences and experiences with mobile banking apps.

Hypothesis

- ✓ There is no significant relationship between age and Usability Assessment factors
- ✓ There is no significant relationship between occupation and Adoption Factors
- ✓ There is no significant relationship between gender and barriers did you face before adopting the app

Research Design

This study employs a descriptive research design to understand the impact of mobile banking apps' usability on customer perception and adoption in Thoothukudi district. A mixed-methods approach will be used, combining both quantitative and qualitative research methods.

Sample Size and Sampling Technique

A sample size of 110 respondents will be selected using a convenience sampling method. This method involves selecting participants who are easily accessible and willing to participate in the study. The sample will be drawn from various demographic groups, including age, gender, occupation, and income levels, to ensure a diverse representation of the target population.

ANALYSIS AND DISCUSSIONS

TABLE NO: 1 DEMOGRAPHIC PROFILE

Age	Frequency	Percent
Below 25years	20	18.2
26years - 35years	54	49.1
35years - 45years	33	30.0
45years - 55years	2	1.8
Above 55years	1	.9
Gender	**Frequency**	**Percent**
Male	62	56.4
Female	48	43.6
Area of residence	**Frequency**	**Percent**
Rural	33	41.3
Urban	47	58.8
Educational Qualification	**Frequency**	**Percent**
High School or below	3	2.7
Diploma	5	4.5
Under graduation	40	36.4
Post - Graduation	22	20.0
Professional qualification	40	36.4

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Occupational status	Frequency	Percent
Private Employee	26	23.6
Govt Employee	21	19.1
Business	21	19.1
Professional	33	30.0
Others	9	8.2
Monthly Income	**Frequency**	**Percent**
Up to Rs. 20000	6	5.5
Rs. 20000 - Rs. 30000	56	50.9
Rs. 30000 - Rs. 40000	23	20.9
Rs. 40000 - Rs. 50000	18	16.4
Above Rs. 50000	7	6.4
Total	**110**	**100**

(Source: Primary data)

Interpretation

The demographic analysis reveals that the majority of respondents (49.1%) belong to the age group of 26–35 years, followed by 30% in the 35–45 age range, indicating a predominance of younger and middle-aged participants. Gender distribution shows a slightly higher proportion of males (56.4%) compared to females (43.6%). Urban residents form a larger share (58.8%), reflecting more digital banking usage in urban areas. Most respondents have higher educational qualifications, with 36.4% holding undergraduate or professional degrees. The largest occupational group is professionals (30%), and the income distribution indicates that 50.9% fall in the Rs. 20,000–30,000 bracket. This suggests that a mid-income, educated urban population primarily engages with mobile banking services in the district.

TABLE NO: 2 EXPERIENCE IN USE OF MOBILE BANKING

Years of Experience in use of Digital Banking	Frequency	Percent
Less than 1-year	10	9.1
1–3 years	24	21.8
4–6 years	32	29.1
More than 6 years	44	10
Total	**80**	**100**

(Source: Primary data)

Interpretation

The analysis of respondents' experience with mobile banking reveals that the largest proportion (44%) has more than six years of experience, indicating a well-established user base familiar with mobile banking functionalities. A significant share (29.1%) falls in the mid-range of 4–6 years, while 21.8% have 1–3 years of experience, reflecting a steady increase in adoption. Only 9.1% of respondents are new users with less than one year of experience, suggesting that mobile banking has become a mature service for most participants in the study.

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TABLE NO: 3

MOBILE BANKING FEATURES DO YOU USE MOST FREQUENTLY

Factors	Frequency	Percent
Convenience	30	27.3
Security	5	4.5
Trust	13	11.8
Customer Service	27	24.5
Innovative Features	8	7.3
Rewards and Offers	25	22.7
Brand Reputation	2	1.8
Total	**80**	**100**

(Source: Primary data)

Interpretation

The analysis of frequently used mobile banking features shows that convenience is the most favored attribute, cited by 27.3% of respondents. Customer service follows closely, influencing 24.5%, while rewards and offers also play a significant role at 22.7%. Trust accounts for 11.8%, while innovative features are used by 7.3%. Security and brand reputation are less influential, cited by 4.5% and 1.8%, respectively. This suggests that ease of use, service quality, and benefits are critical factors driving mobile banking adoption among users.

TABLE NO: 4

BARRIERS DID YOU FACE BEFORE ADOPTING THE MOBILE BANKING APP

Factors	Frequency	Percent
Lack of trust in the app's security features	23	20.9
Concerns about the privacy of personal and financial data	11	10.0
Difficulty in understanding how to use the app	19	17.3
Limited access to a stable internet connection	26	23.6
Lack of awareness about the app's features and benefits	8	7.3
Concerns about hidden charges or transaction fees	22	20.0
Insufficient technical support or customer service	1	.9
Total	**80**	**100**

(Source: Primary data)

Interpretation

The analysis of barriers faced before adopting mobile banking apps reveals that the most significant challenge was limited access to a stable internet connection, reported by 23.6% of respondents. Lack of trust in the app's security features (20.9%) and concerns about hidden charges or transaction fees (20.0%) were also notable obstacles. Difficulty in understanding how to use the app affected 17.3%, while concerns about data privacy impacted 10%. Lack of awareness about features (7.3%) and insufficient technical support (0.9%) were less common

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barriers. This highlights the need for improved user education, transparency, and infrastructure to foster adoption.

H0: There is no significant relationship between age and Usability Assessment factors

TABLE NO: 5 - ANOVA

Factors		Sum of Squares	df	Mean Square	F	Sig.
The mobile banking app is easy to navigate.	Between Groups	3.120	4	.780	1.434	.228
	Within Groups	57.098	105	.544		
	Total	60.218	109			
The app interface is visually appealing.	Between Groups	2.438	4	.610	.872	.483
	Within Groups	73.380	105	.699		
	Total	75.818	109			
The app provides clear instructions for performing tasks.	Between Groups	.773	4	.193	.206	.934
	Within Groups	98.218	105	.935		
	Total	98.991	109			
Transactions on the app are quick and seamless.	Between Groups	6.762	4	1.690	1.925	.112
	Within Groups	92.229	105	.878		
	Total	98.991	109			
The app rarely crashes or has technical glitches.	Between Groups	1.779	4	.445	.658	.622
	Within Groups	70.912	105	.675		
	Total	72.691	109			
The app design is responsive and works well on my device.	Between Groups	2.908	4	.727	1.324	.266
	Within Groups	57.646	105	.549		
	Total	60.555	109			

(Source: Primary data)

Interpretation

The ANOVA results indicate that there is no statistically significant relationship between age and the usability assessment factors of the mobile banking app, as all p-values

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(Sig.) exceed the 0.05 threshold. So, the null hypothesis accepted. This implies that perceptions regarding ease of navigation, visual appeal, task clarity, transaction efficiency, stability, and design responsiveness are not significantly influenced by age. The findings suggest that usability experiences are generally consistent across different age groups, highlighting the app's broad user-friendliness. These insights can inform inclusive design strategies for mobile banking platforms.

H0: There is no significant relationship between occupation and Adoption Factors

TABLE NO: 6 - ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
The app’s usability influenced my decision to adopt it.	Between Groups	2.983	4	.746	.922	.454
	Within Groups	84.980	105	.809		
	Total	87.964	109			
I find the app more convenient than traditional banking methods.	Between Groups	11.161	4	2.790	2.425	.050
	Within Groups	120.803	105	1.151		
	Total	131.964	109			
The app's accessibility (anytime, anywhere banking) motivates me to use it regularly.	Between Groups	2.967	4	.742	1.262	.290
	Within Groups	61.724	105	.588		
	Total	64.691	109			
The app’s performance encourages me to continue using it.	Between Groups	.341	4	.085	.134	.969
	Within Groups	66.650	105	.635		
	Total	66.991	109			
The app provides good value for my time and effort.	Between Groups	3.740	4	.935	1.231	.302
	Within Groups	79.724	105	.759		
	Total	83.464	109			
The app interface is visually appealing.	Between Groups	4.731	4	1.183	1.747	.145
	Within Groups	71.087	105	.677		
	Total	75.818	109			

(Source: Primary data)

Interpretation

The ANOVA results reveal no statistically significant relationship between occupation and the adoption factors of the mobile banking app, as all p-values (Sig.) are greater than 0.05, except for one factor. I find the app more convenient than traditional banking methods which has a borderline p-value of 0.050. This indicates that, generally, adoption factors like usability, accessibility, performance, time value, and interface appeal are consistent across occupational

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groups. These results suggest that the app's adoption drivers are broadly applicable, with minor variations potentially influenced by specific user preferences.

H0: There is no significant relationship between gender and barriers did you face before adopting the app

TABLE NO: 5 - Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.201[a]	6	.058
Likelihood Ratio	12.839	6	.046
Linear-by-Linear Association	8.452	1	.004
N of Valid Cases	110		

(Source: Primary data)

Interpretation

The Chi-Square test examines the relationship between gender and barriers faced before adopting the mobile banking app. The Pearson Chi-Square value is 12.201 with a p-value of 0.058, slightly above the 0.05 threshold, indicating no significant relationship at the 5% significance level. However, the Likelihood Ratio with a p-value of 0.046 and the Linear-by-Linear Association (p = 0.004) suggest some gender-based variation. This implies that gender may moderately influence perceptions of certain barriers, though the overall association is not conclusively significant.

Conclusion

This study examines the relationship between the usability of mobile banking apps and customer perception and adoption in Thoothukudi district. The findings highlight that usability factors such as ease of navigation, security, customer service, and convenience are crucial in shaping user experiences. Despite significant adoption, barriers like internet connectivity, security concerns, and app comprehension continue to affect adoption rates. The analysis revealed that demographic factors like age and occupation generally do not have a significant impact on usability assessments, with user experiences being largely consistent across different groups. Gender-related differences were observed in relation to the barriers faced before adoption, suggesting that gender may influence certain perceptions but not to a large extent. Overall, the research emphasizes the importance of user-centered design, improved security features, and better customer support to enhance the adoption and satisfaction levels of mobile

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banking users. By addressing these factors, financial institutions can create more accessible and appealing mobile banking services, fostering wider adoption and greater customer loyalty.

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