www.jst.org.in DOI:https://doi.org/10.46243/jst.2025.v10.i01.pp01-09

# IMPROVING CUSTOMER EXPERIENCE WITH MODERN BANKING SOLUTIONS

Archana Todupunuri Fidelity Information Services, USA

To Cite this Article

Archana Todupunuri "IMPROVING CUSTOMER EXPERIENCE WITH MODERN BANKING SOLUTIONS Journal of Science and Technology, Vol. 10, Issue 01-Jan 2025, pp01-09

Article Info

Received: 31-12-2024 Revised: 09-01-2025 Accepted: 20-01-2025 Published:31-01-2025

Abstract- The research describes the impacts of digital transformation on customer experience in modern systems of banking. The interactions have become more personalized, financial decisions are improved, and finally this improves customer satisfaction. This research describes the way effective omnichannel banking is in providing an integrated, frictionless customer experience across all touchpoints. Moreover, integration of innovative technology is also proposed for building confidence among customers to use financial services. Evidence showed that these technological enhancements were some of the major factors contributing to improving convenience, enhancing customer satisfaction, and improving customer loyalty. One of the futures of banking is in further integrations of technologies that can be developed in service delivery and customer engagement.

Keywords: Omnichannel banking, Digital transformation, financial services, Artificial intelligence, Customer satisfaction.

### I. Introduction

The redesigning of the banking industry for the modern world is in response to emerging customer expectations through the use of new technologies. The changes encompass fully integrated digital platforms, artificial intelligence, and omnichannel. Modern banking reflects customer convenience in terms of speed and access to a wide array of financial services on both mobile and online platforms. Analytics on customer Big Data brought about personal touches to AI-driven advice. Omnichannel banking puts up continuity, with the same look and feel on each platform. Advanced security ensures using biometric authentications and tokenization increases customer confidence in digitally served services of banks. This introduction brings forward the way modern and contemporary banking solutions play an elemental role in influencing the changing realm of customer experiences.

### II. Aims and Objective

### Aim

The research's main aim is to examine the way current banking solutions, such as digital transformation, artificial intelligence and omnichannel strategy, improve the customer experience.

### **Objectives**

- To assess the impact of digital transformation on consumer convenience and accessibility in modern banking systems
- To analyze the use of artificial intelligence to personalize client experiences and improve financial decision-making

- To investigate the efficacy of omnichannel banking in providing consistent and unified consumer experiences across platforms
- To recommend incorporating innovative technology to boost consumer happiness and confidence in financial services

### **III. Research Questions**

- What does digital transformation affect customer convenience and accessibility in current banking systems?
- What role does artificial intelligence play in tailoring customer experiences and improving financial decisions?
- What techniques help omnichannel banking deliver consistent and unified consumer experiences across platforms?
- What recommendations can be made to improve the use of new technologies to increase customer happiness and confidence in financial services?

### IV. Research rationale

Customer expectations have completely changed in the banking industry with rapid technological evolutions. Traditional banking habits can hardly ever meet the growing demands of convenience and personalization for a modern customer. The issue is very important because it touches on customer satisfaction and loyalty, further influencing the bank's performance in the highly competitive environment. Inconsistent service across various platforms further complicates the task of customers [1]. New means can be necessary in the use of advanced technologies like Artificial Intelligence and omnichannel banking whenever such tasks require creative handling. These technologies improve accessibility, customization and consistency in financial services. Getting to understand modern banking solutions can help with recommendations of different strategies aimed at pleasing customers and establishing trust in bank systems.

### V. Literature Review

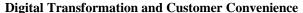




Fig 1: Digital Transformation

Digital transformation in banking has decoded the easy approach and peripheral accessibility of the banking industry to customers. It has taken the conventional concept of banking to digital platforms for access to services at any moment. Mobile and online banking services allow customers to operate their accounts, transfer funds, pay bills and do a lot more without dependence on geographical location. These innovations reduce reliance on physical branches, saving customer's time and enhancing their satisfaction. Self-service stands in branches make the routine transaction automated, reducing the waiting time of customers. Digital wallets and real-time payment systems further reduce transaction time and enhance efficiency [2]. These solutions meet customer expectations for seamless and instantaneous financial dealings.

It is digital transformation that solves the issue of accessibility and brings about inclusivity of service to as many people towards customer variety. Many banks have made voice commands and screen readers commonly in use within their applications to give easy access for disabled customers towards more services. It is inclusiveness that builds up confidence and trust with customers for being there. On the other hand, this rapid pace of digital transformation also creates problems in terms of a lack of digital literacy for certain types of customers [3]. The presence of such problems creates outer limitations on the possibility to gain maximum benefits from higher-order banking technologies. There is still a threat of cyber security that is forcing banks to take extreme measures as far as security is concerned. It really has eased customer's lives with all sorts of accessible banking solutions. The reality as much as digital transformation has had its regrets creates concerns on digital security and literacy among others. Understanding the causes of digital transformation is important to enhancing modern financial systems. This information aids in the development of successful methods for increasing customer happiness and accessibility.

### AI for Personalizing Client Experiences

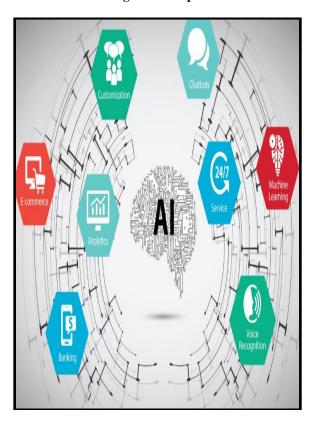


Fig 2: Uses of AI

It is changing customer experience in the banking industry for personalization of services according to the needs of customers. AI can analyze large sets of customer data, search for patterns and preferences, and provide personalized financial solutions. All this helps banks pitch relevant products to customers for satisfaction and engagement of their customers. The major applications of AI also include several leading-edge chatbots and virtual assistants that can facilitate communication between the bank and the customer with an instant replay such as a smoother service

access [4]. Some apps, like Erica from Bank of America, use AI-driven assistants that do advice about finance, transaction activities to make the best improvement in customer's experience.

AI also enhances decision-making by providing customers with real-time insights into financial issues. Empowerment of the client in making informed decisions over his own money can be in the form of customized spending reports, investment advice, or budget planning. AI also plays a very important role in fraud detection and prevention in terms of finding unusual patterns about asset deals. All these can provide security in banking and help customers have more confidence in digital services. However, its implementation challenges most organizations in ensuring data privacy and ethical issues related to decision-making algorithms. AI highly personalized customer experience through presenting customized solutions, improved communication, and increased security [5]. Full potential is tapped in the banking industry in the time of challenges associated with AI are overcome. It helps develop strategies that are going to promote customer's satisfaction and trust in financial services.

### **Omnichannel Banking Effectiveness**

Omnichannel banking has grown as one of the most important methods of delivering steady, frictionless customer services over multiple touch points. It unifies both the physical and digital channels, hence allowing customers to interact seamlessly with their respective banks. For example, this is state online and can be completed at a branch without any issues. Omnichannel banking also enables consistent service delivery across all platforms, such as mobile apps, websites, and ATMs [6]. This can get the same experience. Integration leads to convenience and satisfaction of customers by serving their needs fast whatever channel the customers use. Omnichannel strategies also let personalized engagement take place through the use of customer data to make personalized recommendations and offers. Promotions like those derived from a customer's transaction history and preference. This kind of personalized communication ensures that the relationships are strengthened and customers become loyal.

Omnichannel banking enhances real-time solution of problems since data is integrated across the channels, and instantly staff can have customer details on desktops. These reduce any delay in solving inquiries and boost customer experiences. A few obstacles exist in executing an omnichannel approach such as high integration cost and advanced demands of technology infrastructure. Omnichannel banking represents the smooth, personalized and effective customer experience on a multitude of diverse platforms [7]. Any challenge associated with it needs to be sorted out, that is to contribute maximally to improvements in the sphere of satisfaction and loyalty in modern banking systems.

### **Innovative Technology Recommendations**

Innovative Technology is important to integrate highly innovative technologies into developing modern banking services that are characterized by high levels of customer trust and satisfaction. It is incumbent upon banks to show keen interest in integrating emergent technologies such as blockchain-to ensure that the security and transparency of transactions are heightened. It is possible to develop a decentralized ledger that lowers fraud risks and consequently rebuilds customer's confidence in conducting any form of digital transaction because of the blockchain. Another good recommendation can be the embedding of machine learning algorithms in developing personalized customer experiences. Machine learning can analyze customer behavior and predict their future needs by offering them appropriate financial products [8]. This can enhance service quality and improve customer relationships, thereby increasing customer satisfaction and loyalty.

Biometrics for authentication and security are areas that banks can invest in. Technologies like facial recognition and fingerprint scanning can enhance security with its use easily. Biometrics reduce fraud risks and simplify authentication, hence making banking secure and easy for customers. This can also be supported with advanced analytics-intended to make sense of client preferences and fine-tune their services according to those of the clients. The data-driven insight can empower banks in chalking out focused marketing strategies that can help improve customer engagement over time [9]. It uses the latest in innovation such as blockchain, machine learning, biometric and data analytics with an effort towards building customer satisfaction and confidence.

### Literature Gap

The main gaps in literature are identified by a lack of research into the long-term implications of blockchain technology on customer's trust in banking services. Another gap involves the way machine learning can be combined with omnichannel banking strategies for a better customer experience. These areas call for further studies that can help in giving the right directions for implementing innovative technologies within the banking industry.

# Interpretivist philosophy Deductive approach Secondary data Qualitative thematic analysis

VI. Methodology

Fig 2: Methodology

Interpretivist philosophy focuses on meaningful human experiences and meanings in context. Interpretivist philosophy helps this research to understand the way and what customers perceive in regard to changes brought about by digital transformation, AI, and omnichannel banking. This calls for a methodology investigating individual meanings and interpretations-one that makes interpretivism fitting. A deductive approach means that the testing of existing theories and concepts is related to customer experience in relation to technologically innovative services offered within banking. The deductive approach begins with established frameworks that apply to the main object of the research [10]. This research has been conducted based on deductive reasoning to draw out the way established models, such as TAM and Innovation Diffusion Theory, apply to the adoption of modern technologies in banking. It develops a theoretical framework from which to reach valid conclusions on the basis of empirical data. The basis is of secondary data as it holds abundant information regarding prevailing trends, customer behavior, and banking technological implementation. The secondary data have inexpensiveness and are efficient in time factors. Secondary data get the benefits of the greatest pools sans collections from the very ground [11]. Studies and reports can be availed together with shootings presented by academics about the way digital transformations, AI and omnichannel banking are associated in customer experience.

Qualitative thematic analysis can be applied in the data analysis and thematic analysis offers a way of identifying recurring themes, patterns, and insights that have evolved through different studies and datasets. Thematic analysis is appropriate for the research, as through it the researcher can be able to explain various factors influencing customer's experiences and satisfaction of customers with modern technologies in banking [12]. This also allows the thematic analysis and exploration of gradation within the customer's perceptions and key trend identification to assist in strategies regarding customer improvement of satisfaction and access.

### VII. Data Analysis

## Theme 1: Digital transformation improves customer convenience and accessibility in current financial systems.

Digitization in this regard improved customer convenience for the easy accessibility of most modern financial systems. The banks tried to make all their services smooth, slick, and very user-friendly with the help of digital tools. Banking customers need not be physically present to access any services that can operate from anywhere with ease [13]. Greater accessibility has resulted in customer satisfaction since customers can deal with their financial matters with great flexibility and at their convenience. The work is manual for customers now comprises a series of self-servicing possibilities where customers are more or less doing their work on their own through the use of digital platforms. Online banking applications also add more ease and there is automation of customer service through mobile phone systems to make payments. These are 24/7 in operation keeping the customer in continuous reach to their money data and associated functions.

Digital solutions have brought in speed and Transactions that hitherto used to take days for execution are being done within seconds. The speed not only helps the customers but is also useful in the operational efficiencies of the financial institutions themselves. It increased the inclusiveness of banking services in that services for these underrepresented groups within those communities were improved. Banks and financial service providers have had an easy time reaching most communities that could earlier have been shrouded in far corners [14]. Accessibility is drawn to every door, introducing increased financial opportunities inclusive of geographic scope. The customer's convenience and accessibility have been grapes in the net with the help of digital transformation.

### Theme 2: Artificial intelligence personalized customer interactions and enhances financial decision-making.

Artificial intelligence plays an important role in personalizing interaction with a customer in banking, as big volumes of customer data are used through AI algorithms to present the services to them according to the customer's preferences. This offers better user experience by providing personalized recommendations regarding the financial products proposed on the basis of customer's transaction history, spending patterns, and financial objectives, upon which decisions are made. AI also enhances decision-making through real-time insights into the guidance of customers on ways of managing their finances [15]. AI-driven tools can predict spending habits in the future and warn customers against impending financial risks. This enables individuals to make necessary adjustments proactively, hence improving overall financial health.

AI banking offers improved operational efficiencies through automating tasks related to loan approval, credit scoring, and other risk assessments. This reduces the processing time in the decision-making circle and ensures speediness toward the customer. The continuous learning from new data made possible by AI enables refined enhancements in predictions and recommendations toward better decisioning. AI in financial decision-making empowers not only the customer but also reaffirms their belief in the services provided by banking [16]. It enhances customer satisfaction and loyalty while delivering personalized advice on the way to make better financial choices. Theme 3: Omnichannel banking delivers a uniform and unified consumer experience across several platforms.

Omnichannel banking creates a seamless, continuous consumer experience across a multitude of touchpoints-from mobile applications and websites to the branch network. This means that customers are able to reach their bank via any channel and get the same feeling, without discontinuity in the quality of the service provided. The primary

advantage of omnichannel banking is the seamless continuity across all touchpoints, whether accessed using a mobile app or by visiting a branch [17]. This builds trust in customers and satisfaction since predictability and familiarity are attached to the services offered across all platforms. Omnichannel banking allows for the ease of transition between different platforms since a customer can initiate a transaction at a different channel and complete it on another. For example, one can have initiated the loan application online and concluded it at the branch without loss in process. Flexibility can be more convenient and enhance the overall customer experience.

This results from omnichannel banking offering customer data from across the multiple touch-points, integrated into creating a single comprehensive view of the customer. This has helped banks in connecting with customers on a personal level, offering the services that give targeted recommendations based on the customer behavior and choice from the transaction pattern. Omnichannel banking is all about providing continuity on all platforms for the consumer to give one single experience and a connected platform [18]. This means greater customer satisfaction, better trust for higher engagement of the customer because of complete unified and efficiency in experiencing banking.

### Theme 4: Incorporating new technology increases consumer satisfaction and confidence in financial services.

The financial services integrated with new technologies raise the consumer's satisfaction and build confidence in banking institutions. All these innovative solutions make the banks much better in service quality, efficiency, and customer experience. Innovations enable an institution to meet the expectations of customers that can definitely increase the satisfaction of customers [19]. Artificial intelligence, mobile banking and automated customer service systems have brought a high degree of convenience for customers in banking services.

New technology contributes to displaying transparency and security in financial transactions. Advanced modes of encrypting combined with biometric authentication make online banking safer. Customers become confident about the security of their financial information. Reduced security anxiety can ensure that more customers can use the services of digital banking, and as such that can ensure increased trust and satisfaction [20]. Innovations in technology also facilitate customer service by offering new avenues for responding to the issues raised much quicker and with more relevant solutions. The use of virtual assistants or chatbots helps them attend to customer queries in the most feasible way with little or no time consumption upgrading the service delivery [21]. New technology in financial services can make consumers more satisfied and confident due to better access, security and personalization.

### **VIII. Future Directions**

Modern banking is more integrated with AI and machine learning in the future to offer more personalization and predictive analytics in this direction. Banks are bound to rely even more heavily on information gleaned from data in order to provide relevant financial solutions as technologies evolve. Omnichannel services can continue to expand in established ways of achieving seamless customer experiences across digital and physical touchpoints [22]. Future innovations are likely to involve increased use of blockchain for value-added security and complete transparency.

### IX. Conclusion

Digital transformation, artificial intelligence, and omnichannel banking have transformed the way banking used to be, customers are way more facilitated and satisfied making better decisions. These technologies allow personalization of experiences, acceleration of services, and consistency across platforms. Trust is gained by consumers, innovation in technology is improved such as improvement in security heightens confidence in financial services. The development going on within the banking sector ensures that the amalgamation of services and improvement in customer experience can be followed by further quality improvement. The future of banking lies in those evolving technologies that meet the needs, enhance experiences and bring long-term customer loyalty and satisfaction.

### References

- [1] Gunawan, J., Pradeep, A., Choffnes, D., Hartzog, W. and Wilson, C., 2021. A comparative study of dark patterns across web and mobile modalities. Proceedings of the ACM on Human-Computer Interaction, 5(CSCW2), pp.1-29.
- [2] Hossain, M.A., Islam, S., Rahman, M.M. and Arif, N.U.M., 2024. Impact of online payment systems on customer trust and loyalty in E-commerce analyzing security and convenience. Academic Journal on Science, Technology, Engineering & Mathematics Education, 4(03), pp.1-15.
- [3] Kutnjak, A., 2021. Covid-19 accelerates digital transformation in industries: Challenges, issues, barriers and problems in transformation. IEEE access, 9, pp.79373-79388.
- [4] Rane, N., Choudhary, S. and Rane, J., 2023. Sustainable tourism development using leading-edge Artificial Intelligence (AI), Blockchain, Internet of Things (IoT), Augmented Reality (AR) and Virtual Reality (VR) technologies. Blockchain, Internet of Things (IoT), Augmented Reality (AR) and Virtual Reality (VR) technologies (October 31, 2023).
- [5] Gao, Y. and Liu, H., 2023. Artificial intelligence-enabled personalization in interactive marketing: a customer journey perspective. Journal of Research in Interactive Marketing, 17(5), pp.663-680.
- [6] Saghiri, S. and Mirzabeiki, V., 2021. Omni-channel integration: the matter of information and digital technology. International journal of operations & production management, 41(11), pp.1660-1710.
- [7] Xuan, Q.T., Truong, H.T. and Quang, T.V., 2023. The impacts of omnichannel retailing properties on customer experience and brand loyalty: A study in the banking sector. Cogent Business & Management, 10(2), p.2244765.
- [8] Chaudhuri, N., Gupta, G., Vamsi, V. and Bose, I., 2021. On the platform but will they buy? Predicting customers' purchase behavior using deep learning. Decision Support Systems, 149, p.113622.
- [9] Crompton, H., 2023. Evidence of the ISTE Standards for Educators leading to learning gains. Journal of Digital Learning in Teacher Education, 39(4), pp.201-219.
- [10] Casula, M., Rangarajan, N. and Shields, P., 2021. The potential of working hypotheses for deductive exploratory research. Quality & Quantity, 55(5), pp.1703-1725.
- [11] Walter, M., Lovett, R., Maher, B., Williamson, B., Prehn, J., Bodkin-Andrews, G. and Lee, V., 2021. Indigenous data sovereignty in the era of big data and open data. Australian Journal of Social Issues, 56(2), pp.143-156.
- [12] Braun, V. and Clarke, V., 2023. Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. International journal of transgender health, 24(1), pp.1-6.
- [13] Wulandari, D., 2022. Customer satisfaction as a priority in excellent banking services. KINERJA: Jurnal Manajemen Organisasi dan Industri, 1(1), pp.27-34.
- [14] Mogaji, E., Adeola, O., Hinson, R.E., Nguyen, N.P., Nwoba, A.C. and Soetan, T.O., 2021. Marketing bank services to financially vulnerable customers: evidence from an emerging economy. International Journal of Bank Marketing, 39(3), pp.402-428.
- [15] Hamadaqa, M.H.M., Alnajjar, M., Ayyad, M.N., Al-Nakhal, M.A., Abunasser, B.S. and Abu-Naser, S.S., 2024. Leveraging Artificial Intelligence for Strategic Business Decision-Making: Opportunities and Challenges.

DOI:https://doi.org/10.46243/jst.2025.v10.i01.pp01-09

- [16] Badmus, O., Rajput, S.A., Arogundade, J.B. and Williams, M., 2024. AI-driven business analytics and decision making. World Journal of Advanced Research and Reviews, 24(1), pp.616-633.
- [17] Xuan, Q.T., Truong, H.T. and Quang, T.V., 2023. The impacts of omnichannel retailing properties on customer experience and brand loyalty: A study in the banking sector. Cogent Business & Management, 10(2), p.2244765.
- [18] Xuan, Q.T., Truong, H.T. and Quang, T.V., 2023. The impacts of omnichannel retailing properties on customer experience and brand loyalty: A study in the banking sector. Cogent Business & Management, 10(2), p.2244765.
- [19] Ayinaddis, S.G., Taye, B.A. and Yirsaw, B.G., 2023. Examining the effect of electronic banking service quality on customer satisfaction and loyalty: an implication for technological innovation. Journal of Innovation and Entrepreneurship, 12(1), p.22.
- [20] Rabbi, M.F., Oláh, J., Popp, J., Máté, D. and Kovács, S., 2021. Food security and the COVID-19 crisis from a consumer buying behaviour perspective—the case of Bangladesh. Foods, 10(12), p.3073.
- [21] Nirala, K.K., Singh, N.K. and Purani, V.S., 2022. A survey on providing customer and public administration based services using AI: chatbot. Multimedia Tools and Applications, 81(16), pp.22215-22246.
- [22] Hübner, A., Hense, J. and Dethlefs, C., 2022. The revival of retail stores via omnichannel operations: A literature review and research framework. European Journal of Operational Research, 302(3), pp.799-818.