PROFILES OF AND PROBLEMS ENCOUNTERED BY TERTIARY STUDENTS IN USING DIGITAL BANKING SERVICES

Bation, Sueña L, Guiao, Edcelle Nicole A., Jaravata, Cristy Angelique E., Liwayan, Erika B., Ramos, Kristelle Kaye S., and Ramel, Regina D.

ABSTRACT

This study explored the digital banking profiles and problems encountered by higher-year tertiary students in the usage of digital banking services. Using purposive sampling, data from 221 respondents were collected through questionnaires. Quantitative data were analyzed using SPSS, while qualitative data underwent thematic analysis. Findings revealed a significant adoption of digital banking among students, with most using these services for one to three years on a weekly basis. Smartphones were the primary devices for accessing banking, with convenience as the key motivation. Despite overall satisfaction, several problems were identified, including forgotten passwords, login difficulties due to network issues, slow internet speeds, and security concerns like phishing attacks and weak passwords. While students generally reported satisfaction with digital banking, the study highlights areas for improvement in security, connectivity, and user support. In response, recommended actions include stronger security measures such as multi-factor authentication, enhanced network performance with offline banking options, simplified user interfaces, improved customer support, and robust data privacy protections. These insights are valuable for financial institutions in addressing the needs of tertiary students and improving overall digital banking satisfaction for this demographic.

Keywords: connectivity, online banking, satisfaction, security, user experience

INTRODUCTION

The global rise of digital technologies, such as mobile devices, digital public services, and advanced innovations like Artificial Intelligence (AI), is reshaping societies and economies worldwide. These technologies are not merely tools of convenience; they are transformative forces that hold the potential to foster financial inclusion, enhance governmental efficiency, and reduce poverty. Particularly, digital technologies are pivotal in advancing Sustainable Development Goal (SDG) No. 9, which emphasizes Industry, Innovation, and Infrastructure. With the ability to contribute to the achievement of 70% of SDG targets, digital technologies are critical drivers of sustainable development (SDG Digital, 2023).

While traditional banking systems have historically been central to economic growth and infrastructure development, their rigid structures often fail to meet the dynamic and rapidly changing needs of modern consumers. In the context of globalization and liberalization, the shift towards digital banking has become an imperative for national progress. Students, particularly those in higher education, are at the heart of this transformation. As both the next generation of leaders and early adopters of digital technologies, they play a crucial role in shaping the future of digital banking. Despite efforts to raise awareness, many students still face barriers to full participation in digital banking due to issues of accessibility and digital exclusion (Khan et, 2017; Sultana & Bousrih, 2022).

Recent research has highlighted that tertiary students are increasingly turning to digital banking services for their convenience and accessibility, enabling them to manage their finances at their own pace, from any location. In response, banks are adapting by expanding their customer bases and investing in innovative solutions, including advanced security measures, to meet the evolving needs of the student demographic. However, many students still encounter

difficulties in utilizing these services, indicating the need for further research to identify and address these problems, ultimately improving the overall user experience (Achakala et al., 2022; Dhote, 2021).

This study explored the perceptions of tertiary students at Saint Mary's University regarding their digital banking profiles and the problems encountered when using digital banking services. By analyzing these profiles and problems, the study aims to offer actionable recommendations that could enhance the accessibility, efficiency, and alignment of digital banking services with the specific needs of students. The findings may also provide valuable insights to financial institutions, helping them refine their offerings and better cater to the student demographic. Furthermore, the study will contribute to future research by identifying key areas for exploration in the evolving relationship between students and digital banking.

Statement of the Problem

The study investigated the banking profiles and problems encountered by the higher-year students in the tertiary level as bases for recommending solutions towards efficient and effective utilization of digital banking services. The study was conducted during the first semester of the school year 2024-2025.

Specifically, the study aims to:

1. Determine the digital banking profile of the respondents, in terms of:
   1.1 Years of using digital banking services
   1.2 Frequency of using digital banking services
   1.3 Kinds of technology/device used
   1.4 Motivation(s)
   1.5 Source of information
   1.6 Types of digital banking commonly used
   1.7 Services availed
   1.8.Overall satisfaction
2. Determine the problems encountered by the tertiary students in using digital banking services in
   terms of:
   2.1 Incorrect password
   2.2 Difficulties in logging in
   2.3.Accessibility/poor connectivity
   2.4.Security threat
3. Recommend solutions that may address the problems encountered by the tertiary students in digital banking.

METHODOLOGY

The study employed a mixed-method approach, integrating quantitative and qualitative techniques to examine the digital banking profiles and problems encountered by tertiary students at Saint Mary's University (SMU). The quantitative component used a descriptive design to analyze factors such as years of use, frequency of transactions, types of digital banking services, motivations, sources of information, devices used, satisfaction levels, and common issues like login difficulties, security threats, and accessibility problems. The qualitative component consisted of an open-ended question that elicited students' recommendations for enhancing digital banking services. The study was conducted at SMU, a private institution recognized for its innovative and research-oriented environment. Respondents were third- and fourth-year students from the university's four academic schools: the School of Accountancy and

Business (SAB), the School of Health and Natural Sciences (SHANS), the School of Teacher Education and Humanities (STEH), and the School of Engineering, Architecture, and Information Technology (SEAIT). Using Raosoft's formula, a sample size of 221 students was determined and proportionally distributed across the schools. Data were collected through a structured survey questionnaire. Frequency, percentage, mean, and standard deviation were computed to analyze students' digital banking profiles and the problems they encountered. Thematic analysis was applied to responses from the open-ended question to generate insights and recommendations for addressing digital banking challenges.

RESULTS AND DISCUSSION

Section 1. Respondents' Digital Banking Profile

In terms of years of using digital banking services, 98 respondents (44.3%) reported using these services for one to three years, 63 respondents (28.5%) for less than one year, and 60 respondents (27.1%) for more than three years. This data indicates that the majority of users fall within the one to three-year category, suggesting a growing adoption of digital banking practices.

Regarding the frequency of digital banking service usage, the majority—81 respondents (36.7%)—use these services weekly, followed by 75 respondents (33.9%) on a monthly basis and 45 respondents (20.4%) on a daily basis. A smaller portion, 18 respondents (8.1%), use digital banking services annually. Additionally, two respondents (1.0%) fall into the 'others' category, including one (0.5%) who uses digital banking "if needed" and another (0.5%) who "barely" uses these services. This data aligns with several studies showing a significant trend toward weekly usage of digital banking services.

With respect to the devices used for digital banking, 208 respondents (94.1%) reported using smartphones, while only 13 respondents (5.9%) rely on computers or laptops. This indicates that smartphones are the primary device for accessing digital banking services, likely due to their portability and convenience.

The motivations for adopting digital banking services show that a significant majority—149 respondents (67.4%)—prioritize convenience as their primary reason. This is followed by 54 respondents (24.4%) who value time-saving features. In contrast, 16 respondents (7.2%) are motivated by access to a wider range of services, and only 2 respondents (0.9%) cited incentives or rewards as a key factor.

The primary source of information about digital banking for most respondents are friends and family, cited by 150 respondents (67.9%), highlighting the strong influence of personal networks on perceptions and decisions. In contrast, 39 respondents (17.6%) rely on social media, 17 (7.7%) on online reviews, and 14 (6.3%) on bank promotions. A single respondent (0.5%) accounted for webinars, categorized as "others." This data underscores the significant role of personal networks in shaping decision-making.

The types of digital banking services most frequently used included mobile banking (100 respondents, 45.2%), internet banking (47 respondents, 21.3%), mobile wallets (41 respondents, 18.6%), and ATM banking (33 respondents, 14.9%).

Concerning the types of services availed, 118 respondents (53.4%) utilize money transfer services, followed by 54 (24.4%) who engage in savings accounts, 42 (19%) who opt for online payments or bill payments, 4 (1.8%) who use online deposits, 2 (0.9%) who utilize

electronic fund transfers, and 1 (0.5%) who avail of account management services. The data indicates that money transfer services are the most frequently availed, demonstrating their crucial role in financial transactions.

Most respondents were generally satisfied with the digital banking services they use. Money transfer services received the highest satisfaction rating (mean = 3.49, SD = 0.52), followed by savings accounts (mean = 3.40, SD = 0.53), online payments or bill payments (mean = 3.39, SD = 0.54), account management (mean = 3.38, SD = 0.51), and online deposits (mean = 3.35, SD = 0.52). The lowest rating was attributed to electronic fund transfers, with a mean of 3.27 (SD = 0.52). Overall, the mean satisfaction rating for all services is 3.38 (SD = 0.52), indicating a general level of satisfaction.

Section 2. Problems Encountered by the Tertiary Students in Using Digital Banking Services

The most common problem encountered by respondents relates to incorrect or forgotten passwords, reported by 140 individuals, representing 63.3% of the total frequency. This was followed by typing errors, noted by 56 respondents (25.3%), while account lockout was experienced by 16 respondents (7.2%), and hacked or compromised accounts affected 9 respondents (4.1%).

Regarding the various difficulties faced by tertiary students when logging into digital banking services, the most prevalent issue is network connection problems, reported by 154 respondents, accounting for 69.7% of the total. This was followed by two-factor authentication issues, which affects 32 respondents (14.5%). Incorrect credentials were noted by 14 respondents (6.3%). Other problems include expired sessions, reported by 18 respondents (8.1%), and browser compatibility issues, noted by 3 respondents (1.4%). These findings highlight that network connectivity problems are the most common challenge faced by tertiary students when using digital banking services.

Concerning accessibility and poor connectivity issues, the most significant problem identified is slow internet speed, affecting 118 respondents (53.4%). This was followed by server overload, reported by 58 respondents (26.2%), and system downtime, experienced by 24 respondents (10.9%). Geographical location and ISP problems were each reported by 6 respondents (2.7%), while slow website loading times were noted by 7 respondents (3.2%). Hardware malfunctions were the least reported issue, with only 2 respondents (0.9%) mentioning them. Slow internet speed was identified as the most significant factor affecting students, as indicated by 53.4% of the responses.

For security threats, phishing attacks and weak passwords are the most prevalent problems, each reported by 68 respondents (30.8%). These were followed by unauthorized access, which was noted by 42 respondents (19%), and malware and viruses, identified by 27 respondents (12.2%). Identity theft was acknowledged by 14 respondents (6.3%), while only 2 respondents (0.9%) indicated encountering no security threats, classified under the "others" category.

Section 3. Recommended Solutions that may Address the Problems Encountered by the Tertiary Students in Digital Banking Services

Table 1
Recommended Solutions that may Address the Problems Encountered by the Tertiary Students in Digital Banking Services

Recommended Solutions that may address digital banking problems	Sample Responses	*f*	%
Network Performance and Accessibility	● Strengthen Network Connection ● Available offline for easy access. ● Strong wifi everywhere that is relevant and accessibility to all. Use only 1-2 password in all your account that is easy to remember. ● Improve bugs and server error ● Improve internet connections and password for future purpose. ● Hardware function must be fix upon time. ● To improve accessibility by ensuring digital platforms are user-friendly, secure and available to users with varying levels of technological literacy and internet connectivity. ● They need to lessen the system downtime ● Improve internet speed, and a similar autofill features to avoid repeated filling out of information.	35	15.84
Digital Security and Authentication	● Offer seamless log-in and transaction authorization using voice and facial recognition technology. ● Implement strong security measures ● Tighter security. Send OTP with every transaction in all digital banking. ● A much more thorough identification process ● Use unique passwords enable two factor authentication update your banking app. Check transactions often, avoid public wifi, and stay cautious of phishing scams. ● Put a security feature like eye tracker, fingerprint scanner and more. ● Verification codes for new devices that people logged in ● Incorporate the logging in process with face I.D. ● Optimization and maximizing security ● Detect those scammers that may lead to loss of savings. By utilizing or hiring the info technologies.	85	38.46
User Experience and Interface Design	● Enhance user experience ● Choose a secure and modern bank. ● Design banking apps that are simple and easy to navigate ● Simplify digital banking platforms with user-friendly interfaces. ● Removes adds in the apps ● Enable easy and secure peer-to-peer payments. ● Improve the website when it comes to loading times. ● Design a clear, intuitive, and accessible interface that is easy to navigate ● Simplify the protocol of using digital banking services.	22	9.95
Support and Continuous Improvement	● Early notice for sudden errors	30	13.57

	● I think these need a more continuous upgrade and innovation to make it better. ● They must notify customers on time if they will have maintenance, or at least schedules if their services will not be available before the day of maintenance. ● Take note important information such as emails and password to avoid errors ● Always remember the important details about digital banking. ● Provide Benefits ● More incentives and cybersecurity to ensure longevity. ● Offer multiple support channels and provide prompt, helpful assistance. ● The recommendation I can suggest is having an efficient customer support that would cater questions, problems, and can report issues to be addressed.		
Privacy and Personal Data Protection	● I recommend that they secure their passwords and personal information to prevent identity theft. ● Better legislation regarding data security ● More privacy, since today online and internet are easily accessible and also can be easily hacked and attacked. ● Use friendly banking apps and more encryption to secure the privacy of the users. ● I recommend people to be mindful in giving out such vital personal information and always be knowledgeable on things we put effort into and money we invest in.	5	2.26
Total		177	80.08

Note: 100% at 221 Total Student Respondents.

This table presents the recommended solutions that may enhance the utilization of digital banking services for tertiary students. These solutions, gathered from respondents, offer actionable strategies designed to improve the overall respondent experience. Organized into five main themes—network performance and accessibility, digital security and authentication, user experience and interface design, support and continuous improvement, and privacy and personal data protection—these recommendations aim to help banking institutions, policymakers, and educational organizations optimize digital banking platforms, potentially increasing accessibility, security, and satisfaction for students.

The most common concern raised, accounting for 38.46% of responses, is the need for stronger digital security and authentication methods. Respondents stressed the importance of implementing advanced security measures, such as multi-factor authentication, two-factor authentication (2FA), and one-time passwords (OTPs), to ensure user accounts and transactions are better protected. Additional suggestions include biometric authentication, real-time fraud detection, and regular security updates to protect users from unauthorized access and identity theft. These measures are vital for enhancing user confidence and safeguarding the integrity of digital banking systems.

Network performance and accessibility emerged as a key concern, receiving 15.84% of the total responses. Respondents emphasized the need to enhance internet connectivity for reliable access to banking services, improve network stability to minimize transaction interruptions, and develop offline banking features to ensure access to essential functions during poor network conditions. These improvements are considered vital for providing a

smoother digital banking experience for users, particularly in areas with unstable internet connections.

Support and continuous improvement garnered 13.57% of responses, focusing on enhancing customer support and technical assistance. Respondents suggested offering multiple support channels, improving response times, and providing proactive notifications regarding system downtimes or maintenance. Regular software updates and consistent service quality were also emphasized to ensure the ongoing improvement of digital banking platforms. These actions aim to ensure that users receive timely help when problems arise and that systems are continuously refined to meet user needs.

User experience and interface design represented 9.95% of the feedback. Respondents highlighted the importance of having streamlined, intuitive, and user-friendly interfaces to enhance the accessibility of digital banking. Participants proposed features like ad-free experiences, quicker loading times for apps and websites, and more straightforward navigation to boost user satisfaction. The aim is to foster a setting where users can carry out banking activities with minimal hassle.

Privacy and personal data protection accounted for 2.26% of the responses, focusing on measures to enhance the protection of personal and financial data. Respondents highlighted the importance of securing passwords, verifying account credibility, and safeguarding user data from unauthorized access. Strengthening data privacy policies and adhering to regulatory standards were also suggested to increase users' confidence in the safety of personal information.

CONCLUSION AND RECOMMENDATIONS

Conclusion

1. The majority of respondents have been using digital banking services for one to three years, with the majority using these services on a weekly basis. The primary device used by respondents to access banking services is a smartphone, with convenience being the main motivation for adopting digital banking. Most participants rely on friends and family as the primary source of information about digital banking. Mobile banking emerged as the most preferred channel for banking services, and the most frequently availed service is money transfer. Overall, the majority of respondents expressed being satisfied with the use of digital banking services.
2. Several problems persist despite the satisfaction expressed. The most common problem related to incorrect passwords is forgotten passwords, which were reported by the highest frequency of respondents. When it comes to difficulties logging in, the most prevalent problem is network connection problems. Accessibility and poor connectivity were also significant problems, with slow internet speed being the primary factor hindering participants from effectively using digital banking services. Regarding security threats, phishing attacks and weak passwords were the most commonly reported concerns.
3. Several recommendations have been identified that could address digital banking problems. There is a need for continuous improvement, especially in connectivity issues, security features, and user support for login problems, along with other banking problems. Financial institutions can further improve customer satisfaction by focusing on user-friendly features, reliable connectivity, and stronger security protocols to ensure a smoother and more secure digital banking experience.

Recommendations

For Financial Institutions and Digital Banking Providers. It is recommended that they implement stronger security measures such as multi-factor authentication, biometric verification, and real-time fraud detection. Additionally, enhancing network performance and accessibility by improving internet connectivity and offering offline banking options can significantly improve the user experience, particularly for students in areas with unstable internet connections. Financial institutions should also simplify user interfaces and provide better customer support to address login issues and other technical concerns.

For Policymakers and Regulators. They can enforce stricter regulations to ensure compliance with data protection standards for digital banking services. They can also encourage financial institutions to adopt more inclusive solutions that cater to the needs of students, ensuring equal access to secure and efficient digital banking platforms.

For SMU and other Educational Institutions. Providing educational resources to students on best practices for digital banking, such as password security, data privacy, and recognizing phishing scams, is recommended. Additionally, collaborations with financial organizations could enhance accessibility to secure banking options for students

For Future Researchers. Future studies can build upon this research by exploring how the implementation of these recommendations impacts user satisfaction and security. Researchers may also look into the effectiveness of different digital banking platforms and adoption rate among students across various regions. Moreover, expanding the research scope to include different demographic groups, such as older adults or people with disabilities, would yield deeper insights into the wider spectrum of user needs.

REFERENCES

Achakala, S. K. R., Dhanunjayulu, A., & Reddy, K. J. (2022). Digital banking in India- A study on trends and opportunities. *International Journal of Research and Analytical Reviews (IJRAR), 9*(3), 148.

Dhote, S. (2021). *Mathematics: An analytical tool to study student perception towards digital banking services.* https://doi.org/10.17762/turcomat.v12i12.7557.

Khan, A., Khan, S., & Xiang, I. (2017). Factors influencing consumer intentions to adopt online banking in Malaysia. *Business & Economic.* https://bereview.pk/index.php/BER/article/view/152/19.

SDG Digital (2023*). SDG digital acceleration agenda.* https://www.sdg-digital.org/ accelerationagenda.

Sultana, R. F., & Bousrih, J. (2022). *Digital banking penetration: Impact on students' usage frequency and awareness.* https://refpress.org/ref-vol20-a64/.