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Bridging Banking and Education: Evaluating the Multifunctional Use of the Tertiary Education Student ATM Card

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ABSTRACT

To enhance student services and promote financial inclusion, Lagos State University (LASU), in collaboration with Lotus Bank, introduced a multifunctional identity card that integrates student identification with banking features and Near Field Communication (NFC) capabilities. This study evaluates the usability, adoption, and effectiveness of the LASU Student ATM ID card among the student population. The study was carried out among LASU students and a multistaged sampling techniques were adopted for the study. A descriptive survey design was adopted, and data were collected using a structured questionnaire administered to undergraduate students who had received the card. Five research questions were formulated and were interpreted. The findings revealed that the ATM ID card was widely accepted and used as a means of identification within some areas in the school but not being used in library, health centres, NFC portion of the card was not known to most of the students. Challenges identified include low awareness, and insufficient integration with university systems such as automated attendance. The study concludes by recommending enhancements to the card's functionality, including improved awareness campaigns, better NFC integration within the university, and expansion of use cases within the campus environment.

1. Introduction

Technology advancement borne out of scientific research and innovations has paved way for institutions to thrive in their daily activities across the world, in which the educational sector is a beneficiary of these. Scientific research and contributions to human-computer interface have transformed educational sectors. Higher education has greatly benefited from this transformation. Digital transformation in higher institutions is about the development of new, more advanced, and effective methods and practices in pursuit of the higher education's mission (Alenezi, 2021).

The swift development of technology is evident in the banking sector and has caused a significant shift in the banking sector. From artificial intelligence (AI) to blockchain and beyond, these technologies are reshaping traditional banking models and ushering in an era of smart banking solutions (Vittala et al., 2024). These recent smart banking technologies have provided innovative services and improved customer experiences, which have resulted from the intersection of banking and emerging technologies. Adoption of smart technologies by banks have paved the way for modern-day banking and has equipped the smart banking ideology within the society. Smart cards in Nigerian universities have witnessed significant growth over the past decade, with expectations that more institutions will adopt their use in the near future. This growth has been driven by advancements in digital infrastructure, the need for enhanced security, and the desire to create more streamlined and efficient campus experiences.

One of the key benefits of smart card integration is campus identity management. Smart cards function as access tools for lecture theatres, dormitories, libraries, laboratories, and other official university facilities, serving as unified identification systems across campuses (Hitech International, 2025). Additionally, smart cards support integrated payment systems in line with the Central Bank of Nigeria's (CBN) cashless policy, which aims to reduce the use of physical cash and promote electronic transactions. Mobile and virtual smart cards also provide students with opportunities to conduct mobile transactions or access virtual account services offered by their institutions or partner banks.

Another important benefit is the integration of smart cards with campus IT and learning systems. These cards can be used for enrolling students into the Learning Management System (LMS) and for automated attendance tracking for both students and staff. Moreover, they contribute to environmental sustainability by significantly reducing paper usage in administrative processes, attendance logging, and resource management, thereby promoting a shift to digital records (Hitech International, 2025).

Several universities in Nigeria have already adopted smart card systems. For example, Lagos State University (LASU) launched its Multipurpose Smart ID Card on December 28, 2023, with the first batch distributed to management, Senate members, and new 100-level students in January 2024. By May 2024, full-time undergraduates admitted during the 2022/2023 academic session were actively issued the cards. The LASU Smart ID Card provides features such as identification, attendance tracking, access control, ATM/POS transactions, and integration with users' National Identification Numbers (NIN) and bank accounts (Fapohunda, 2024). Similarly, the University of Ilorin (Unilorin) introduced its Combo Card in 2013, offering identification, payments, campus access, blood-group information, payroll integration for staff, and attendance tracking. This initiative was launched in partnership with Interswitch (New Unilorin Multi-functional ID Card Ready - Education - Nigeria, 2013). Ladoke Akintola University of Technology (LAUTECH) also introduced its Smart ID Card during the 2022/2023 academic session, primarily for smart identification purposes (Allschool, 2023).

The use of smart banking cards in Nigerian tertiary institutions faces several challenges that limit their full potential. One major issue is the slow pace of financial inclusion among students. Ibrahim and Olarewaju (2019) found that only about ten percent of students surveyed had bank accounts, while the majority, approximately 90 percent, did not. Factors such as unemployment, high costs of opening accounts, lack of funds, poor banking infrastructure, security concerns, and limited trust in banks contribute to this problem. This indicates that many students remain either unbanked or underbanked, which poses a significant barrier to the adoption of smart banking cards. Another challenge relates to digital identity requirements. Since smart card activation is linked to the National Identity Number (NIN), interoperability with the national ID system is essential. However, some students face difficulties in obtaining or submitting their NIN, which delays or prevents the use of these cards. In addition, the rate of technology deployment in Nigerian universities remains low. Many institutions have yet to fully embrace digital technologies in administrative processes, lecture halls, and offices. This lack of technological integration hinders the widespread use and benefits of smart banking cards within the academic environment.

LASU - Lotus Bank: Smart ATM ID Card Partnership On March 27, 2024, Lagos State University (LASU) signed a Memorandum of Understanding (MoU) with Lotus Bank to introduce a smart ATM ID card system. The agreement was officially certified by the Vice-Chancellor, Prof. Ibiyemi Ibilola Olatunji-Bello, and the Managing Director of Lotus Bank, Mrs. Kafilat Araoye. As part of the partnership, a project was launched to deploy a multi-functional card alongside a lifestyle mobile application designed for both staff and students (Moradeyo, 2024).

The LASU Smart ATM ID Card comes with innovative features that integrate academic, administrative, and financial functions. According to Lenzi (2025), the card serves as both a standard identification card and a financial tool, functioning as an ATM and POS card linked directly to a bank account. In addition, the card supports attendance tracking through a campus-wide tap system. Following a successful trial in December 2023, the card's identity verification, attendance monitoring, and ATM functionalities were showcased by the Vice-Chancellor and university management during a live demonstration (Faleye, 2023).

The integration of smart ID cards into Nigeria's institutional systems marks a major step toward modernization. This initiative bridges critical gaps in identity management, banking, security access, and attendance tracking, all within a single digital platform. In a context where many institutions still depend on manual or fragmented systems, LASU's innovation stands out for promoting efficiency, accuracy in data management, and overall digital transformation. More broadly, it reflects a national push toward e-governance and smart infrastructure, aligning with Nigeria's goals for digital inclusion and modernization in education, finance, and civil service.

In 2023, Lagos State University (LASU), in collaboration with Lotus Bank, introduced a multifunctional student identity card embedded with ATM and Near Field Communication (NFC) features. The multifunctional card is designed to serve

as a student identity, facilitate financial transactions, enable attendance tracking, and support contactless digital interactions. At the time of this study, the card has been successfully disbursed to students from the 200 level to the 400 level, and the processes to disburse for staff are ongoing, but there is currently no documented assessment of how effectively it fulfils these intended functions. It remains unclear to what extent students are using the card beyond basic identification and ATM withdrawal, particularly to its smart NFC capabilities and integration into academic systems. This lack of evaluation limits the university's ability to measure success, identify challenges, and optimize usage. Without this insight, the card may fall short of its potential to bridge banking and education through smart digital infrastructure. Therefore, a usability study is necessary to understand student experiences, adoption patterns, and opportunities for improvement to further enhance their experiences.

This study aims to assess the LASU Student ATM ID card's use and efficacy among undergraduate students. The study specifically seeks to ascertain whether the card is fulfilling its stated functions in terms of identity, banking, tracking attendance, and NFC-based interactions. The study aims to produce insights that can guide enhancements to the card's functionality and its integration with Lagos State University's academic and administrative systems by looking at student awareness, usage patterns, satisfaction levels, and encountered problems.

Research Questions

1. To what extent are students of Lagos State University using the Student ATM ID card for its intended functions, including identification, ATM banking, and attendance tracking?
2. How aware are students of the card's Near Field Communication (NFC) capabilities and other smart features?
3. What challenges or limitations do students encounter in the usage of the LASU Student ATM ID card?
4. How satisfied are students with the overall performance and usability of the card?

What suggestions do students have for improving the functionality, accessibility, and effectiveness of the ATM ID card system?

2. Methodology

This study adopted a descriptive survey design, aimed at evaluating the usability, awareness, and satisfaction of students with the LASU Student ATM ID card. A mixed method was adopted to gather quantitative and qualitative data on students' experiences and perceptions regarding the functionalities of the card, particularly its use for identification, ATM banking, attendance tracking, and NFC-based interactions. The population for this study consisted of all undergraduate students at Lagos State University, Ojo. However, due to the staged rollout of the card and the absence of issuance to the current 100-level students and staff at the time of the study, the sample was limited to students in the Faculty of Education from the 200

to 400 levels. A multistage sampling technique was used. First, purposive sampling was applied to select the Faculty of Education, due to the closeness of the faculty to the researcher. In the second stage, simple random sampling was employed to distribute the link to Google form among eligible students within the faculty of Education. This approach ensured randomness in participation while maintaining relevance to the research objectives. A total of 194 valid responses were obtained from the sampled population. Participation was voluntary, and informed consent was obtained from all respondents. No personal identifying information was collected, and all responses were treated with confidentiality and used solely for academic purposes.

3. Results and Discussion

Research question one: To what extent are students of Lagos State University using the Student ATM ID card for its intended functions, including identification, ATM banking, and attendance tracking?

Table 1. Mean and Standard Deviation of Awareness Distribution

s/n	Items	Strongly Agree (5) %	Agree (4) %	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	I use the card regularly as my means of identification.	68	76	33	9	8
2	I have linked the card to a Lotus Bank account	39	35	41	56	23
3	I have used it for banking transactions	18	15	53	70	38
4	I have used the card at an ATM machine successfully.	13	15	45	79	42
5	I have used the card at a POS agent successfully.	7	11	46	83	47
6	The card is accepted in departments, libraries, or other administrative units as ID	65	60	43	17	9
7	I am aware that the card has NFC capability.	21	38	68	45	22
8	I have tried scanning the card with a smartphone or NFC-enabled device.	9	13	65	79	28
9	The NFC feature provided a useful or meaningful interaction	16	28	91	41	18
10	The card has ever been used to take my class attendance.	17	21	55	63	38
11	The card is functional and serves the purposes it was introduced for.	53	47	59	29	6

From Table 1, students' usage of the LASU ATM ID card varies across its intended functions. While it is widely accepted as a means of identification, its adoption for banking and attendance tracking is relatively low. The card is most effective for

identification, with 72.8% of respondents confirming its use for this purpose. Table 4, Item 2 (“I use the card regularly as my means of identification”) recorded a mean score of 3.96 and a standard deviation of 1.04, showing broad agreement, though the moderate spread indicates variations in how frequently it is used across different contexts. Table 7 further reveals that many students believe the card should be upgraded with enhanced access features. Adoption for financial services, however, is much lower. Only 34.8% of students have linked the card to a Lotus Bank account, and even fewer use it regularly for transactions: 26.1% reported using it for banking, 30.4% at ATMs, and just 17.4% with POS agents. Table 4, Item 2 (“I have used it for banking transactions”) produced a mean score of 2.51 and a standard deviation of 1.17. These figures suggest that the card has not yet been fully integrated into students’ financial routines. Similarly, attendance tracking is underutilized. Only 37.0% of respondents indicated that the card has ever been used to record their attendance. Table 4, Item 10 (“The card has ever been used to take my class attendance”) recorded a mean score of 2.57 with a standard deviation of 1.18. This suggests that most students either disagreed or were unsure about its use for attendance monitoring, pointing to inconsistent implementation or limited awareness.

Research question two: How aware are students of the card’s Near Field Communication (NFC) capabilities and other smart features?

Table 2. Mean and Standard Deviation of Awareness Distribution

s/n	Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
1	I use the card regularly as my means of identification.	68	76	33	9	8
2	I have linked the card to a Lotus Bank account	39	35	41	56	23
3	I have used it for banking transactions	18	15	53	70	38
4	I have used the card at an ATM machine successfully.	13	15	45	79	42
5	I have used the card at a POS agent successfully.	7	11	46	83	47
6	The card is accepted in departments, libraries, or other administrative units as ID	65	60	43	17	9
7	I am aware that the card has NFC capability.	21	38	68	45	22
8	I have tried scanning the card with a smartphone or NFC-enabled device.	9	13	65	79	28
9	The NFC feature provided a useful or meaningful interaction	16	28	91	41	18
10	The card has ever been used to take my class attendance.	17	21	55	63	38
11	The card is functional and serves the purposes it was introduced for.	53	47	59	29	6

From Table 2 above, Item 7 (“I am aware that the card has NFC capability”) recorded a mean score of 2.95 and a standard deviation of 1.15, indicating relatively low and inconsistent awareness among students. This suggests that a significant number of students are unfamiliar with the card’s technological features. Similarly, Table 4, Item 8 (“I have tried scanning the card with a smartphone or NFC-enabled device”) recorded a low mean of 2.46 and a standard deviation below 1.0. This shows that most students have not attempted to use the card’s NFC function, and the narrow spread suggests that their responses were fairly uniform. Table 4, Item 9 (“The NFC feature provided a useful or meaningful interaction”) produced a mean score of 2.91 with a standard deviation of 1.03. This indicates that respondents were generally unconvinced about the usefulness of the NFC feature.

Research Question Three, “What challenges or limitations do students encounter in the usage of the LASU Student ATM ID card?”

Table 3. Thematic Review of different challenges faced by students using LASU Smart Id card

s/n	Theme	Description	Examples of Student Responses
1	Limited Functionality and Acceptance	Respondents noted that the card isn't accepted in a lot of places, like the main library. Inability to access a full banking package was mentioned as well.	It is not really functioning for it to be accepted everywhere, It's not used at the main library, It is not accepted in some places like other ATM machines
2	Technical and Network Issues	Some respondents reported transaction problems like "Network issues," "Slow transaction," or "not working at all."	In It's not functioning at all, I have not been able to activate my account to receive alerts, Network issue.
3	Security Concerns	Many students voiced concerns about whether their money was safe and secure when using the card.	Because the security is not guaranteed. My money cannot be safe there.
4	Usability and Activation Difficulties	Many students struggled to register their bank accounts or weren't clear about what was needed to activate the card's banking features.	Difficulty to register the bank account, Did not meet required terms.
5	Quality and Durability of the card	Some students complained that the color tends to fade over time.	The color always fades.

Table 3 presents a thematic summary of the respondents’ challenges in using the ATM ID card. A major issue raised was limited acceptance, as the card is not recognized everywhere, with complaints about it failing at certain ATMs and even within the university’s main library. Technical problems were also common, particularly network failures and slow transaction times, which affected students who relied on the card for banking. Security concerns were highlighted, with some students doubting the safety of their funds. One remarked, “*My money cannot be*

safe there,” while another questioned whether losing the card would mean losing both identification and access to banking services, since replacements might not be issued. Several respondents also described the activation and linking process as difficult and complicated, further discouraging effective use. In addition, a recurring minor challenge was the card’s physical durability, as its colour was reported to fade too quickly.

Research Question 4: How satisfied are students with the overall performance and usability of the card?

Table 4. Mean and Standard Deviation of Satisfaction and Experience Distribution

s/n		Very Satisfied (%)	Satisfied (%)	Dissatisfied (%)	Very Dissatisfied (%)	Mean	Standard Deviation
1	How satisfied are you with using the card as an ID.	69	62	57	6	3.00	0.88
2	How satisfied are you with using the ID card as banking/ATM use	28	34	107	25	2.34	0.88
3	How satisfied are you with NFC experience	18	27	129	20	2.22	0.75
4	How satisfied are you with using the ID card at POS	19	26	119	30	2.18	0.81
5	How satisfied are you with using the ID card as an attendance in class	43	38	91	22	2.53	0.96

Table 4 shows different satisfaction levels based on the usage of the card. For identification, students reported a high level of satisfaction (mean = 3.00, SD = 0.88), suggesting that this is the most widely accepted and smoothly functioning feature of the card. Satisfaction with banking and ATM transactions was low (mean = 2.34), indicating that the integration of banking functions is either underutilized or underperforming, with users not finding it effective or convenient. The NFC feature also received a low satisfaction rating (mean = 2.22, SD = 0.75), consistent with the awareness issue noted in Table 4 item 7, implying that students may not be aware of it or that the university has not yet fully implemented it. Using the ID card at POS terminals recorded the lowest satisfaction (mean = 2.18), reinforcing concerns that the feature is either non-functional, unreliable, or poorly adopted.

Attendance tracking scored a mean of 2.53, reflecting divided opinions, likely due to inconsistent implementation.

Research Question Five: What suggestions do students have for improving the functionality, accessibility, and effectiveness of the ATM ID card system?

Table 5. Thematic Review of Suggested Improvements for Easier Use of LASU Smart ID Card

s/n	Theme	Description	Examples of Student Responses
1	Banking Accessibility & Functionality	Students strongly advocate for the card to function as a full-fledged ATM card, seamlessly integrated with mainstream banking systems. This includes universal acceptance at all ATMs and POS terminals (both on and off campus), enabling online transactions, faster transaction speeds, reduced bank charges, and even mobile banking app compatibility.	"It should be more functional at ATMs," "It should be able to function as an ATM card, that can be used for any transaction," "It should be fully functional at any POS or ATM machine," "It should be able to perform every transaction like normal ATM card," "Should be functioning like normal ATM card," "Make it accessible to transfer to any bank," "Easy access," "That it works on all ATM and POS."
2	Enhanced ID & Access Features	There's a clear desire for the card to have broader acceptance and utility within the university itself. Students suggest it should be a universal access card for all school units, including the main library and specific buildings. They also want an easier and compulsory card acquisition process.	"It should be an access card to the school libraries," "More acceptance in various places around school," "It should be accepted in every departments, offices, libraries and also be used to take attendance."
3	Improved Attendance Tracking	Students recommend a more consistent and mandatory use of the card for taking class attendance. This implies a need for standardized procedures and reliable technology for this specific function.	"It should be used for taking attendance regularly and compulsory," "It should be mandatory for taking attendance in classes."
4	Student Support & Communication	Feedback indicates a need for better support mechanisms. This includes improved orientation for students on how to register and effectively use the banking features, better customer attention and complaint	"Proper distribution," "Good customer attention to complaints," "They should give proper orientation to students on how to use it for banking transactions."

resolution from the bank, and more efficient distribution of the cards themselves.

The responses revealed several recurring ideas. Many students wanted the card to function like a proper ATM card that could be used at any ATM or POS terminal, with compatibility for mobile banking apps, faster transactions, and reduced bank charges. Others emphasized that the card should be consistently accepted everywhere on campus, including as an access card for buildings, so there would be no need for additional identification. Students also called for a more reliable attendance system that works across all faculties and departments. Another key concern was the lack of proper communication, as many felt uninformed about how to activate and use the card's features; they requested clearer guidance and stronger customer support from the bank. Beyond these, students suggested new uses such as transport payments on BRT buses and campus shuttles, food purchases in the cafeteria, and even as a digital exam pass. One creative proposal was including personal information, like blood group details, for emergencies. Some also envisioned smart technology integrations such as tap to pay attendance and prepaid meter functionality in hostels.

4. Conclusion

The LASU Student ATM ID card shows great potential but falls short of expectations in several areas. Although it is widely used as an ID, students consider the banking features unreliable and seldom make use of the smart functions. With clearer communication, expanded features, and stronger technical support, the card could still evolve into an indispensable tool for students' academic, financial, and social lives.

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