



Full Length Research

## Implications of Online Payment Modes on Purchase Behaviour of Students at Baze University, Abuja-Nigeria

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**Abstract:** The paper investigated the implications of online payment modes on the purchase behaviour of students at Baze University, Abuja. Three research objectives and three research questions guided the study. The study adopted a descriptive survey research design. The population consisted of 600 students of Baze University, Abuja. The sample size of 234 students was used for the study, using the Krejcie and Morgan (1970) sampling size determination Table Technique. The data collection instrument was a structured questionnaire titled: "Online Payment Modes and Students' Purchase Behaviour Questionnaire (OPMSPBQ)". Test-retest method of reliability was used to obtain the internal consistency, showing an index of 0.78. Data collected were subjected to descriptive statistics, using the Statistical Package for Social Sciences (SPSS) version 25 software. The study discovered among others that; credit/debit card mode, Point of sales (pos) mode and mobile banking system mode were the most frequently used online payment modes by students of Baze University, Abuja. The online payment mode is convenient for students, it saves students time in handling cash meant for the purchase of goods and services. Network errors and the high cost of internet access relative to students' income were challenges of online payment modes for students of Baze University, Abuja. The researchers recommended among others that the management of Baze University, Abuja including banks and other finance houses should erect basic infrastructure that can support different online payment

modes to prevent cases of network errors and there should be an adequate security measure to prevent illicit alteration of payment data by students or pay agents.

Keywords: University Students: Online Payment Modes: Purchase Behaviour: Internet Sources: Nigeria.

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## **1.0 Introduction of the Study**

All marketing activities centre around the purchase behaviour of consumers. Marketers are enthused and benefit from consumers' purchase decisions (Shu'ara, 2021; Jooda et al., 2022). Consumer purchase behaviour does not only focus on brand attributes but also on cost and ease of payment for the goods. Deciding what to buy and modes of payment are some of the consumers' most basic tasks. The place of purchase of a product plays an important role in the kind of payment mode. Ayodele (2015) cited Balino et. al (1996) and noted that payment modes include instruments, procedures, information, and communication on transfers of money from payer to payee. According to Anyanwaokoro (2001), an online payment mode is a method of settling financial obligations through the use of credit cards or electronic transfers from the payer's account in a bank to the accounts of other persons.

In most higher education institutions, students make payments on several financial transactions or purchases. Students pay for application forms, school fees, course registration, hostel accommodation, food, beverages, etc (Shu'ara, 2021; Jooda et al., 2022). Today, the introduction of modern information and communication technology facilitates ease of payment for goods and services within and outside the campus environment. Different online payment modes have become increasingly popular among students due to the increased use of internet shopping and banking. It is on this note that Asaolu et al. (2011) argued that in Nigeria, online payment is effected from end to end electronically at the touch of a computer button and manual intervention is limited to only the input of payment data.

Today, students in higher education institutions in Nigeria can access their institutions' online registration portals with an internet connection from anywhere to make necessary payments without going to the bank to pay in cash. According to Pena-Lopez (2007), online payment portal functions as a point of access to

information on the Web from different sources. Looney and Lyman (2000) opined that an online portal is a platform for businesses, companies and organizations (universities, colleges inclusive) to leverage efficient communication and other in-house operations in a single, one-stop 'web-page, that helps the user to avoid being lost on the web or overwhelmed by infoglut'.

There are several online payment modes through which students can conduct financial activities or make purchases. Ayodele (2015) highlighted these to include:

**Point of sales (POS) system** - allows credit/debit cardholders to make payments at sales or purchase outlets while other customers can embark on service inquiries, purchase of airtime, loyalty redemption, and printing of transaction statements.

**Electronic web collection** - Universities go into partnership with Banks to render electronic online payment on services such as admission, registration, examination management, collection of exam results, alumni membership etc, to students. Today, many higher education institutions make maximum use of this payment system in Nigeria.

**Telephone banking**- This medium allows the customer to access the Bank's Server and Computer Centre using established telephone lines to obtain account balance, funds transfer, change of pin, account deactivation, payment of Bills, etc.

**Mobile banking system:** This system allows Bank customers; including students to access financial services (financial transactions, account balance, verification, deactivation, payment of Bills, etc) from anywhere while on the move.

**The card system** - The smart, plastic, debit, credit or Visa cards are unique online payment devices embedded with integrated circuits and used to settle financial obligations. Ayodele (2015) cited Hodagho (1996) and noted that the power of these cards lies in their ability to store data and manipulate multiple applications securely. Students can make payments on financial obligations, using these cards via online transactions, without queuing in the banking hall.

**ATM card** - This device contains an embedded silicon chip used to perform several financial activities (balance inquiry, mini statement, cash withdrawal or internet/ online fund transfers) through the Automated Teller Machines.

**Western Union Money Transfer** - is a bank product that allows individuals in the Diaspora to remit funds to beneficiaries anywhere in the world using foreign or local Banks as receiving and disbursing points to parties involved (Ayodele, 2015; Malik & Malik, 2022).

In explaining the implication of online payment mode on the purchase behaviour of students, Delali (2010) noted that the internet has contributed positively to the growth of online payments and transactions. The purchase of goods has been made easy through the use of the internet and unencrypted credit card numbers in a variety of secured network payment schemes to protect the privacy and security of consumers. For students online payment modes, allows them to make purchases anytime, anywhere to overcome the limitations of time and place.

Okifo & Igbunu (2015) agree that online payment is a very convenient mode for consumers' (students) financial transactions. In many purchases, all that is needed is to enter account information and the collector's address which is stored in the retailer's server to ease a repeat purchase that will thereafter only require a username and password. Worku (2010) emphasized that online payment lowers the costs of doing business and makes shopping less stressful because with a simple touch of a button the purchase is done.

Another positive implication of online payment modes on the purchase behaviour of students is that it enables them to handle financial purchases and transactions without a cumbersome visit to the local store or Bank. Online payment products save time, energy and expense in all transactions (Appiah & Agyemang, 2007). On many University campuses, the introduction of crucial infrastructure like Point of Sale (POS) Terminals in supermarkets, restaurants, fuel stations, hostels, recreational centres etc, have positively influenced the purchase behaviour of students who now easily pay for goods and services through debit cards within or outside the campus (Onakpa & Alfred, 2022; Shu'ara, 2021).

Available literature has also identified some factors that prohibit the use of online payment modes. Atanbasi (2010) revealed that the major challenge of online payment modes is the security of the payment platform, intrusion by hackers and attacks by a virus. Okifo & Igbunu (2015) noted that low literacy among consumers hinders smooth accessibility of banking services while the high cost of internet access rates relative to per capita income discourages the use of online payment services. Compared to developed countries, there are higher costs of entry into the online payment modes and the e-commerce market in Nigeria's higher education institutions. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements and an unpredictable power supply.

Okifo & Igbunu (2015) noted that power supply is a key challenge for the conduct of smooth online payments and e-banking transactions to students. Ayodele (2014) also agreed that epileptic power supply slows down the rate of electronic transactions in all online modes of payment. In Nigeria's higher education institutions, poor service from the internet service provider remains a big challenge for online payment; many times Electronic Servers go into downtime rendering the process ineffective in times of need for students. Sometimes, students make double payments on purchases because of technical errors in the process of online payment which render the transaction invalid. It is against this backdrop that this study investigated the implications of online payment modes on the purchase behaviour of students with a special focus on Baze University, Abuja.

### **1.1 Statement of the Problem**

Online payment modes are a progressive development in financial transactions for Nigerian higher education institutions. The process of online purchases and payments has become a key source wise time management; ease and convenience. The researcher observed that eateries and stores within and outside the campus make products and services available through online payments, but a large number of students remain reluctant to take advantage of this mode due to security concerns regarding financial transactions. Furthermore, from the experiences and observations of the researcher as a stakeholder in tertiary institutions, students often complain of network failure while making online payments through the Auto Teller Machines (ATMs) and Point of Sale (POS) machines. There are cases of some students being defrauded by others who offer assistance in the process of using online payment modes. These and many other problems necessitated the current study on the implications of online payment modes on the purchase behaviour of students of Baze University, Abuja.

### **1.2 Objectives of the Study**

The specific objectives of the investigation were to:

1. Find out the online payment modes that are frequently used by students of Baze University, Abuja.
2. Determine how online payment modes affect students' purchasing behaviour in Baze University, Abuja
3. Examine the challenges of online payment modes to students of Baze University, Abuja

### **1.3 Research Questions of the Study**

The following research questions were raised to guide the investigation:

1. What are the online payment modes that are frequently used by students of Baze University, Abuja?
2. How do online payment modes affect students' purchase behaviour at Baze University, Abuja?
3. What are the challenges of online payment modes to students of Baze University, Abuja?

## 2.0 Methodology of the Study

The study adopted a descriptive survey research design and the research population were 600 students of Baze University, Abuja. The Krejcie & Morgan (1970) sampling size determination table technique was used to highlight typical population scenarios and sample sizes for each population case. A sample size of 234 students was obtained for the study. Sixteen items self-structured questionnaire titled "Online Payment Modes and Students' Purchase Behaviour Questionnaire (OPMSPBQ)" was used as an instrument for data collection. It is a closed-ended questionnaire in which the responses were categorized on a four-point rating scale of 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree' with assigned values of 4, 3, 2 and 1. Content validity was used. A pilot study was conducted. Test-retest method of reliability was used to obtain internal consistency. The reliability index was obtained through Cornbrash's alpha (0.78).

The questionnaire was designed and self-administered by the researcher. The researcher explained their intentions and after the full consent of the respondents was secured, the questionnaire was administered. It took the researcher two days to complete the exercise. Out of the 234 questionnaires administered, 221 were returned valid, representing a 94% success rate. Data collected were imputed into the Statistical Package for Social Sciences (SPSS) version 25 software. The mean score was used to answer the research questions. The results were electronically generated through the SPSS software and then analyzed. In analyzing the research questions, a mean cut-off score of 2.50 was used to determine whether to accept or reject the questionnaire items. A mean score of 2.50 and above indicated positive agreement with the questionnaire items while a mean score of 2.49 and below indicated negative disagreement. Discussions of findings were done immediately after data analysis.

## 3.0 Analysis and Results of the Study

**3.1 Research Question One:** What are the online payment modes that are frequently used by students of Baze University, Abuja?

**Table 1:** Online payment modes that are frequently used by students Respondents: 221

S/n	Items	Mean	Std. Deviation	Decision
1.	Point of sales (pos) mode	3.4027	.64371	Agreed
2.	Electronic web collection	1.7376	.75311	Disagreed
3.	Telephone banking	1.7014	.69508	Disagreed
4.	Mobile banking system	3.3575	.66319	Agreed

5. The credit/debit card mode	3.4118	.60125	Agreed
6. Western Union money transfer mode	1.5204	.76026	Disagreed

**Source:** SPSS version, 25

Table 1 showed the response level of respondents on the online payment modes frequently used by students of Baze University, Abuja. Accordingly, the highest mean response of 3.4118 is agreement that the credit/debit card mode is most frequently used. The second highest mean response of 3.4027 is agreement that the Point of sales (pos) mode is most frequently used. The third highest mean response of 3.3575 is agreement that the mobile banking system is most frequently used. The respondents disagreed that electronic web collection (1.7376), telephone banking (1.7014) and Western Union money transfer mode (1.5204) are the most frequently used online payment modes. These findings create the basis for the conclusion that credit/debit card mode, Point of sales (pos) mode and mobile banking system mode are online payment modes that are frequently used by students of Baze University, Abuja.

**3.2 Research Question Two:** How do online payment modes affect students' purchase behaviour in Baze University, Abuja?

**Table 2:** How online payment modes affect students' purchase behavior Respondents: 221

S/n	Items	Mean	Std. Deviation	Decision
7.	Online payment mode facilitates quick settlement of students' bills	3.3801	.61078	Agreed
8.	Online payment mode is convenient for students	3.4570	.58326	Agreed
9.	Online payment mode allows transparency in financial transactions made by students	3.0226	.39822	Agreed
10.	It saves students' time in handling cash meant for purchase of goods and services	3.3937	.53407	Agreed
11.	Online payment modes make students to make purchases on internet instead of physical stores	3.2896	.58569	Agreed

**Source:** SPSS version, 25

Table 2 showed the response level of respondents on how online payment modes affect students' purchase behaviour at Baze University, Abuja. The highest mean response of 3.4570 is agreement that the online payment mode is convenient for students. The second highest mean response of 3.3937 is agreement that it saves students' time in handling cash meant for the purchase of goods and services. The third highest mean response of 3.3801 is the agreement that the online payment mode facilitates quick settlement of students' bills. The respondents also agreed that online payment modes allow students to make purchases on the internet instead of going physically to stores (3.2896) and it allows transparency in financial transactions (3.0226).

These findings create the basis for the conclusion that online payment modes affect students' purchasing behaviour at Baze University, Abuja. This is because it is convenient for students, saves students' time in handling cash meant for purchases, facilitates quick settlement of students' bills, allows students to make purchases on the internet instead of physical stores and allows transparency in financial transactions.

**3.3 Research Question Three:** What are the challenges of online payment modes to students of Baze University, Abuja?

**Table 3:** Challenges of online payment modes to students No: 221

	Mean	Std. Deviation	Decision
Network errors	3.5701	.59606	Agreed
Illegal alteration of payment data	2.6968	.55057	Agreed
High cost of internet access relative to student's income	3.4027	.57666	Agreed
Irregular power supply	2.4480	.53365	Disagreed
Payment of double money for invalid transaction	2.8416	.78467	Agreed

**Source:** SPSS version, 25

Table 3 showed the response level of respondents on the challenges of online payment modes to students of Baze University, Abuja. The highest mean response of 3.5701 is agreement that network error is a challenge. The second highest mean response of 3.4027 is an agreement that the cost of internet access concerning students' income remains a challenge. The third highest mean response of 2.8416 is the agreement that payment of double money for an invalid transaction is a challenge. The respondents also agreed that illegal alteration of payment data is a challenge (2.6968) but the respondents disagreed that irregular power supply is a challenge (2.4480). These findings create the basis for the conclusion that the challenges of online payment modes to students of Baze University, Abuja include: network errors, high cost of internet access relative to student's income, double payment for the invalid transaction and illegal alteration of payment data.

#### 4.0 Discussions of the Study

The major findings as revealed in Table 1 showed that credit/debit card mode, Point of sales (pos) mode and mobile banking system mode were the most frequently used online payment modes by students of Baze University, Abuja. These findings corroborated the earlier position of Ayodele (2015) who argued that available online payment modes are not limited to point of sales (pos) system, which allows holders to make payments at sales or purchase outlets. There are other modes like the mobile banking system that offer Bank customers or students access to bank services on the motion. The smart card system has an embedded integrated circuit that can be logged unto a Bank's server and used to settle financial obligations by students.



Ayodele (2015) cited Hodagho (1996) and noted that the usability of debit card, credit card, or visa card lie in the ability to securely store and manipulate data, as well as handle multiple applications.

The results in Table 2 showed that the online payment mode is convenient for students at Baze University, Abuja. Online payment mode saves students' time in handling cash meant for purchases, facilitates quick settlement of students' bills, enables students to make purchases on the internet instead of a physical visit to stores and allows transparency in students' financial transactions. These findings were in agreement with the position of Delali (2010) who argued that the introduction of internet services has positively improved online payments and transactions. Students can easily make purchases from the internet and send unencrypted credit card numbers across the network. With online payment modes, students buy products and services anytime from anywhere and thereby overcome the limitations of time and place.

The major findings as revealed in Table 3 showed that network errors, high cost of internet access relative to students' income, double payment for the invalid transaction and illegal alteration of payment data are challenges of online payment modes to students of Baze University, Abuja. These findings disagreed with the position of Atanbasi (2010) who argued that the major challenge of online payment modes in the country is security; security in terms of the platform where the payment is made, intrusion by hackers and virus attacks. It however agreed with the position of Okifo & Igbunu (2015) that the high cost of internet access relative to per capita income is a critical factor. It disagreed with Ayodele (2014) who argued that constant power failure has led to deficiencies in infrastructures such as ATMs, POS, computers etc, which have slowed down the rate of electronic transactions.

## **5.0 Conclusions and Recommendations of the Study**

Based on the findings of the study, it can be concluded that online payment modes such as credit/debit cards, Point of sales (pos) and mobile banking systems are most frequently used by students of Baze University, Abuja. Online payment mode is convenient for students: it secures their money, saves time in purchase transactions, facilitates quick settlement of bills, encourages internet purchases instead of physical transactions, and allows transparency in all financial transactions. However, network errors, high cost of data and internet access in comparison to students' income, double payment on invalid transactions and illegal alteration of payment data remain challenges of online payment modes to the students of Baze University, Abuja. In this study, the authors recommended that; The Management of Baze University, Abuja should invite more Banks and Finance Houses to provide more infrastructure that supports different online payment modes on campus to reduce pressure on the available channels and minimize the incidence of network failure. Banks and Finance Houses offering online payment modes on the campus of Baze University, Abuja should deploy adequate internet security to prevent infringement on the integrity of payment data by unscrupulous persons. The

Federal Government of Nigeria should put in place sound economic policies to reduce the cost of doing business and to improve the economy; this will in turn reduce the cost of internet fibre installation and internet access to all users. All Online payment service providers should maintain vibrant Customer Service that speedily attends to complaints and ensure the quick reversal of invalid transactions to stimulate students' continuous interest in the use of online payment modes in all financial transactions.

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