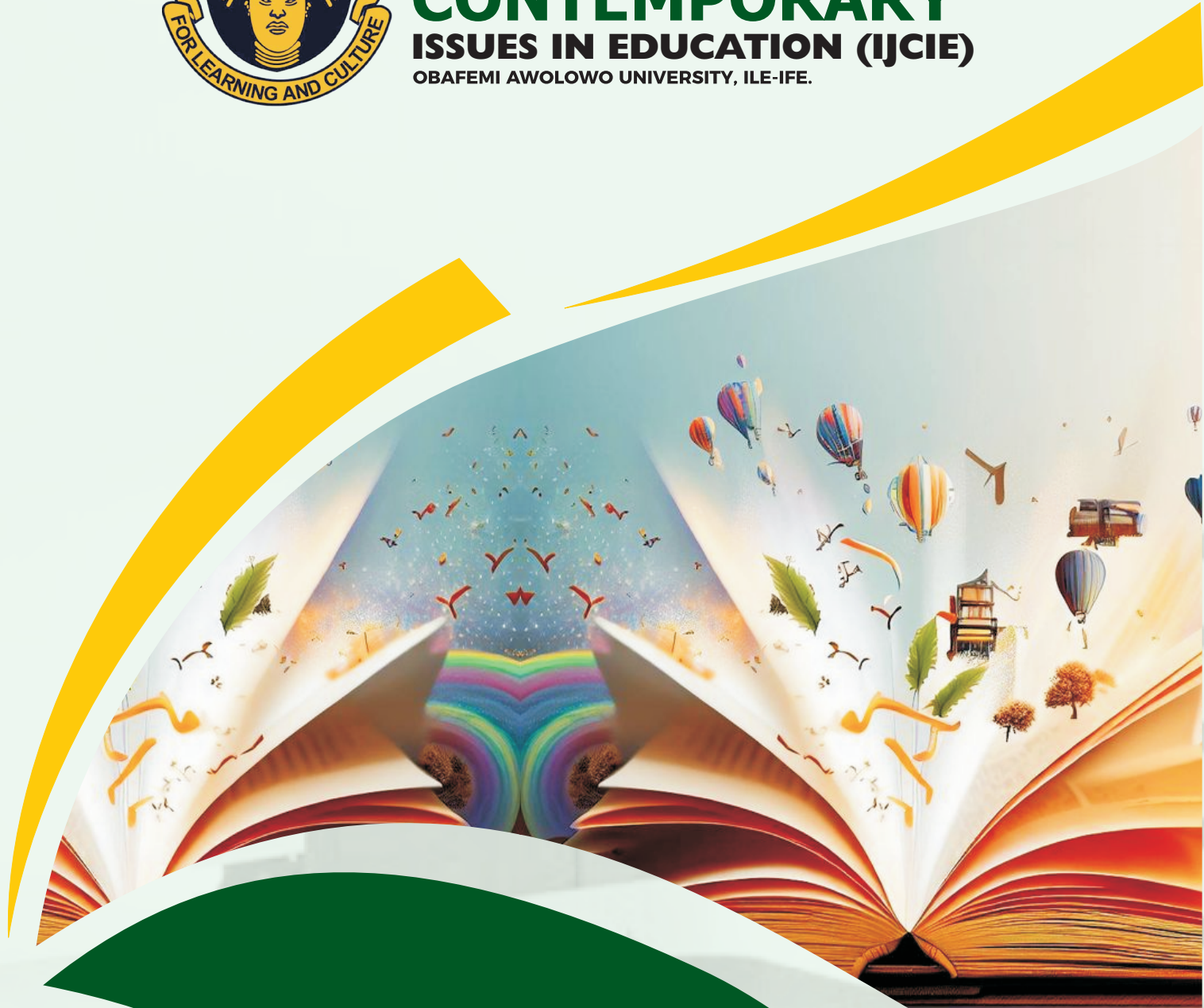




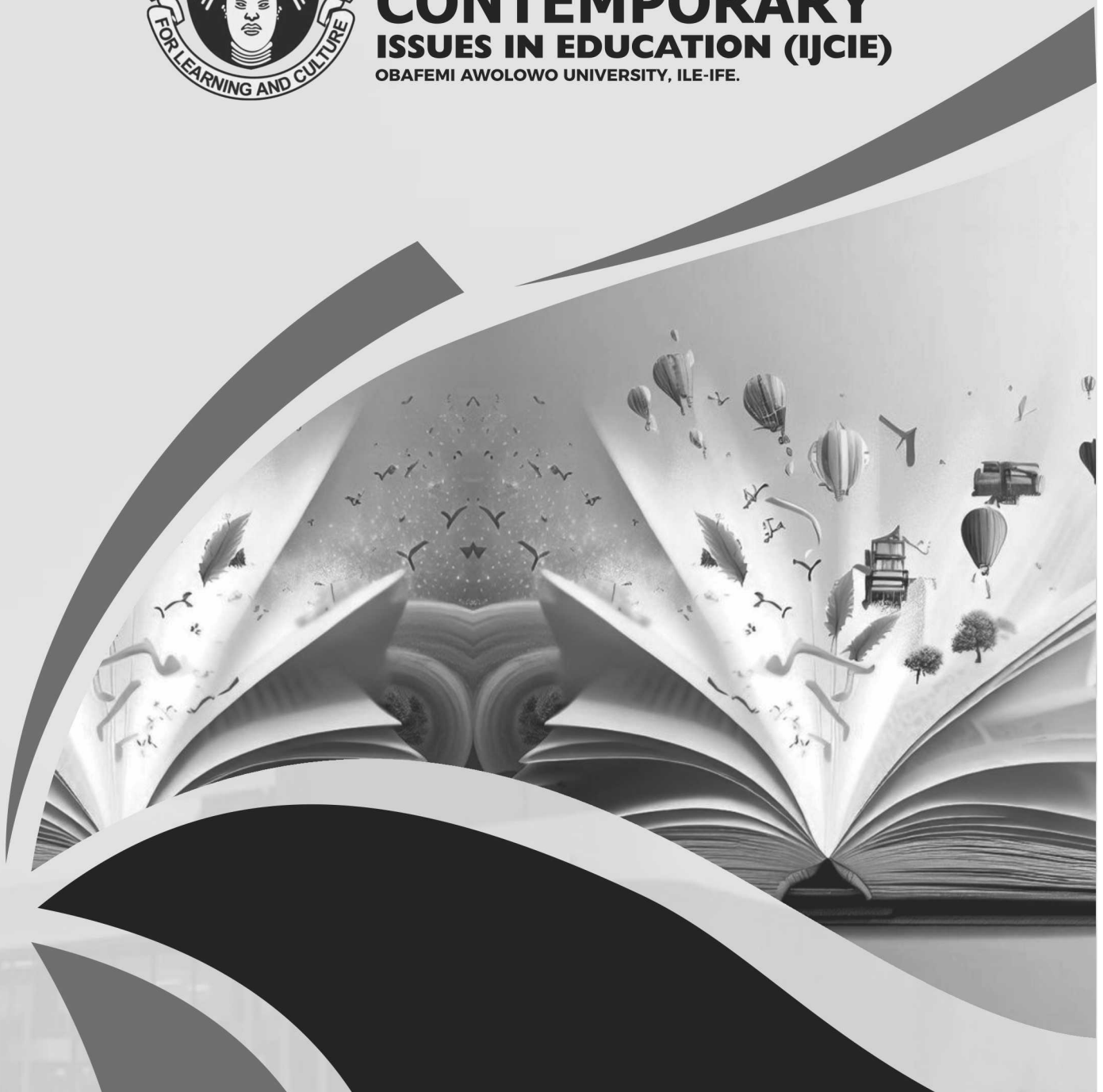
**INTERNATIONAL
JOURNAL OF
CONTEMPORARY
ISSUES IN EDUCATION (IJCIE)**
OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE.



ISSN: 3115-5251
(Vol. 6, Nos. 1 & 2, 2025)



**INTERNATIONAL
JOURNAL OF
CONTEMPORARY
ISSUES IN EDUCATION (IJCIE)**
OBAFEMI AWOLowo UNIVERSITY, ILE-IFE.



ISSN: 3115-5251
(Vol. 6, No. 2, 2025)

EDITORIAL BOARD

Prof. H. O. Ajayi
(*Editor - in - Chief*)

Prof. O. S. Agboola
(*Managing Editor*)

Editors

Prof. P. O. Jegede
Prof. C. O. Odejobi
Prof. T. O. Bello
Prof. O. E. Ojedokun
Prof. B. A. Adeyemi
Prof. J. O. Okewole

EDITORIAL CONSULTANTS

- Prof. O. A. Sofowora- Dept. of Educational Technology and Library Studies, Obafemi Awolowo University, Ile Ife
- Prof. T. A. Adebisi - Dept. of Adult Education and Life Long Learning, Obafemi Awolowo University, Ile-Ife
- Prof. B. I. Popoola- Dept. of Guidance and Counselling, Obafemi Awolowo University, Ile - Ife.
- Prof. A. T. Akande- Dept. of English, Obafemi Awolowo University, Ile-Ife
- Prof. B. A. Omoteso- Dept. of Educational Foundations and Counselling, Obafemi Awolowo University, Ile - Ife.
- Prof. M. A. Adeleke - Dept. of Science and Technology Education, Obafemi Awolowo University, Ile-Ife.
- Prof. E. F. Bamidele - Dept. of Science and Technology Education, Obafemi Awolowo University, Ile-Ife.
- Prof. T. O. Soneye- Dept. of English, Obafemi Awolowo University, Ile-Ife
- Prof. V. F. Olaleye - Dept. of Zoology, Obafemi Awolowo University, Ile - Ife
- Prof. D. Okunoye- Dept. of English, Obafemi Awolowo University, Ile-Ife.
- Prof. E. T. O. Babalola- Dept. of English, Obafemi Awolowo University, Ile-Ife.
- Prof. M. A. Ajayi - Dept. of Human Kinetics and Health Education, University of Ibadan, Ibadan.
- Prof J.B. Bilesanmi- Dept. of Curriculum Studies and Instruction Technology, Olabisi Awoderu Awoderu
- Prof. J. A. Adegbile - Institute of Education, University of Ibadan, Ibadan.
- Prof. G. B. Adewale - Institute of Education, University of Ibadan, Ibadan
- Prof. S. O. Ajitoni - Dept. of Arts and Social Science Education, University of Ibadan, Ibadan.
- Prof. A. Yusuf - Dept. of Social Science Education University of Ilorin, Kwara State.
- Prof. P. A. Dania- Dept. of Arts and Social Science Education, Delta State University, Abraka.
- Dr. S. A. Adelokun- Dept. of Educational Management. Obafemi Awolowo University, Ile-Ife.
- Dr. J. A. Obadiora- Dept. of Arts and Social Science Education, Obafemi Awolowo University, Ile-Ife.
- Dr. A. A. Adetunji- Dept. of Science and Technology Education, Obafemi Awolowo University, Ile-Ife.
- Dr. Funso Olatunde- Dept. of Arts and Social Science Education, University of Lagos, Lagos.
- Prof. K. A. Aderonmu - Dept. of Kinesiology & Health Recreation, Obafemi Awolowo University, Ile-Ife.
- Prof. S. O. Subar - Dept. of Educational Management, Obafemi Awolowo University, Ile-Ife.
- Prof. A. A. Adediwura - Dept. of Educational Foundation, Obafemi Awolowo University, Ile-Ife.
- Prof. T. A. Ajeigbe - Dept. Educational Foundation, Obafemi Awolowo University, Ile-Ife.

**INTERNATIONAL JOURNAL OF
CONTEMPORARY ISSUES IN
EDUCATION (IJCIE)
(Vol. 6, No 2, 2025)**

TABLE OF CONTENTS

PATHWAY TO INSECURITY AND POVERTY: AS CHALLENGES TO LANGUAGE EDUCATION DEVELOPMENT IN NIGERIA AWOPETU EMMANUELO. & GARUBA BENEDICTA	01-11
ASSESSMENT OF INSECURITIES ON SCHOOL FARMS AND ENTREPRENEURIAL SKILL DEVELOPMENT AMONG SECONDARY SCHOOLS STUDENTS IN IFE CENTRAL LOCAL GOVERNMENT AREA, OSUN STATE, NIGERIA OLUYEMISI DOLAPO, ADISA & IBIRONKE IBIWUMI, IDOWU	12-19
MODELS OF CLASSROOMS INTERACTION IN TEACHING SOCIAL STUDIES IN JUNIOR SECONDARY SCHOOLS OYO-STATE, NIGERIA DAUDA SEUN ABUBAKAR & ALEGE SEUN EMMANUEL	20-29
LEADERSHIP STYLE: IMPETUS FOR INNOVATIONS AND IMPROVEMENT IN NIGERIAN SCHOOLS SYSTEM AZEEZ BABATUNDE ADEBAKIN & HASSAN KEHINDE OLASUPO	30-38
POVERTY CUM SECONDARY SCHOOL CURRICULUM CHANGE AND ITS IMPLEMENTATION FOR THE ATTAINMENT OF QUALITY ADEGBITE DORCAS OLAYEMI, Ph.D	39-45
DIGITAL INSECURITY AND EARLY CHILDHOOD DEVELOPMENT AND EDUCATION IN THE DIGITAL AGE HANNAH OLUBUNMI AJAYI, Ph.D	46-54
APPLICATION OF ARTIFICIAL INTELLIGENCE AMONG HISTORY STUDENTS IN NIGERIAN UNIVERSITIES IN EKITI STATE GBEMISOLA MARY OYEWALE, Ph.D & BOWALE ELIZABETH BABAJIDE, Ph.D	55-60
INSECURITY AS A COG IN BASIC EDUCATION IN NIGERIA SHAMSIDEEN ADIO AMUSA	61-68
POVERTY CUM SECONDARY SCHOOL CURRICULUM CHANGE AND ITS IMPLEMENTATION FOR THE ATTAINMENT OF QUALITY ADEGBITE DORCAS OLAYEMI, Ph.D	69-74
INSECURITY AND POVERTY AS CONSTRAINTS TO ECONOMICS EDUCATION IN NIGERIA: AN EMPIRICAL STUDY OF THEIR IMPACT ON NATIONAL ECONOMIC DEVELOPMENT ORUNNA, B. BERNARD, Ph.D & UBOGU, CYNTHIA UCHE, Ph.D.	75-79
INSECURITY AND CURRICULUM IMPLEMENTATION IN SCHOOLS IN NIGERIA BOLAJI OLUFEMI AKINLOYE, OJO, MICHAEL GBEMIGA & DAUDA ISIAKA KAYODE	80-86

- EFFECTS OF AUDIO-VISUAL INSTRUCTIONAL MATERIALS ON STUDENTS' ACADEMIC PERFORMANCE IN MATHEMATICS IN OGBOMOSO SOUTH LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA
OLATUNJI OLUSUJI 87-92
- SCHOOL HEALTH PROGRAMME: A STRATEGIC APPROACH TO PROMOTING HEALTH AND HEALTH EDUCATION IN PRIMARY AND SECONDARY SCHOOLS IN NIGERIA
AKINNUBI CAROLINE F. Ph.D. & ADISA T. O. (M.A.) 93-99
- PRINCIPALS' ADMINISTRATIVE STRATEGIES AND QUALITY ASSURANCE IN OSUN STATE SECONDARY SCHOOLS, NIGERIA.
AKINOLA, OLUWATOYIN BOLANLE & AKOMOLAFE, OMOLARARUTH 100-109
- EXCLUSIVE BREASTFEEDING AS A NATURAL COST REDUCTION STRATEGY IN CHILD REARING AMONG MOTHERS OF CHILDREN UNDER FIVE IN OSUN STATE, NIGERIA
ODEKUNLE, RACHAELIYABO & ODEKUNLE, STEPHEN ABIODUN 110-115
- DEVELOPMENT OF SECURITY CONTROL SMART CARD USED IN BANKING SECTOR
SAM-EKEKE DORIS CHISARA, Ph.D, UKANSI UKANSI KALU 116-122
- ORACLE OF JUDGEMENT AND RESTORATION: AN EXEGETICAL AND INTERTEXTUAL ANALYSIS OF JEREMIAH 23:1-8
DR. GAIYAKAGARKO 123-131

DEVELOPMENT OF SECURITY CONTROL SMART CARD USED IN BANKING SECTOR

SAM-EKEKE DORIS CHISARA, Ph.D, UKANSI UKANSI KALU

Ogbonnaya Onu Polytechnic,
Computer Science Department, Aba,
Abia State

E-mail: Samekekedoris@gmail.com

Telephone Number: 08035483024

ABSTRACT

Banking services have elevated from the traditional method to transaction (or the one aided by technology to the one that can be done from the comfort of one's convenience from home). This has given rise to system integration toward ATM networks implementation in Nigeria that e-banking, e-shopping etc. The infrastructure such as good Telecommunication, been internet service etc. has achieved greater penetration and raising the level of awareness among the banking public that they do not necessarily or physically need to internet with the teller in his bank for him to achieved his cash needs. It is a paramount thing to note by every bank would not only promote further development and growth of ATM industry but also enhance electronic commence in Nigeria. Development of security control smart card used in banking sector deals with the use of ATM which is used for withdrawing money from the cash machinery. Objectives of this research centers on how to develop workable software program that will automatically help to reduce the high risk of fraud, insecurity and queues experience in various financial institutions most especially in the banking sector. The Automated Teller Machine (ATM) network tile was invented to facilitate the different problems such as Forgetting of password, Scratching of the microprocessor; Malfunction of the system and Network failure. The financial inIstitutions especially the Nigeria banks own the decades experienced different kinds of operational problems in the use of manual/traditional systems of banking occurring to the massive increase of banking, provide in the number of customer and day-to-day challenges banks encountered. It has become impossible for; most Nigerian banks and other financial institutions to meet with the demand associated on the modern banking

system. Hence, the need for effective, faster and more efficient means of operation was developed to ease the heavy task of labour and stress which the old system encountered in the previous year. The manual system has in the past increased high level of insecurity and fraud in the banking sector and other financial bodies in Nigeria.

Keywords: CBN, ATM, INTERNET, E-COMMERCE, PIN

Introduction

The Central Bank of Nigeria has in recent time, posed great influence in banking problems, which most banks faced, that eventually led to their liquidation of funds and capitals. This has brought about the issue of banks capitalization, process which in December 31 2005, the CBN pledge honour of banks capitalization based on N125 Billion. Consequently, the Automated Teller Machine (ATM) system was introduced as a means of meeting the ecommerce and e-payment strategies, which are the easy facts and reliable of transportation, which are the order of the day in developed economics and modern banking business. The new trend of ATM technology has attracted customers at protection necessary towards frauds and security branches. ATM was first produced by NCR in Dumbere Scotland later installed in Enfield town in Northern London in the year 1967 on June 27th by Barclays Banks.

In modern ATM, there are high security level encoded in the card which every consumer must authenticate themselves, by using a card with a magnetic stripe. It is encoded with the customer account number and by entering a numeric pass code called a PIN (Personal Information Number), which in some cases will be attended or changed using the machine as the need arises when, the number is entered

incorrectly several times in a row most ATM will retain the card as a security precaution measure to prevent any hackers or unauthorized user from manipulating out the PIN, either by guess or any other means. ATM improves the convenience and security of any transaction. It provides temper-proof storage of user and account identity. ATM systems have proven to be more reliable than other machine-reliable cards, like magnetic strips and barcode.

ATM, typically a type of chip card, is a plastic card that contains an embedded computer chip - either a memory or micro-processor type that stores and transacts data. This data is usually associated with either value, information or both and is stored and processed within the card's chip. The card data is transacted via a reader that is part of a computer system.

It is increasingly clear that the world of computerization has assumed an exponential growth in the recent times business and other products. But the most important aspect of the current trend in a system that is computer management, is the amazing increase in the growing number of new application which have been devised by latest technology to handle complex operates and task. This therefore, helps in the greater application of the management problems, which can be predicted for a long time and it appears that such predicates are successively fulfilled at the end. This was the advent of ATM which has made great impacts on various institutions, banks and co bodies such areas as in business transaction of money in a clean efficient manner. In time with the purpose of the section, this objective is examine the views of various experts on computer and computing as it's related to Automated Teller Machine (ATM) which is currently in use.

Automated according to Oxford Dictionary (3 Edition). It explained automated to be the use of machines instead of people to do a job or industrial process. According to Kenneth A. C. (1993) describes "the computer as an information processing machine". Going by the following definition, I will say that Automated refers to the use of machine other than people in controlling or operating the equipment with which the system functions computerization of industries and other sectional work place have

increased the level of efficiency and effectiveness in management. The availability of computer and necessary software in operation research has greatly helped in its infiltration into realm of decision making either at local national or international level. Computer are indeed some of the most interesting and complex item at technology in everyday use, but they are only around in such numbers because of their useful nature as a working tools. French C. S. (1996) defined computer as a device that work under the control of stored programs automatically accepting, storing and processing information which is the result of that processing "Computer are electronic machine remarkable speed and reliability"

In the similar was, Okafor (2003) described computer as an electronic device which accepts data (inputs) stores them as program to produce a fast an accurate and efficient result (information) at the output.

Going by all these definition of computer which are all good enough and perfection but I can deductively relate, that "computer is an electronic devise which accepts data input I processes it can produces amount of output under a stored program. To satisfy this need many banks and financial institution seek a better way of modernizing their business to enhance customers need and satisfy action. ATM is fast, convenience and portable in the customers pocket and money in the business owner's cash register. Occurring to the law of investment available space requirement needed by ATM outside business. According to Shepherd (2005) said that customers benefit greatly from convenience ATM replacement, of course they are fast and of course they are convenience, but most importantly, customers prefer to pay with cash payment over carry credit and balance on paying annual fees. According to Archyka (2001) described ATM as an aid to business operators, business owners and also benefit been paid in cash, reducing the risk of credit and card and check fraud and increasing the likelihood of impulse shopping.

Statement of The Problem

The financial institutions especially the Nigeria banks own the decades experienced different kinds of operational problems in the use

of manual/traditional systems of banking occurring to the massive increase of banking, provide in the number of customer and day-to-day challenges banks encountered. It has become impossible for, most Nigerian banks and other financial institutions to meet with the demand associated on the modern banking system. Hence, the need for effective, faster and more efficient means of operation was developed to ease the heavy task of labour and stress which the old system encountered in the previous year. The manual system has in the past increased high level of insecurity and fraud in the banking sector and other financial bodies in Nigeria. Therefore, the evolutionary trend in technology has been pushing the human race forward at it concerns with banking to meet the demand of 21st century. The Automated Teller Machine (ATMs) network was implemented as a new trend in science and technology.

Aims And Objectives of The Study

The scope and objectives of this paper are centers on how to develop workable software program that will automatically help to reduce the high risk of fraud, insecurity and queues experience in various financial institutions most especially in the banking sector.

The Automated Teller Machine (ATM) network tile was invented to facilitate the different problems of handling the following transactions

- (a) Bank by phone system
- (b) Cashing cheques/withdrawal
- (C) Student loans operations
- (d) Visa account
- (e) Authorizing and verifying credit cards

Methodology

The data collection for the project was make available from different work materials of textbooks, internet, papers on ATM, which are all referred to as secondary sources of data'. In other hands, the verbal method means of data collecting includes oral interview method which involves two or more persons in a conversation that is face to face approach. Also eye witness account to bank that offer ATM service and all of which are referred to as primary sources. The various methods used in this research work are;

(a) Interview Method:

This involves a research methodology which involves analyst into gathering of information from individual can be used to achieve any of the following goals, findings, facts, verify facts, clarify facts or classify facts etc. the persons is called interviewer while the system is called respondent.

In the method of research, the interview's flexibility in structure and answering question enable the respondent to provide more information that was required.

(b) Observation Method:

This is a method of analysis where the system analyst either participates in watching his topic in a particular environment or writes down the noticeable aspects of his /her facts in the study process. This method is highly reliable, at checks validity of data obtained directly from individual. This method is often used when there is validity of data collected through other methods, when the complexing of certain aspects of the system prevents a clear explanation by the end users.

(c) Questionnaire Method

This is a special purpose document that shows the analyst to collect and gather information and several opinions from respondents. It also allows the analyst to collect fact from a large number of people while maintaining inform of responses. It saves times for the researcher and respondents. The format is usually yes or no format.

(d) Research and Website Visit:

This is a research method employed through on-line document, files etc together with information necessary to the field of study and problem association with it. This method does not concern any respondent or the organization.

System Investigation

System investigation is concerned with the in-depth and comprehensive study carried out on the system so as to acquire all the relevant facts that will help in designing the new system. The task of investigation comprises of facts findings, means of gathering the facts about the current system. The purpose of the fact finding is to identify the implication and application of the

system to the management.

How the methods were used

(a) Interview method

This researcher of this project personally went to object of interest in present and seeing if the expected attributes are present. The researcher observed that before anyone could withdraw money from the ATM suit, first of all you type in your, personal identification number (PIN) and the password on the card, the account balance before withdrawing the amount according to the user.

(b) Research and Website Visit Method:

This is a means by which the researcher went to Cyber café to printout information in the internet. Going to the different website like search engines such as com, yahoo.com, ask.com, askco.uk etc. asking questions about the topic and also the establishment of e of study.

Analysis of Finding

In collecting data for the study, 30 copies questionnaire were produced and 28 were use on the collection of the questionnaire, the researcher observed that high return rate was achieved.

However a good analytical look at the questionnaire indicates that out of 30 copies distributed 28 copies were found valued while the voided copies stood at. This respectively represents 96% and 4% of the total of questionnaire. This was a good return rates as it were two third (2/3) or 70-75 percent of the total number researcher formulated to guide the study, the researcher therefore, did not hesitate to present that data overall 24 or 96% as the finding No	5	20.0
Total	25	100.0

To determine whether ATM is of the security control in banking sector, out of 25 or 84% questionnaires distributed to the respondents, majority said yes while minority replied No.

To determine whether ATM has personal identification number (PIN) and password for security purpose out of 25 or 100% questionnaire distributed to the respondents majority said Yes, which is 18 or 72% whereas minority said 7 or 28% respectively so the number of Yes greater than No.

The respondents were asked to indicate whether money can be withdrawn from ATM cash machine. Out of 25 or 100% respondents, majority said Yes which is 19 or 76% while the minority that said No are 6 or 24% respectively.

The respondents were asked to indicate their ATM whether ATM card is fast in withdrawing money and reliable, maintainable and for security purpose, out of 25 or 100% respondents 22 said Yes while 3 said No.

To determine whether ATM has only

disadvantages life forgetting your password, scratching off the microprocessors, malfunction of system and network failure from the table above 17 or 68% said Yes while 8 or 32 said No.

The table determines whether ATM can solve/stop problem in banking sectors from the table, 23 or 92% said Yes while 2 said No.

This determines whether ATM stop problems like fraud, insecurities, queue and unauthorized user from manipulating out a new PIN in other means 20 said Yes while 5 said No.

To determine whether the new system (ATM) is better than the old system from the total of 25 or 100% questionnaires distributed to the respondents, 24 or 96% said Yes while 1 said No.

To determine whether to encourage people to welcome this new system of withdrawing money from the bank (ATM). 21 said Yes while 4 respondent said No.

Problem of Existing System

The problem that has generated from ATM cards

are

- (a) Forgetting of password
- (b) Scratching of the microprocessor
- (c) Malfunction of the system
- (d) Network failure

(a) Forgetting of Password:

In this case, it involves when one easily forget password that was given to him/her. This can easily lead someone to lose his/her money and not able to withdraw through ATM.

(b) Scratching of the Microprocessor:

This is when the chip is scratched off mistaking and disallowing acceptance of the card by the machine (ATM)

(c) Malfunction of the System:

This is due to regular power failure. It can lead to the damage of the system or the machine or the account details.

(d) Network Failure:

In the case, it can occur when the network is bad during network failure, the machine never accepts or process any input.

Proposal Of The New System

Design and implementation of security control smart card used in banking sector deals with the use of ATM which is used for withdrawing money from the cash machinery. The procedures that will be adopted in this system will be explained as follows.

(1) Card Based Security:

Smart cards are highly secured each card comes with a unique personal identification number (PIN). Some smart cards uses voice tags and finger print which uniquely identifies the user The PIN which is only known by the card owner or bearer which is required for easy purchase and value load transaction. ATM can store information i stripe base and cannot be accessed or scanned without the approval of the private access code. This is more secured that the way information is stored in magnetic strip card.

(2) System Base Security

As earlier noted that smart card infrastructure

consist of software, hardware commonly the link between body in a smart card environment is a local area network (LAN) which can communicate with the outside through a network architecture, provides for fir well in a combination of hardware and software designed to their unwanted traffic hacking.

(3) Personal based device

A smart card is a personnel and portable device associated with a particular card holder. This smart card Plastic often personalized, proving an even storage brinking to the card holder. There features, while somewhat obvious can be a leverage by the system to improve privacy. For instance, a weather care application might elect to store drug prescription information on the card instead of in paper form to improve the accuracy and privacy of patient prescription.

(4) Operation Based Security:

The first operation based security is timed monitoring value leads into card holders are usually subject to availability of funds in the customer's bank account. This check is done automatically. There is also a point limit set at the CSA so that bank may not lead more than a previously severed authorized limit.

The system also enforce in acquires within the same institution.

Finally, ATM returns cards as security precaution to prevent the hackers or any unauthorized user from manipulating out the PIN In other means. It stores customers date relevant to the individual on a particular smart card. One's name is encoded in it, it also same in withdrawing money. It is also advisable to use it in any bank for security purpose.

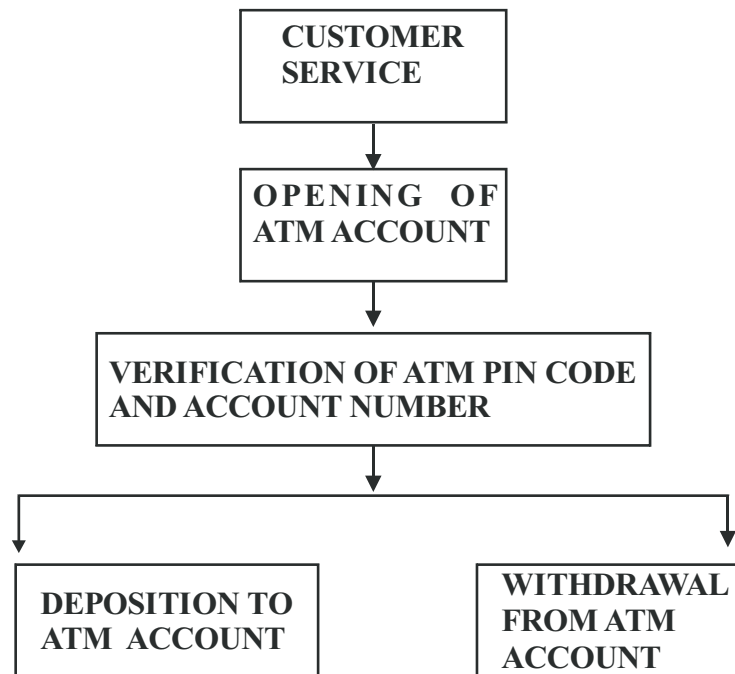
1. when they travel outside the country.
2. Eliminates cash induced robbery in the society

Program Design

The work is designed to take care of respective task that constitute the ATM and its implementation in the similar way the program design is used on the input and output specification to facilitate easy coding, testing and

debugging and it is where the database used in Microsoft access while the programming language used is visual basic version 6 and its

execution and implementation will be on personal computer windows operating system platform



Conclusion

Banking services have elevated from the traditional method to transaction (or the one aided by technology to the one that can be done from the comfort of one's convenience from home).

This has given rise to system integration toward ATM networks implementation in Nigeria that e-banking, e-shopping etc. the infrastructure such as good Telecommunication, been internet service etc. has achieved greater penetration and raising the level of awareness among the banking public that they do not necessarily or physically need to internet with the teller in his bank for him to achieved his cash needs. It is a paramount thing to note by every bank would not only promote further development and growth of ATM industry but also enhance electronic commence in Nigeria. By adopting the rapid development in its sense should be purely approached from long-term perspective and abetting by some staff typical or common to most Nigeria banks, considering the diseasing economic statue, consortium of different banks private initiative should brace up and establish ATM network to meet with the demand and challenges imposed by the metro-

politic, urban cities and most importantly the local community dweller.

It is conspicuously evident that both foreign and local banks will patronize such outfits.

Recommendation

The researcher strongly believes that the advantage of ATM would probably enhance business in Nigeria banking sectors; therefore make recommends this packages system integration towards ATM network implementation in Nigeria to.

- a. Banking sector and telecommunication scheme
- b. Government nation health insurance scheme(NHIS), Poverty Alleviation Scheme (PAS), ECOWASTravels Scheme (ETS) and the Salary Payment Scheme(SPS)
- c. Student Scheme: A typical multi-application card could contain information on personal details, authentication of student identify, electronic cash library and attendance monitoring. When a student card is filled

- to a bank it is used in ATM machine and at post terminals
- d. Petroleum sector as in petrol station for fuel, lubricant and snacks purchases.
 - e. Transportation sector (Toll Plazas) the bank can integrate this to their card solution whereby debit can be made automatically from the holder accounts.
 - f. Also students or researcher should go into hardware configuration of ATM for further studies.
 - g. Further research should be done on how well ATM should be mounted and secured on the road in order to make accessible.

REFERENCES

- Archyka, C. (2001), Automatic Teller Machine on Cud Business Operation. New Delhi Publication Hill.
- Behouz, A. F. (2004), Data Communication and Networking (3rd edition). New Delhi: McGrew Hill.
- French, C. S. (1996), Computer Science (8th edition). London: DP Production.
- James, OB (1997), Introduction to Information System (8th Edition). New York: McGrew Hill Inc. Publication.
- Jeffery, U. N. and Lonnie, B. (1998), System Analysis and Design Method (4th Edition). New York: MC Grew Hill Publication.
- John, S. (2005), ATM Communication (1st Edition). London: Haneman Publication.
- Kenneth, A.C (1993) Computer Application: An Introduction to Computer System. Enugu: Arena Publication.
- Kusshani, A (1986) Computer science and Easy Information. London: Haneman publication.

