APPLICATION OF ONLINE CLEARANCE SYSTEM IN UNIBEN STUDENTS' ONLINE APPLICATION

BY

EMMANUEL KELECHI ANYIM

MGS1606491

DEPARTMENT OF BUSINESS ADMINISTRATION

FACULTY OF MANAGEMENT SCIENCES

UNIVERSITY OF BENIN

BENIN CITY

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF BUSINESS ADMINISTRATION, FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF SCIENCE (BSC) DEGREE IN BUSINESS ADMINISTRATION

AUGUST, 2021

DECLARATION

I, **Emmanuel Kelechi ANYIM**, hereby declare that:

i. This project is based on a study undertaken by me in the Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City, under the supervision of **Dr. Ekanem D. Ekanem.**

ii. This work has not been previously submitted for the award of any diploma elsewhere.

iii. Ideas and views are products of my personal research and where the view of others have been expressed, they have been duly acknowledged.

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EMMANUEL KELECHI ANYIM

CERTIFICATION

We, the undersigned hereby certify that this research project was carried out by **Emmanuel Kelechi ANYIM** with Matriculation Number **MGS1606491** and do approve that it is adequate in content and quality in partial fulfilment of the award of Bachelor of Science (B.sc) degree in Business Administration, University of Benin.

_____	_____
Dr. EKANEM D. EKANEM	**DATE**
(Project Supervisor)	
_____	_____
Dr. E. C. GBANDI	**DATE**
(Project Coordinator)	
_____	_____
Dr. OSARUMWENSE V. IGUISI	**DATE**
(Head of Department)	

DEDICATION

This project is dedicated to my loving savior Christ Jesus who helped made this project a success, Whose love and mercies kept being a light in my academic pursuit and also to my grand ma, Mummy Beatrice Esebuke and my Father in the lord; Pastor E. A. Adeboye.

ACKNOWLEDGEMENTS

The success of my academic would have been impossible but for the great love, mercies of God almighty. My academic pursuit has been a success, largely by his undeniable help and strength. My Earnest gratitude to Him. My Profound appreciation goes to my Project Supervisor Dr. Ekanem D. Ekanem, Whose guidance made this a reality.

My esteemed gratitude goes to my beloved mother Mrs Olachi Kalu for the formidable support Financially, Morally and in Prayers all through my academic pursuit. I also wish to express my gratitude to every lecturers who taught and imparted me with knowledge, your efforts goes un-noticed. Thanks to Dr Adekunle, Dr Ibrahim Shuaib, Dr. Mrs. Agbajor and Dr A.E. Tafema.

Lastly, I want to appreciation this wonderful body of believers The Redeemed Christian Church of God, Christian Fellowship International for helping me grow. I appreciate my friends who aided my study in school, my loving Family, My Leaders in church, My Mentors and Teachers, Buka 6 (My food first aid kit) thank you and lastly Mrs Williams. Thank you for your investment in me.

The Good Lord bless everyone of you

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ABSTRACT

This study analyses the relationship between the online clearance system (Independent variable) and waiting lines (dependent variable). The study employed the use of the primary data administering questionnaire to correspondents of the first year students in Faculty of Management Sciences. In order to determine the reliability and validity of the result, Method of data analysis covering descriptive statistics and inferential statistics, Measure of Operation and technical analysis. A chi-test was conducted and the interpretation and discussion of results follow.

From the chi-test analysis, it could be confirmed that there exists a positive linear relationship between Student's psychology and manual ways of registering students. The analysis also showed that there is a negative and significant relationship between Student's psychology and delayed time of waiting. The analysis showed there exists a positive relationship between The Clearance Effectiveness and the Manual ways of registering students. The study recommends the school management should eliminate physical clearance and conduct her clearance online, alongside equipping the clearance officers' in training that will increase their efficiency and work performance.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Queuing is often an unavoidable experience in many business settings. At the hospital, petrol stations, schools, colleges and institutions of higher learning or in the canteen, people wait for their turn to be attended to either for registration or to buy products as customers. So waiting in lines seems to be part of everyday life. People usually wait or queue in line when the demand for a service exceeds its supply (Kandemir-Cavas and Cavas, 2017). Sometimes, customers wait for a few minutestes, hours, days or months to receive the ordered goods or services. People not only wait in a line in front of a service window or cash register, but waiting sometimes might occur at home as well while waiting for a package to be delivered. In modern world service sector dominates the economies, yet basic features of services mean that queues or waiting lines cannot be avoided. One of the basic features of services is that they cannot be stored or carried in inventory and that demand is not predictable (Zeithaml, Braimoh, Princeley & Denga, 2015).

According to Osato (2016), this seem to also be a problem for manufacturing industries, because now-a-days manufacturing industry is also providing services to their customer, e.g.: with offers of after-sales service or toll-free help numbers, to differentiate themselves and to keep their customer retained. The media have reported queue rage and telephone rage with increasing frequency.

Marketing department put in all efforts to communicate and create a favorable image of a service organization; the first impression by the consumer of the organization itself which opposed to all its advertising efforts may be a line of waiting, frustrated and possibly angry consumers. Evaluation of customer of many services is critically influenced by waiting time.

Even though the concept of waiting for the services or goods appears to come in many different forms, in general, but customers take waiting as a negative construct. The waiting in line for services can often have a negative effect and also creates a negative perception about the particular firm. Hence the way in which managers address the waiting line issue is critical to the long term success of their firms. People waiting in queue sometimes raise problems also like, while the norm in many retail banks is to serve customers on a first-come-first-served basis, some customers try to cut the line, usually by providing an excuse for their urgency. Therefore, service managers often try to offset the negative effects of waiting by implementing a number of solutions, like, shortening waiting times, informing customers about the length of the wait, and providing different kinds of entertainment like television etc during the wait. However, despite the wide variety in methods available to influence customer satisfaction, it is definitely not an easy practice to do (Braimah, 2018)

An organization may not be able to have full control over waiting process or queue. In addition reducing objective waiting time might not influence a customer's subjective interpretation of the waiting for the services (Pruyn and Smidts, 2018). There are a number of studies stressing the importance of perception in queues and waiting situations (Davis and Heineke, 2018; Davis and

Maggard, 2018; Jones and Peppiat, 2016). Queuing has become a symbol of inefficiency for organizations. Universities also face the same kind of problems. Despite the managing of the length of the line few of the factors that are responsible for long waiting lines or delays in providing service are: lack of passion and commitment to work on the part of the staff (Belson, 2018) overloading of available staff, and insufficient staff etc. These put staff under stress and tension, hence tends to dispose off a customer/student without in-depth probing, which often leads to dissatisfaction (Babes and Sarma, 2017). This study is based on the understanding that most of these difficulties can be managed by using queuing model to determine the waiting line performance.

Queuing system or waiting lines has observed to have a wide spectrum application in most things that are taking place in the society particularly where the situation requires provision of services at a frequent interval. At the initial time, the model concentrated on commercial activities. A. K. Erlang the originator of this theoretical framework studied the fluctuating demands on telephone facilities and associated service delays. The application of the theory has now seem to have gone beyond commercial activities. It also embraces other field of human endeavors.

Srivastava, Shenoy and Sharma (2018) enumerate the following as the examples of real queuing system. One significant class of queuing system that we always seem to come across in our daily lives is commercial service system where customers receive service from commercial firms. This involves person-to-person service at a fixed location, such as banks, large retail sales outlets, barber shop, tertiary institutions, etc. Another instance of waiting lines is in the transportation services,

where the vehicles are at a customer's service, such as truck applied most to business industrial systems. This includes material handling units (the servers) more loads (the customers).

The theory is applicable to social service systems. For instance, a judicial system is a queue network, where the courts are service facilities, the judges are the servers and the cases waiting to be tried are the customers. From the observations made above, it is a clear indication that the model can be applied to most aspects of our lives.

Clearance is a status granted to individuals, typically members of the Military, University undergraduate and graduates, and Employees of Government and their contractors, allowing them access to classified information, a clearance by itself is normally not sufficient to gain access. The organization must determine that the clearance individual has a "need to know" the information. Clearance is the process of determining and negotiating any permission that are needed to melu the use of someone else's intellectual property in creative project. Part of that process include: Determining the owner (s) of the intellectual property. Contacting the owners and negotiating on agreement. Administering written contracts, Handling other issue related to the use and licensing of intellectual property.

No one is supposed to be granted access to classified information solely because of rank of position, but once a clearance is obtained access to certain information or gain of freedom will be granted. The advantage of e-learning are many, as people of all ages and backgrounds become increasingly reliant on the internet for information, online learning become more convenient and efficient here,

the need for an online clearance system. The skills needed to access and comprehend information online are becoming common place, and the flexibility of wireless computing means that any coffee shop, airport or bedroom can become a classroom online courses, registration, clearance have few, if any scheduling restrictions, well-integrated learning resources and competitive degree option, with an online clearance system. The changing online college landscape now includes online clearance system, traditional undergraduate and general studies programs. However career learning is still the most popular online training option.

Ochuko (2017) observed that Nigeria's higher institutions are faced with a growing number of applicants who want to undertake studies in different professional fields or disciplines. The successful applicants always seem to find it hard to pass through the registration process because of its cumbersome nature. Most of the institutions are still observed to maintain the old ways of registering students. They often seem to spend many days on the queues before completing the registration which has strong effects on the students' psychology, health conditions and other risks associated with staying long on the queue.

This study is based on the under-standing that most of these difficulties can be managed by using queuing model to determine the waiting line performance.

1.2 STATEMENT OF THE PROBLEM

It has been observed that Nigeria's higher institutions are faced with a growing number of applicants who want to undertake studies in different professional fields or disciplines. The successful applicants always seem to find it hard to pass through the registration process because of its cumbersome nature. Most of the institutions still observably maintain the old ways of registering students. They often seem to spend many days on the queues before completing the registration which has strong effects on the students' psychology, health conditions and other risks associated with staying long on the queue.

In the university environment, such as the University of Benin, there is the need for automated method of recording and keeping data, more so a greater need for an online clearance system. This would go a long way in alleviating the various problems and stress associated with the manual method of student clearance. Also, the issue of delayed National youth service clearance for National assignment to complete the tedious manual process of clearance would be curtailed.

The process of clearing students of the named Institution University of Benin, after graduation requires that the students must be cleared in their various departments and information units. Among which are: Bursary Clearance, Halls of Residence Clearance (for those who stayed in the hostel provided by the school management), Security Clearance, Student Union Fee, Departmental Due amongst others.

Furthermore, for a graduating student to carry out his/her clearance from all these departments it normally takes a lot of time and a lot of process and delay in clearing the student for youth service as well as collection of statement of results. Hence, it became imperative for computer software based online clearance system to eliminate the shortcoming of the manual system in place.

1.3 OBJECTIVES OF THE STUDY

The main Objective of this waiting lines study is to examine effect of queuing on uniben student's online registration. Other objectives are:

1. To find out the average time usage by each student during her physical registration of students(mean item score)
2. To find out the implication of delayed time in waiting in student's psychology i.e mental state
3. To point out the pros of using a queuing software to solve the delayed time of waiting
4. To eliminate the tradition ways of registering students in a clearance system.

1.4 RESEARCH QUESTIONS

1. Does the clearance system have an average time usage for students in waiting lines?
2. Does waiting lines have an implication on the students' psychology?
3. Does the Queuing software improve the delayed time of waiting?
4. Does the traditional way of manual registering of students need to be eliminated?

1.5 RESEARCH HYPOTHESES

Hypothesis are assumptions on which a researcher bases his investigation and on the basis of which a confirmation of the assumed conditions are tested and validated. The hypothesis will be derived from the objectives stated earlier which the researcher intends to investigate. It shall be stated in null and alternate forms as stated by:

Ho: Null hypothesis

H1: Alternate Hypothesis

Ho: There is no significant relationship between the manual method of registering students and students' psychology

H1: There is a significant relationship between the manual method of registering students and the students' psychology

Ho: There is no relationship between the students' psychology and the delayed time in Queuing

H1: There is a relationship between the students' psychology and the delayed time in Queuing

Ho: There is no significant relationship between the clearance officer's effectiveness and the traditional manual way of registering students.

H1: There is a significant relationship between the clearance officer's effectiveness and the traditional manual way of registering students.

1.6 SIGNIFICANCE OF THE STUDY

The study will help in a good number of ways to ease the queuing system in the university as the online clearance system will help student to achieve whatever they want to achieve without going from office to office to get the needed approval for their clearance.

This study serves as an escape route to the university's clearance officer, the students and other business which waiting lines in inevitable in serving their customers such as Banks, Canteens, Bus Stations, Petrol Stations, to mention but a few. Clear advantages of internet information process over those of traditional manual system are higher yields.

Online clearance system allows the users to check their clearance status as whether they are in any way indebted to the school, fill and submit their clearance form, and obtain their clearance letter. There are many other advantages of online clearance system and some of them are listed below

The findings of the study would also help the school in reducing cost such as labour and stationary. In this sense, this will adequately equip the school management to invest heavily on the apparatus that are necessary to erase any issues pertaining to students' clearance.

The findings of the study would also help to serve as a source of reference material to future researchers wishing to embark on a research on a similar study thereby contributing to a body of knowledge in that area of study.

1.7 SCOPE OF THE STUDY

This study is to develop a computer software based online clearance system for doing clearance for the students of the department of Business Administration in University of Benin. This research focus only on the JOOMLA Ms Access queuing model used in University of Benin. The software development will be carried out using JOOMLA Ms Access to manage both the database and at the same time make the software online.

1.8 DEFINITION OF TERMS

The following terms were operationally defined as used in the study:

Computer Network: Computer network is a system that connects two or more computers together using a communication link.

World Wide Web: World Wide Web simply called "www" is the most important tool of the internet, it was created in the late 1980's in Europe and was limitedly use in academics cycle.

Clearances: official certification of blamelessness trustworthiness or suitability for graduation and issue of certificate in degree course.

File Transfer: Any kind of computer file can be sent via the internet from one internet user to another. Table of account in a spreadsheet, design by a graphic artist, music and sound files etc can all be exchanged in this way.

Web Browser: this is special kind of software that processes hypertext mark-up language (HTML) document. In other words, a web browser is a computer program that interprets HTML command to collect, arranged and display the parts of a web page.

Web Site: A web site is a collection of many interconnected web page organized by a specific college, organization company etc, containing web page (goods and commodities) on the internet. Web site is stored on web servers. There are many web sites and thousands of HTML pages on each web site. A web is a treasure of information and entertainment.

Hyperlinks: Hyperlinks are highlighted words and phrase you find on a web document that you can click on as to jump to some other document or internet services.

Online: connected via a computer attached to or available via a central computer network

Offline: Disconnected from computer network, describe a computer terminal or peripheral devices disconnected from a computer network.

System: Set of computer components that is, an assembling of hardware, software and peripheral functioning together.

CHAPTER TWO

LITERATURE REVIEW

2.1 CONCEPT OF QUEUING THEORY

Queuing theory is a mathematical approach which is applied to the analysis of waiting lines within the field of operations management (Nosek & Wilson, 2001). Any system in which arrivals of customers place demand upon a finite capacity resource may be termed as a queuing system (Singh, 2007). Gorney (1981) and Bunday (1996) argue that queuing theory uses queuing or mathematical models as well as performance measures to assess and expectedly improves the flow of customers through a queuing system. A good flow of customers means that the customers queuing is minimized while a poor flow means customers suffer considerable queuing delays (Hall, 2016).

Queuing theory can be diversely applied and has been used mainly by the service industries (Nosek and Wilson, 2011). A queuing system or waiting lines consists of six major components: the population, the arrival, queue line, queue discipline, service mechanism, and departure or exit.

a) **The population source** serves as from where arrivals are generated. Arrivals of customers or students at the university may be drawn from either a finite or an infinite population. A finite population source usually refers to the limited size of the customer pool. Alternatively, an infinite source is unlimited.

b) **The queue discipline** is the sequence in which customers or students are processed or served. The most common and widely used discipline is first come, first served (FCFS). Other disciplines are last to come, first served (LCFS), and service in random order (SIRO). Sometimes customers may also be selected from the queue based on some order of priority (Taha, 2015).

c) **The service mechanism** describes how the customer is served at the source. Nosek and Wilson (2011) conclude that the number of servers and the duration of the service time-both of which may vary time to time and also in a random fashion. The choices of facility structure can be determined by the number of lines and servers. The common service facility structures are: single-channel, single – phase; single-channel, multiphase; multi-channel, single phase and multi-channel, multiphase.

d) **The departure or exit** occurs when a customer is served. There are two possible exit scenarios that are: (a) the customer may return to the source population and immediately become a competing candidate for service again; (b) there may be a low probability of re-service. Abbottabad campus, COMWAVE Abbottabad, Hazara University, Mansehra campus and UET Abbottabad campus. Student Affairs is facing a problem of queue management. A survey of the students of different universities showed that more than 70% of the students in universities are unhappy and dissatisfied with their services of student affairs. One of the big problems in the student affairs is the large waiting lines that build up just before exams when students have to collect their sessional or exam coupons. In order to collect them they need to clear their dues,

fines, and any other such defaults. At a time like this, students have less time to stay in line because of the enormity of academic work and the urge to attend scheduled ongoing classes, so they simply break lines and try to get to the server first which causes chaos and confusion and psychological trauma on the student and this affect their health status. Another such phenomenon is seen during the new academic session. Students assembled or queue in students affairs to clear their queries, submit forms, documents, clear fee dues, enable installments, education fund, etc. once again the same thing happens. So in order to reduce these waiting lines and managing the queue system of the student affairs need to be re-designed and improved.

Student affairs major work is to deal with the following three functions in the universities,

Information: Information area in student affairs provides the arrivals of all kind of information that they require else than that information portion deals with all the queries related to academic and non-academic issues of both students and faculty members and their other services are information providing facility to parents, notice board, online course registration, registered course status, attendance monitoring, fee status, marks, result card, overall progress, login history, changing password.

Student issues: The student affairs section basically deals with the following matters that are admissions, student counseling for academic as well as non-academic issues, provision of certificates, information / query center for students, liaison with the guardians / parents, student refunds.

Admission: It deals with the admission for the new candidates. In this admission desk the students are provided the student applications for academic as well as non-academic issues like accommodation, Electricity, Water and a peaceful atmosphere for learning. It also deals with the provision of certificates, student counseling and student refunds.

These set of modules provide all the academic functions including admissions, academic activities, student fees, examination, Head of Department activities, faculty activities, user management, student transport, HRMS & payroll system, library access, ID-cards.

2.2 ROLE OF INFORMATION TECHNOLOGY IN THE ACADEMIC SYSTEM

The introduction of computer into information technology has massively improved the hunger of knowledge in organizations; the success of this machine is dependent on the knowledge base. Therefore, one can be prompted to ask aloud "what is a computer" Funk (2019) defined a computer as an electronic device that can perform automatically at a high speed of a sequence of logical operations according to instructions giving to it inform of pre-arranged program.

Anigbogu (2015) define a computer as an electronic device capable of accepting data and instruction; process the data base on the instruction to generate result or output in such a manner that is yet to be equaled by any other known machine to mankind.

Chimezie (1990) define computer by saying that computers are looked upon as obedient servants who are ever ready to free man from tedious procedures and produce result as compared with human computing time.

Obilikwu (2015) define a computer as a machine that is capable of accepting input data, store and process the data base on the instructions giving by the computer users and in this way produce expected result, generally called output.

World net describes an information system (I.S) as systems consisting of all communication channels used within an organization and include software and hardware. It may also be define as a system that collect and process data (information) and provide it to managers of all levels that use it for decision making, planning, program implementation and control.

The aim of information system to admission, registration, result processing and clearance in universities using computer software based online clearance system is to improve the quality and accuracy of information provided to all involved as well as assisting universities in compiling and reporting information, making work lesser for the management.

Information technology has been an integral part of academic system since almost four decades. According to Hewlet (2013) the world is entering an era in which technology will literally transform every aspect of business, every aspect of life and every aspect of society.

Since the arrival of internet technology, school system has taken a new shape style with a blend of convenience and satisfaction. Taylor (2010) says that computer base education includes both computer-assisted instruction programs that interact with students in a dialogue and a broader array of educational computer applications such as simulations or instructions in computer programming. Learning from a student bedroom, office or anywhere in the world has made its way into university system with the advent of internet technology. Information technology has always helped the university system to educate student in better way. To explain few examples. Student online clearance is a method where the student obtains his/her clearance letter without carrying files around. This is safe, fast and has no hazels. Filling out the documents and comparing options and writing for approval is a time consuming process. Through the internet, this process is made much easier and sometimes the approval is made within minutes. This explains an efficient way of obtaining clearance and saves time and money for students.

2.3 DATA AND INFORMATION

The concept of data and information are very important in understanding issues that go with development and implementation of a computer software based online clearance system. The term “data” and “information” are used interchangeably in every day conversation as meaning the same thing by many managers and information specialists. However, these terms have distinct meaning. According to O’Leary (2016) data simply consist of raw unprocessed facts while information is a data that have been processed by the computer. Hordeski (2016) gives the following definition of

data; A graphic or textual representation of facts concepts, numbers, letters, symbols or instructions suitable for communication, interpretation or processing. Data is the basic element of information that is use to described objects, ideas, conditions or situations.

Lucy (2011) defines data and information as; Data is fact events, transactions and so on, which have been recorded. They are the raw materials from which information is produced. Information is data that has been produced in such a way as to be useful to the recipient. Data are fact obtained by observation, counting, measuring, weighing etc, which are often records of day-to-day transactions of the organization. For example, the date, amount, and other details of an invoice or cheque, payroll details of payment, the number of a student living in a particular hostel and so on.

Enwerem (2012) argue that the concept of information in an organization sense is more complex and difficult than the frequent use of this common word would suggest. Oketunji (2012) emphasized that information is data that have been processed, transmitted by the recipient, interpreted and understood by the recipient. Here it should be noted that the user, not just the sender is involved in the transformation of data into information. There is a process of thorough and understanding involved and if follows that a given message can have different meaning to different people. Based on this, one can conclude that data which has been analyzed, summarized or processed in some other fashion to produce a message or report which is conveniently deemed “management information” only becomes information if it is understood by the recipient. Therefore it is the user who determine whether a report contains information or just processed data.

2.4 TECHNOLOGY ENHANCED COMPUTER SOFTWARE BASED ONLINE CLEARANCE SYSTEM

According to Jeremy (2006), made a comparison of traditional and hybrid online system in communication technology. Online system has become a central element of the discourse on higher education (cox 2015). There seems to be an overall drive towards online system given the mountainous need for flexibility in scheduling and the daily emergency of communication technology and capabilities (Hill stock 2015).

Online system is presented as a means of conveying instructions to an extensive learning community any place at any time Cox (2015). Indicate that adequate designate online learning as the driving force and model for transformation in teaching, learning and formal schooling online course has the potential to provide learner individualized attention by the instructor, otherwise impossible in a large classroom environment (environmental education and training partnership 2016).

With the continuous development of online system applications, many colleges and universities began to offer online courses as an alternative to traditional face-to-face instructions. 67% of colleges and universities agreed that online education is the most logical long term strategies for their institutions (Hill stock, 2015). However, there are considerable hesitation rising predominantly related quality and student respectively to online system, (Yong & Conellus 2014). Just as their advantages there are also disadvantages to the online system instruction delivery method. There is evidence through previous research that student fill isolated or disconnected when not engaged in

traditional face-to-face instruction (Guhu, 2001, Graham, 2017), while other report indicate large success (Hoff man 2012, Kaczynski & Kelly 2014: Mayer, 2017). There remains a lack of clarity whether online courses are as affective as traditional courses (Peirier & Feldman 2014).

While there has been vast amount of research conducted on the advantages and the disadvantages of online system institution, little is known on how assessment is used in online classroom to monitor performance and progress.

Hew, Liu, Martinez. Bonk, and Lee (2014) describe the evaluation of current online education system at three levels; the macro level, the meso level and micro level. The macro level is an online evaluation that access an entire online program, the meso level evaluation access individual online courses, and the micro level access the learning of the online student.

Online clearance system present educational experience very different from standard face-to-face environment (Hew, Liu, Martinez, Bonk & Lee 2014). When conducting a micro level courses evaluation, interest commonly lies in learner perception of the course experience pertaining to the level of comfort, ability to communicate with class mate and the instructor, as well as comparison to traditional face-to-face lecture. Many times the only means of evaluating learner perception is in the form of a questionnaire or survey. Although perception of online system can be extremely useful information, it is usually not sufficient to conclude the evaluation without expanding to learners understanding.

2.5 COMPUTER-BASED ONLINE INFORMATION SYSTEM

An information specialist Lucey (2011) define computer based management information system as: the combination of human and computer based resource that result in the collection, storage, retrieval, communication and use of data for the purpose of efficient management of operations and for business planning.

Computer based information system is a feature of all large organization nowadays. The literature identifies four kinds of computer based information: Transaction processing system (TPS), management information system (MIS), decision support system (DSS) and executive support system (ESS). Some system record routine activities: Employees hired, material purchased or produced and the like. Such recorded events are called transactions. Other system uses this recorded event to help managerial planning and control. The systems form a pyramid each primarily supporting one another level of management.

a. Transaction processing system (TPS): these system record day-to-day transactions such as customer order, bills, inventory levels and production output. The TPS helps supervisors by generating data base that act as foundation for other information system.
b. Management information system (MIS). These summarize the detailed data of the transaction processing system standard report for middle level managers. Such report might include production schedules and budget summarizes.

c. Decision support system (DSS); The DSS provide the flexible tools for analyzes. The DSS help middle level managers and other in the organization analyze a wide range of problem, such as effect of event and trend outside the organization. Like the MIS, the DSS draws on the detailed data of transaction processing system.

d. Executive support system (ESS): The ESS is easy-to-use systems that present information in a very highly summarized form. It helps top level management to oversee the company operation and develop strategic plans. The ESS combines internal data from TPS and MIS with external data.

2.6 DATA BASE OR INFORMATION STORAGE SYSTEM

In the early days of computerization, it was normal to maintain specific files for individual application. Data where processes centrally in batches and there was little or no online interrogation of data. This approach is wholly inefficient for most of today's data processing systems. Supporting this vossen (2011) enumerated the problems that result from organizing the data using the file system.

a. There exist a high redundancy between files which result from the fact that the information is replicated in different places, and that these replications are not controlled by a central monitor

b. Inconsistencies might result from the possibilities that a program makes changes on the files it uses without these changes being made (at the same time) by all other programs that uses the files.

c. There exist in flexibility against changes in the application: if new actions or event arise in the cause of time, these can be realize at a substantial expense of time.
d. The work of many programmers involved is characterize by low productivity, seems program maintenance is expensive: if the structure of an existing file has to be modify during it life time, then all application program has to be modify correspondently
e. Finally, there is the problem of adopting and maintaining standard (with respect to coding data format etc), which is important for exchanging data or for migration to new operating system released, or even to a new computer system.

To overcome these problems, data bases where developed. It is now common for large organization to organize their operational data using the data base technology.

The subject of data is adequately covered in many works in data base technology. Clifton (1983) briefly define data base as a collection of data supporting the operation of an organization. Quoting CIMA, Lucey (2011) provide a more detailed definition.

A data base is a file of data structured in such a way that it may serve a number of application without it structure being dictated by any one of those application, the concept being that programs are written round the data base rather than files being structure to meet the need of particular programs.

Russel M. (2017) dealt extensively on the need for the use of computer on such data base system like computerized clearance system. In the world of Dimorji (2013). “At the center of any information system is a data base, which is any collection of related information grouped together as a simple item. The term can also apply to the ways in which information is catalogued, analyzed, stored and used manually”.

Rossell (2015) was also of the view that without computer, effective handling of candidate record cannot be achieved effectively in a data base, all the data is defined together rather than each file being define separately. In fact, all the literature consulted seem to support the fact that a data base is a collection of structured data with the structure of data being independent of any particular application. Specify the need for data base, O’leary (2016) listed the following advantages:

a. Sharing: in an organization, information from one department can be readily shared with others.
b. Security: users are giving password or access only to the kind information they need to know. Thus, the payroll department may have access to employees pay rate but they would not.
c. Fewer files: with several departments having access to one files, there are fewer files therefore, excess storage or what is called redundancy is reduced.
d. Data Integrity: older filing system many times did not have integrity i.e. a change made in the file in one department might not be made in the file in another department. As one might

expect, these can cause serious problems and conflict when data is used for important decision affecting but department.

To the enumerated above, vossen (2011) at abbs.

a. Standard/access protocols can be enforced.
b. Currency of data can be maintained.
c. Data/program independent can be maintained.
d. Conflicting requirement can be balanced among users.

In these days of integrated networks, the database appeared as the most logical method for organizing the operational data of large organizations. One may as well say that these advantages give the database the attraction over the traditional file processing method.

2.7 INFORMATION TECHNOLOGY AND ONLINE CLEARANCE SYSTEM

Several communicational tools are at the disposal of students and staffs to support their activities during the clearance. The partner universities offer two virtual communication tools with different capabilities (marratech and central). It is also available online and the communication management systems (OCMS) and in dependent discussion forum.

Marratech

Marratech is a virtual online tool that allows holding meeting and video conferencing on the web, face-to-face, whenever you want to talk, see each other and share application and document without

being in the same room, the same building, or even the same country. This platform is used in several systems like in the energy online master program for online lectures, project meetings and project presentation.

Central

Central enables group to work faster and more effectively by automating critical clearance system and training initiatives online through virtual classroom, online meeting and web conferences. Central has a broad array of features that make live, group-oriented system effective on the web. Interactive white board, yes/no feedback, had-raising, multi-point conferencing, advanced application shearing and text and fool-duplex chart examples, in the energy online master program for online lectures, project meetings and project presentation.

Communication management tools are available at each university and also in an online clearance system homepage.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research methodology used for the study. Topics of coverage in this chapter include research design, source of population, the population involved in the study, and the research instrument used as well as the statistical method used in the analysis of data collected.

3.2 RESEARCH DESIGN

Research Design refers to the logical model of proof that allows the researcher to conclude the relationship among variables under the investigation (Nachimas & Nachimas, 1981). This study adopted a survey design via a structured questionnaire to gather information from the respondents for understanding and predicting respondent's opinions on the effects of waiting lines in Uniben Clearance System.

A Survey research is defined as "the collection of information from a sample of individuals through their responses to questions" (Check & Schutt, 2012, p. 160). This type of research allowed a variety of methods to recruit participants, collect data, and utilize various methods of instrumentation. Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods).

3.3 THE POPULATION OF THE STUDY

The population of the study was made up of eight hundred and hundred twenty students of the Faculty of Management Sciences. The population of the study is shown in tabular form below from the various departments in the faculty of Management sciences.

S/N	Names of Department	Total number of students admitted
1.	Accounting (Taxation)	280
2.	Banking and finance (Insurance and Actuarial science)	290
3.	Business Administration (Entrepreneurship, Human resource and Marketing)	350
Total		820

Source: Secretary to the office of the Dean (2021)

3.4 SAMPLE AND SAMPLING TECHNIQUE

Sampling is defined as a process of selecting a section to represent the whole (Pilot & Beck, 2004). For this study's purpose, convenience sampling technique was used to select respondents. This

sampling technique demands selecting/choosing respondents that are readily obtainable to the researcher. The sample selection process lasts till the sought after sample size is achieved (Saunders et al., 2009). This was considered to be less costly and a meaningful way of sampling from such a large population of potential respondents.

3.4.1 SAMPLE SIZE DETERMINATION

The sample of this research was calculated by using Taro Yamane (Yamane, 1973) formula with 95% confidence level. The calculation formula of Taro Yamane is presented as follows.

Where;

n= sample size required

N = number of people in the population

e = allowable error (%)

Substitution in formula

n= 150

N= 820

e= 0.05

$$\frac{150}{1 + 820(0.05)^2}$$

n = 49.1803

The Sample size is 50 (because we cannot have 49.18 students), the questionnaire consisted of both open ended questions and multiple choice questions. The purpose of the questionnaire was to elicit responses that aided data collection and analysis of the study.

3.5 DATA COLLECTION INSTRUMENT

The data used was a primary data i.e Data collected from the field. To elicit responses from the students, questionnaires were administered. The instrument had items measuring average time usage, the effect of queuing on student's psychology, impact of a queuing software and the likely elimination of the manual ways of registering students. A 5 point Likert scale was used to collate responses. Each likert scale is regarded as

5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree

The reason for using questionnaires was to give the most success rate for data collection as far as field survey was employed. Also, due to time constraints, the questionnaires were regarded as the best instrument for the research in order to elicit the necessary information from the respondents.

3.6 DATA COLLECTION METHOD

3.6.1 QUESTIONNAIRES ADMINISTRATION

A total of 50 questionnaires were administered. Prior to that, a pre-assessment of the instrument was conducted on respondents. This was to verify and validate the instrument. The questionnaires was

administered to students of the Faculty of Management Sciences (Accounting, Banking & Finance and Business Administration) during the time of each visit throughout the data collection period. The questionnaires retrieved was assessed and found to be acceptable for usage by my supervisor.

3.7 VALIDITY AND RELIABILITY OF INSTRUMENTS

Validity indicates the degree to which the instrument measures the constructs under investigation (Mugenda & Mugenda 1999). Of the three types of validity test, (Content, criterion and related construct validity), this study used criterion validity because it measures the extent to which the sample of the items represented the measure of correlated variables (also known as criteria). An instrument is said to be valid to the degree that it measures if claimed to measure or the extent to which it predicted accurately such types of behaviour as better service delivery (best & khan, 2004).

Internal check in the form of logical test in the questionnaire was conducted through pilot testing. As such a pilot test was carried out on 20 respondents as directed by my supervisor to pre-assessed instruction.

3.8 METHOD OF DATA ANALYSIS

Data collection was collected and analysed using appropriate sub-programs of the descriptive statistics such as mean and standard deviation was used to answer the study research question 3; while inferential statistics such as the Chi – square was used to evaluate the hypothesis. Inferential statistics is strongly associated with the logic of hypothesis testing. A hypothesis is an empirically

verifiable declarative statement concerning the relationship between independent and dependent variables and their corresponding measures. (Civil service India, 2009)

3.9 OPERATIONAL MEASURE OF VARIABLE

The chi-square was used in analyzing the data. The variables to be used are explained below:

Ho: The null hypothesis

H1: The alternate hypothesis

O: Observation

E: Expected data

X^2: chi-square

3.10 TECHNIQUES OF ANALYSIS

The technique of analysis used in this study is the chi-square (X^2). The test reports the probability of relationships observed if a random sample are the representative of those which would have been observed of the entire population studied.

The chi-square method is comprised of independent and dependent variables. The chi-square is used to test the hypothesis. The null hypothesis states or indicates there is zero or no relationship between the dependent and independent variables.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

The following analysis is based on the data obtained from response to the questionnaire administered. All positive responses (that is strongly agree, agree) are in support of the question asked and are referred to as favourable responses and all neutral responses indicated undecided responses and negative responses and all negative responses (that is strongly disagree, disagree) indicated that they do not agree with the question and are generally referred to as unfavourable responses.

4.2 DATA PRESENTATION AND ANALYSIS

A total of fifty (50) questionnaires were distributed among the departments in the Faculty which were properly filled and returned. The response from the respondents are shown in a tabular form

Section A

Table 4.1: Respondents personal data

Items	Options	Frequency	% of Response
Gender	Male	14	28
	Female	36	72
	Total	**50**	**100**
Age	15-19years	25	50
	20-24years 25-29years 30 & above	20 5 0	40 10 0
	Total	**50**	**100**
Marital Status	Single	50	100
	Total	**50**	**100**
Course of Study	Accounting	25	50
	Banking & Finance (Insurance, Actuarial Science)	15	30
	Business Administration (BUS, HRM, MKT & ENT)	10	20
	Total	**50**	**100**

Source: Field survey 2021

Table 4.2.1 shows that 28% of the respondents are males while 72% are females, 50% of the respondents fall between the age of 15-20years whereas 40% are from 20-24years, 25-29years are 10% and 30 & above are zero. While 100% of the respondents are single, 50% of the respondents are from the Department of Accounting, 30% of the respondents are from the Department of Banking & Finance, 20% of the respondents are from the Department of Business Administration in their Course of Study.

Section B

Table 4.2.1: The Allocated time to kick start the clearance process is strictly adhere to

Rating	Frequency	Percentage
Strongly Agree	16	32
Agree	26	52
Undecided	5	10
Disagree	3	6
Strongly disagree	0	0
Total	50	100

Source: Field survey 2021

Table 4.2.1 shows that 32% of the respondent chose strongly agree, 50% agree, 10% chose undecided, 6% disagree and 0% chose strongly disagree that The allocated time to kick start the clearance process is strictly adhere to

Table 4.2.2: Allocated time given to each students is adequate

Rating	Frequency	Percentage
Strongly Agree	16	32
Agree	24	48
Undecided	5	10
Disagree	5	10
Strongly disagree	1	2

Source: Field survey 2021

Table 4.2.2 shows that 30% chose strongly agree, 50% agree, 10% undecided, 10% disagree and 2% chose strongly disagree that The Allocated time given to each student is adequate for each student to have her clearance processed.

Table 4.2.3: 20 Mins is sufficient for my physical registration

Rating	Frequency	Percentage
Strongly Agree	14	28
Agree	22	44
Undecided	5	10
Disagree	9	18
Strongly Disagree	0	0
Total	50	100

Source: Field survey 2021

Table 4.2.3 shows that 27% of the respondent chose strongly agree, 42% agree, 10 undecided, 9% disagree, while 0% chose strongly disagree that 20 Mins is sufficient for my physical registration

Table 4.2.4: The time spent during my physical registration is satisfactory

Rating	Frequency	Percentage
Strongly Agree	15	30
Agree	26	52
Undecided	2	4
Disagree	4	8
Strongly disagree	3	6
Total	50	100

Source: Field survey 2021

Table 4.2.4 shows that 30% chose strongly agree, 48% agree, 2 % undecided, 8% disagree while 4% chose strongly disagree that the time spent during my physical registration is satisfactory.

Table 4.2.5: Waiting too long and yet not rewarding results in a psychological stress

Rating	Frequency	Percentage
Strongly Agree	20	40
Agree	23	45
Undecided	1	2
Disagree	5	10
Strongly disagree	1	2
Total	50	100

Source: Field survey 2021

Table 4.2.5 shows that 40% choose strongly agree, 45% agree, undecided 2%, disagree 5%, while 2% strongly disagree that waiting too long and yet not rewarding results in a psychological stress.

Table 4.2.6: Standing too long in the queue puts my health in harm's way

Rating	Frequency	Percentage
Strongly Agree	10	20
Agree	26	52
Undecided	4	8
Disagree	6	12
Strongly disagree	4	8
Total	50	100

Source: Field survey 2021

Table 4.2.6 shows that 20% of the respondent choose strongly agree, 52% agree, 8% undecided, 6% disagree and 8% strongly disagree that Standing too long in the queue puts my health in harm's way.

Table 4.2.7: Physical clearance during lectures affects my academics

Rating	Frequency	Percentage
Strongly Agree	18	26
Agree	20	30
Undecided	3	6
Disagree	12	24
Strongly disagree	7	14
Total	50	100

Source: Field survey 2021

Table 4.2.7, the table shows that 26% of the respondent choose strongly agree, 30% agree, 0% undecided, 10% strongly disagree while 34% disagree that Physical clearance during lectures affects my academics

Table 4.2.8: Delayed time spent in registration can cause frustration

Rating	Frequency	Percentage
Strongly Agree	12	24
Agree	24	48
Undecided	2	4
Disagree	5	10
Strongly disagree	7	14
Total	50	100

Source: Field survey 2021

Table 4.2.8 shows that 24% of the respondent choose strongly agree, 48% agree, 2% undecided, 10% disagree, while 14% strongly disagree that Delayed time spent in registration can cause frustration.

Table 4.2.9: Virtual registration of students will do more good to the student's health

Rating	Frequency	Percentage
Strongly Agree	12	24
Agree	22	44
Undecided	7	14
Disagree	5	10
Strongly disagree	4	8
Total	50	100

Source: Field survey 2021

Table 4.2.9 shows that 24 of the respondent chose strongly agree, 44% agree, 14% undecided, 10% disagree, while 8% disagree that Virtual registration of students will do more good to the student's health,

Table 4.2.10: To quicken the registration of students, there is a need an introduction to a queuing software

Rating	Frequency	Percentage
Strongly Agree	16	32
Agree	19	38
Undecided	3	6
Disagree	12	24
Strongly disagree	0	0
Total	50	100

Source: Field survey 2021

Table 4.2.10 shows that 32% choose strongly agree, 38% agree, 6% undecided, 24% disagree while 0% strongly disagree that to quicken the registration of students, there is the need of an introduction to a queuing software.

Table 4.2.11: Using queuing software will make the registration of students more effective and efficient

Rating	Frequency	Percentage
Strongly Agree	12	24
Agree	27	54
Undecided	0	0
Disagree	6	12
Strongly disagree	5	10
Total	50	100

Source: Field survey 2021

Table 4.2.11 shows that 24% of the respondent choose strongly agree, 54% agree, 0% undecided, 10% strongly disagree while 12% disagree that Using queuing software will make the registration of students more effective and efficient.

Table: 4.2.12: Queuing software solves the inappropriate waiting in the clearance hall

Rating	Frequency	Percentage
Strongly Agree	12	24
Agree	20	40
Undecided	6	12
Disagree	8	16
Strongly disagree	4	8
Total	50	100

Source: Field survey 2021

Table 4.2.12 shows that 16% of the respondent choose strongly agree, 40% agree, 20% strongly disagree while 24% disagree that a queuing software solves the inappropriate waiting in the clearance hall

Table 4.2.13: Queuing software helps manage the Facilities in the clearance hall by scheduling all arrival by appointment

Rating	Frequency	Percentage
Strongly Agree	15	30
Agree	19	38
Undecided	1	2
Disagree	8	16
Strongly disagree	7	14
Total	50	100

Source: Field survey 2021

Table 4.2.13 shows that 30% of the respondents choose strongly agree, 38% agree, 2% undecided. 16% disagree while 14% strongly disagree that queuing software helps manage the Facilities in the clearance hall by scheduling all arrival by appointment.

Table 4.2.14: The queuing software will enhance the clearance officer's effectiveness

Rating	Frequency	Percentage
Strongly Agree	19	38
Agree	14	28
Undecided	2	4
Disagree	10	20
Strongly disagree	5	10
Total	50	100

Source: Field survey 2021

Table 4.2.14 shows that 38% of the respondent choose strongly agree, 28% agree, undecided 4%, 20% disagree, while 10% strongly disagree that the queuing software will enhance the clearance officer's effectiveness

Table 4.2.15: The queuing software serves as an effective tool of communication between the students and the staff

Rating	Frequency	Percentage
Strongly Agree	17	34
Agree	15	30
Undecided	6	12
Disagree	10	20
Strongly disagree	2	4
Total	50	100

Source: Field survey 2021

Table 4.2.15 shows that 34% of the respondents choose strongly agree, 30% agree, 12% undecided, 20% disagree, while 4% strongly disagree that the queuing software serves as an effective tool of communication between the students and the staff

Table 4.2.16: The queuing software provides real-time data in the database of the school management

Rating	Frequency	Percentage
Strongly Agree	18	36
Agree	18	36
Undecided	5	10
Disagree	4	8
Strongly disagree	5	10
Total	50	100

Source: Field survey 2021

Table 4.2.16 shows that 36% of the respondent chose strongly agree, 36% agree, 10%undecided, 8% disagree, while 10% strongly disagree that the queuing software provides real-time data in the database of the school management

Table 4.2.17: The manual ways of registering students has delayed the procession of students getting cleared and registered in the department

Rating	Frequency	Percentage
Strongly Agree	10	20
Agree	25	50
Undecided	5	10
Disagree	8	16
Strongly disagree	2	4
Total	50	100

Source: Field survey 2021

Table 4.2.17 shows that 20% of the respondent choose strongly agree, 50% agree, 10% undecided, 8% disagree, while 2% the manual ways of registering students has delayed the procession of students getting cleared and registered in the department

Table 4.2.18: The manual registration of students affect the activities in the academic calendar

Rating	Frequency	Percentage
Strongly Agree	16	32
Agree	20	40
Undecided	3	6
Disagree	6	12
Strongly disagree	5	10
Total	50	100

Source: Field survey 2021

Table 4.2.18 shows that 32% of the respondent choose strongly agree, 40% agree, 6% undecided, 12% disagree while 10% strongly disagree that the manual registration of students affect the activities in the academic calendar

Table 4.2.19: The use of computers and other online tools have rendered the manual method ineffective and time-consuming

Rating	Frequency	Percentage
Strongly Agree	30	60
Agree	15	30
Undecided	1	2
Disagree	4	8
Strongly disagree	0	0
Total	50	100

Source: Field survey 2021

Table 4.2.19 shows that 60% of the respondent choose strongly agree, 30% agree, 2% undecided, 4% disagree, while 0% strongly disagree that the use of computers and other online tools have rendered the manual method ineffective and time-consuming

Table 4.2.20: An online clearance is more effective than a physical clearance

Rating	Frequency	Percentage
Strongly Agree	11	22
Agree	24	48
Undecided	3	6
Disagree	10	20
Strongly disagree	2	4
Total	50	100

Source: Field survey 2021

Table 4.2.21 shows that 22% of the respondent choose strongly agree, 48% agree, undecided 6%, 20% disagree, while 4% strongly disagree that an online clearance is more effective than a physical clearance

Table 4.2.21: Online clearance reduces cost, improve productivity and lead to better operational procedures.

Rating	Frequency	Percentage
Strongly agree	15	30
Agree	30	60
Undecided	2	4
Disagree	3	6
Strongly disagree	0	0
Total	50	100

Source: Field survey 2021

Table 4.2.21 shows that 30% chose strongly agree, 60% agree, 4% undecided, 6% disagree, 0% strongly disagree that Online clearance reduces cost, improve productivity and lead to better operational procedures.

4.3 TESTING OF HYPOTHESIS

Here the hypothesis formulated in chapter one of this research will be tested. The three raised hypothesis will be tested one after the other.

Decision rule

Reject the null hypothesis if the computed value of test statistics x^2 exceeds the critical tabulated value of x^2 for (r – 1) (c – 1) degree of freedom

Hypothesis 1

H_o: There is no significant relationship between the manual method of registering student's and students' psychology

H_1: There is a significant relationship between the manual method of registering student's and students' psychology

Table 4.3.1: Condensed Outcome of Five Questions for Testing Hypothesis I

Rating	Table 4.2.5	Table 4.2.6	Table 4.2.7	Table 4.2.8	Table 4.2.9	Total
Strongly agree	20	10	18	12	12	72
Agree	23	26	12	24	22	108
Undecided	1	4	0	2	7	11
Disagree	5	6	5	5	5	24
Strongly disagree	1	4	17	7	4	31
Total	50	50	50	50	50	250

Source: Adapted from table 4.2.5, 4.2.6, 4.2.7, 4.2.8 and 4.2.9

Table 4.3.2: Contingency Table for Hypothesis ITa

Observation	Expected	O-E	$(O-E)^2$	$(O-E)^2/E$
20	13.4	6.6	43.56	3.250746269
23	22	1	1	0.045454545
1	2.8	-1.8	3.24	1.157142857
5	5.2	-0.2	0.04	0.007692308
1	6.6	-5.6	31.36	4.751515152
10	13.4	-3.4	11.56	0.862686567
26	22	4	16	0.727272727
4	2.8	1.2	1.44	0.514285714
6	5.2	0.8	0.64	0.123076923
4	6.6	-2.6	6.76	1.024242424
13	13.4	-0.4	0.16	0.011940299
15	22	-7	49	2.227272727
0	2.8	-2.8	7.84	2.8
5	5.2	-0.2	0.04	0.007692308
17	6.6	10.4	108.16	16.38787879
12	13.4	-1.4	1.96	0.146268657
24	22	2	4	0.181818182

2	2.8	-0.8	0.64	0.228571429
5	5.2	-0.2	0.04	0.007692308
7	6.6	0.4	0.16	0.024242424
12	13.4	-1.4	1.96	0.146268657
22	22	0	0	0
7	2.8	4.2	17.64	6.3
5	5.2	-0.2	0.04	0.007692308
4	6.6	-2.6	6.76	1.024242424
			CALCULATED	**41.965696**

Source: Field survey 2021

Critical value = (r-1) (c-1)

= (5-1) (5-1)

= (4) (4)

= 16 degree of freedom

The critical value of $x^2_{0.05}$ = **26.30** from chi – square table at 16 degree of freedom

Decision

Since the calculated x^2 value of **41.96** is greater than the critical value which is **26.30** we reject the null hypothesis H_0 and accept the alternate hypothesis H_1 which state that There is a significant relationship between the manual method of registering student's and students' psychology.

Hypothesis II

H_o: There is no significant relationship between the students' psychology and the delayed time of waiting

H_1: There is a significant relationship between the students' psychology and the delayed time of waiting

Table 4.3.3: Condensed Outcome of Eight Questions for Testing Hypothesis II

Rating	Table 4.2.1	Table 4.2.2	Table 4.2.3	Table 4.2.4	Table 4.2.5	Table 4.2.6	Table 4.2.7	Table 4.2.8	Total
Strongly agree	16	16	14	15	20	10	18	12	126
Agree	26	24	22	26	23	26	20	24	187
Undecided	5	5	5	2	1	4	0	2	24
Disagree	3	5	9	4	5	6	5	5	42
Strongly disagree	0	1	0	3	1	4	7	7	33
Total	50	50	50	50	50	50	50	50	400

Source: Adapted from table 4.2.6, 4.2.7, 4.2.8 and 4.2.9

Table 4.3.4 Contingency Table of x^2 for Hypothesis II

Observed	Expected	O-E	(O-E)SQUARED	(O-E)2/E
16	15.125	0.875	0.765625	0.050619835
26	23.875	2.125	4.515625	0.189136126
5	2.875	2.125	4.515625	1.570652174
3	5.25	-2.25	5.0625	0.964285714
0	2.875	-2.875	8.265625	2.875
16	15.125	0.875	0.765625	0.050619835
24	23.875	0.125	0.015625	0.00065445
4	2.875	1.125	1.265625	0.440217391
5	5.25	-0.25	0.0625	0.011904762
1	2.875	-1.875	3.515625	1.222826087
14	15.125	-1.125	1.265625	0.083677686
22	23.875	-1.875	3.515625	0.147251309
5	2.875	2.125	4.515625	1.570652174
9	5.25	3.75	14.0625	2.678571429
0	2.875	-2.875	8.265625	2.875
15	15.125	-0.125	0.015625	0.001033058
26	23.875	2.125	4.515625	0.189136126
2	2.875	-0.875	0.765625	0.266304348
4	5.25	-1.25	1.5625	0.297619048
3	2.875	0.125	0.015625	0.005434783
20	15.125	4.875	23.765625	1.571280992
23	23.875	-0.875	0.765625	0.032068063
1	2.875	-1.875	3.515625	1.222826087
5	5.25	-0.25	0.0625	0.011904762
1	2.875	-1.875	3.515625	1.222826087

10	15.125	-5.125	26.265625	1.736570248
26	23.875	2.125	4.515625	0.189136126
4	2.875	1.125	1.265625	0.440217391
6	5.25	0.75	0.5625	0.107142857
4	2.875	1.125	1.265625	0.440217391
18	15.125	2.875	8.265625	0.546487603
20	23.875	-3.875	15.015625	0.628926702
0	2.875	-2.875	8.265625	2.875
5	5.25	-0.25	0.0625	0.011904762
7	2.875	4.125	17.015625	5.918478261
12	15.125	-3.125	9.765625	0.645661157
24	23.875	0.125	0.015625	0.00065445
2	2.875	-0.875	0.765625	0.266304348
5	5.25	-0.25	0.0625	0.011904762
7	2.875	4.125	17.015625	5.918478261
			CALCULATED	**39.28858664**

Source: Field survey 2021

Critical value = (r-1) (c-1)

= (5-1) (8-1)

= (4) (7)

= 28 degree of freedom

The critical value of $x^2_{0.05}$ = **41.34** from chi – square table at 24 degree of freedom

Decision

Since the calculated x^2 value of **39.29** is less than the critical value which **41.34**, we do not reject the null hypothesis H_0 which state that there is no significant relationship between the students' psychology and the delayed time of waiting.

Hypothesis III

H_0: There is no significant relationship between the clearance officers' effectiveness and the manual ways of registering students

H_1: There is a significant relationship between the clearance officer's' effectiveness and the manual ways of registering students

Table 4.3.5: Condensed Outcome of Twelve Questions for Testing Hypothesis III

The twelve questions were drafted into two tables, i.e Table 4.3.5.1 and Table 4.3.5.2

Table 4.3.5.1

Rating	Table 4.2.10	Table 4.2.11	Table 4.2.12	Table 4.2.13	Table 4.2.14	Table 4.2.15	Table 4.2.16	Total
Strongly agree	16	12	12	15	19	17	18	109
Agree	19	27	20	17	14	15	18	130
undecided	3	0	6	6	2	6	5	28
Disagree	12	6	8	5	10	10	4	55
Strongly disagree	0	5	4	7	5	2	5	28
Total	50	50	50	50	50	50	50	350

Source: Adapted from table 4.2.10, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 4.2.15 and 4.2.16

Table 4.3.5.2

Rating	Table 4.2.17	Table 4.2.18	Table 4.2.19	Table 4.2.20	Table 4.2.21	Total
Strongly agree	10	16	30	11	11	78
Agree	25	20	15	24	24	108
Undecided	5	3	1	3	3	15
Disagree	8	6	4	10	10	38
Strongly disagree	2	5	0	2	2	11
Total	50	50	50	50	50	250

Source: Table 4.2.17, 4.2.18, 4.2.19, 4.2.20, and 4.2.21

4.3.6 Contingency Table of x^2 for Hypothesis III

Observed	Expected	O-E	(O-E)SQUARED	(O-E)2/E
16	15.5833333	0.4166667	0.173611111	0.01114082
19	19.8333333	-0.8333333	0.694444444	0.03501401
3	3.58333333	-0.5833333	0.340277778	0.09496124
12	7.75	4.25	18.0625	2.33064516
0	3.25	-3.25	10.5625	3.25
12	15.5833333	-3.5833333	12.84027778	0.82397504
27	19.8333333	7.1666667	51.36111111	2.58963585
0	3.58333333	-3.5833333	12.84027778	3.58333333
6	7.75	-1.75	3.0625	0.39516129
5	3.25	1.75	3.0625	0.94230769
12	15.5833333	-3.5833333	12.84027778	0.82397504
20	19.8333333	0.1666667	0.027777778	0.00140056
6	3.58333333	2.4166667	5.840277778	1.62984496
8	7.75	0.25	0.0625	0.00806452
4	3.25	0.75	0.5625	0.17307692
15	15.5833333	-0.5833333	0.340277778	0.02183601
17	19.8333333	-	8.027777778	0.4047619

		2.8333333		
6	3.58333333	2.4166667	5.840277778	1.62984496
5	7.75	-2.75	7.5625	0.97580645
7	3.25	3.75	14.0625	4.32692308
19	15.5833333	3.4166667	11.67361111	0.74910873
14	19.8333333	-5.8333333	34.02777778	1.71568627
2	3.58333333	-1.5833333	2.506944444	0.6996124
10	7.75	2.25	5.0625	0.65322581
5	3.25	1.75	3.0625	0.94230769
17	15.5833333	1.4166667	2.006944444	0.12878788
15	19.8333333	-4.8333333	23.36111111	1.17787115
6	3.58333333	2.4166667	5.840277778	1.62984496
10	7.75	2.25	5.0625	0.65322581
2	3.25	-1.25	1.5625	0.48076923
18	15.5833333	2.4166667	5.840277778	0.37477718
18	19.8333333	-1.8333333	3.361111111	0.16946779
5	3.58333333	1.4166667	2.006944444	0.56007752
4	7.75	-3.75	14.0625	1.81451613
5	3.25	1.75	3.0625	0.94230769
10	15.5833333	-5.5833333	31.17361111	2.00044563
25	19.8333333	5.1666667	26.69444444	1.34593838

5	3.58333333	1.4166667	2.006944444	0.56007752
8	7.75	0.25	0.0625	0.00806452
2	3.25	-1.25	1.5625	0.48076923
16	15.5833333	0.4166667	0.173611111	0.01114082
20	19.8333333	0.1666667	0.027777778	0.00140056
3	3.58333333	-0.5833333	0.340277778	0.09496124
6	7.75	-1.75	3.0625	0.39516129
5	3.25	1.75	3.0625	0.94230769
30	15.5833333	14.416667	207.8402778	13.337344
15	19.8333333	-4.8333333	23.36111111	1.17787115
1	3.58333333	-2.5833333	6.673611111	1.8624031
4	7.75	-3.75	14.0625	1.81451613
0	3.25	-3.25	10.5625	3.25
11	15.5833333	-4.5833333	21.00694444	1.34803922
24	19.8333333	4.1666667	17.36111111	0.87535014
3	3.58333333	-0.5833333	0.340277778	0.09496124
10	7.75	2.25	5.0625	0.65322581
2	3.25	-1.25	1.5625	0.48076923
11	15.5833333	-4.5833333	21.00694444	1.34803922
24	19.8333333	4.1666667	17.36111111	0.87535014

3	3.58333333	-0.5833333	0.340277778	0.09496124
10	7.75	2.25	5.0625	0.65322581
2	3.25	-1.25	1.5625	0.48076923
			Calculated X^2	70.9303876

Critical value = (r-1) (c-1)

= (5-1) (12-1)

= (4) (11)

= 44 degree of freedom

The critical value of $x^2_{0.05}$ **= 55.76** from chi square table at 9 degree of freedom

Decision

Since the calculated $X20_{.05}$ **70.93** value of is greater than the critical value which is **55.76**, we reject the null hypothesis H_0 and accept the alternate hypothesis is H1 that there is a significant relationship between the clearance oficers' effectiveness and the manual ways of registering students.

4.4 DISCUSSION OF FINDINGS

The Chi-square test was used to evaluate the hypotheses, of which several decision were made as a result of the Calculated X^2 and the Critical value in which we do not reject the hypothesis (Ho) we accept the alternative hypothesis (H1) and reject the null hypothesis (Ho).

The hypothesis 1, There is a significant relationship between the manual method of registering student's and students' psychology had a critical value of 26.30 and the calculated X^2 as 41.96, we reject the null hypothesis and accept the alternative hypothesis which states that there is a significant relationship between the manual method of registering students and the students' psychology with a p-value less than 0.05 ($p<0.05$) we accept the alternative hypothesis and reject the null hypothesis.

Hypothesis 2 states Ho There is no significant relationship between the students' psychology and the delayed time of waiting. Having a critical value of 41.34 and the calculated X^2 as 39.40, we do not reject the null hypothesis that there is no significant relationship between the students' psychology and the delayed time of waiting. Also, To strengthen this claim the p-value is greater than 0.05 ($p>0.05$), a p-value of 0.45 was generated based on the analysis conducted in Table 4.3.4. Therefore we do not reject the null hypothesis which states that there is no significant relationship between the students' psychology and the delayed time of waiting.

Hypothesis 3 states there is no significant relationship between the clearance officers' effectiveness and the Manual methods of registration students. The critical value for this hypothesis was 55.76 and the calculated X^2 was 70.93, having the p-value less than 0.05 ($p<0.05$) we reject the null

hypothesis and accept the alternative hypothesis that the manual method really does affect the clearance officer's effectiveness. With the aid of Online clearance and the modernized equipment, the clearance system will be more effective, saving time and also low cost effect on the school management.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter is discussed under the following headings: summary of findings, conclusion and recommendations. The chapter also contain contribution to knowledge, limitations of the study, and suggestions for further studies.

5.1 SUMMARY

The study investigated "Application of Online Clearance System in Uniben Students Admission". The survey research design was adopted with the aid of validated questionnaires administered to 50 first year students in the Faculty of Management Sciences was analyzed for the study. Analyzed data using chi-square to evaluate the questionnaires and also the Testing of hypothesis. Major findings of this study are summarized as follows:

a. It was observed that there exists a positive linear relationship between Student's psychology and manual ways of registering students.
b. There is no relationship between Student's psychology and delayed time of waiting.
c. There exists a positive relationship between The Clearance Effectiveness and the Manual ways of registering students.

5.2 CONCLUSION

Based on the findings of the study, the following conclusions were made:

Waiting lines in a clearance system can drastically be eliminated in order to have a seamless clearance process. In other words, through the development of a queuing software, the number of students waiting on the queue is minimized because the software indicates what number they are on the queue and exactly what time they will be attended to, therefore scheduling all arrival by appointment which will help the clearance officers to plan and prepare the influx of students per day. As such the students are not left in the dark as to when to arrive at the clearance hall, eliminating totally anything that will jeopardize the student's health.

Elimination of the manual ways of registering students will Pose an immerse positive effects in having the students registered. With the computerized equipment being installed this will help in the clearance system on both ends; the clearance officer will be able to attend to more students per day than he would, using the manual methods in physical registration. More so, the clearance officer will do more when the clearance is done online with the aid of a queuing software.

5.3 RECOMMENDATIONS

The following recommendations are made in line with the findings of the study for waiting lines in a Clearance system particularly now that the study has shown that the waiting lines could be improved upon with the use of computerized equipment and the students don't have to be involved in with the cost of using a manual method.

1. The school management is therefore implored to have her clearance system online and not physical anymore. The process will be effectively carried out when it is done online and

before the student resume on campus. With respects to the covid 19 protocols, the school management will be able to clear out her normal activities online and not breach the covid protocols. The Clearance process will be held before the resumption date, The Faculties and departments are fully prepared and ready to engage the student in the learning process. The students will be focused in having their clearance done faster than it would be, when they are physically present on campus. As such, the school will set up a queuing software to accommodate the number of students that will be attended to per day to reduce traffic on her website.

2. The School management should mandate that these clearance officers are grounded in using the online tools, the computerized equipment (the queuing software) providing a formal training to equip these individuals with the right knowledge of making adequate use of this equipment.

5.4 LIMITATION OF THE STUDY

The study was limited to not having up-to- date Information in the text in the library on the subject matter Waiting Lines in Clearance system. This resulted into outsourcing articles, journals from other scholarly writings in other schools and Institutions. This is limiting the duration of the research work combined with the short period of the Academic session of 5 months as instigated by the School Management. The study would have been more productive, concise and also reviewing other aspects of the clearance system in the Hostels, the Departments etc.

5.5 RECOMMENDATION FOR FURTHER STUDY

Waiting lines is an interesting and inevitable event, the pioneer to develop a viable queuing theory was the French mathematician S.D Poisson (1781-1840) formulating a distribution function to describe the probability of a prescribed outcome after repeated iterations. Because Poisson used a statistical approach, the distribution he used could be applied to any situation where excessive demands are made on a limited resources. (Production and Operations Management by Dr Ibrahim Shaibu, Ph.D). This interesting topic will be overlooked if the Research contribution of Agner Krarup Erlang who developed formulas, Erlang-B and Erlang-C.

This topic cuts across other walks of life, It is applicable in a wide variety of situations that may be encountered in businesses, commerce, industry, healthcare, public service and engineering (Smith 2006). Research should be done on these industry to manage excessive demands on limited supply, Industries will achieve more when research is done to improve decisions taken by the industry leaders.

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APPENDIX

DEPARTMENT OF BUSINESS ADMINISTRATION

FACULTY OF MANAGEMENT SCIENCES

UNIVERSITY OF BENIN

APPLICATION OF ONLINE CLEARANCE IN UNIBEN STUDENT ADMISSION

My name is Anyim Emmanuel, I am a 400 level final year student of the above named institution currently undertaking research on '' **Application of Online Clearance in Uniben Student Admission''.** This study is part of the requirement for the fulfilment for the award of Bachelors of Science Degree (B.Sc) in Business Administration.

I wish to appeal to you to assist this study by completing this questionnaire which is designed primarily to generate reliable information with the sole purpose of academic research. I assure you that your answers will be treated with strict confidence.

Thanks for your anticipated co-operation and response.

Please fill  in accurately √

SECTION A: RESPONDENT'S DEMOGRAPHIC DATA

Gender √

Male ☐ Female ☐

Age

15-19 ☐

20-24 ☐

25-29 ☐

30 and above ☐

Marital Study

Single ☐

Married ☐

Others ☐

Course of Study

Section B

Please, tick in the appropriate column that best suits your assessment using the following as: (strongly agree (SA), Agree (A), Undecided, Disagree, Strongly disagree (SD)

	Section B: To find out the average time spent by each student during her physical registration	SA 5	A 4	UD 3	D 2	SD 1
1	The Allocated time to kick start the clearance process is strictly adhere to					
2	Allocated time given to each student is adequate					
3	20 Minutes is sufficient for my Physical registration					
4	The time spent during my physical registration is adequate					
	Section C: To find out the implication of delayed time in waiting in Student Psychology					
5	Waiting too long and yet not being rewarding results into a psychological stress					
6	Standing too long in the queue puts my Health easily					
7	Physical Clearance during lecture hour affects my academic performance					

8	Delayed time spent in registration can cause frustration					
9	Virtual Registration of students will do more good to the student's health					
	Section D: To point out the pros of using a queuing software to solve the delayed time of waiting					
10	To quicken the registration of students, An introduction to a queuing software can help satisfactorily					
11	Using a queuing software will make the registration of students more effective and efficient					
12	A queuing software solves the inappropriate waiting in the Clearance Hall					
13	A queuing software helps manage the Facilities in the Clearance hall by scheduling all arrival by appointment					
14	The queuing software will enhance the clearance Officer's effectiveness					
15	The queuing software serves as an effective tool of communication between the students and the staff if well managed					
16	The queuing software provides real-time Data in the Database of the School management					
	Section D: To eliminate the Manual ways of registering students in a clearance system					
17	The manual ways of registering students has delayed the procession of students getting cleared and registered in the department					
18	The manual registration of students affect the activities in the Academic calendar					
19	The use of computers and other online tools have rendered the manual method ineffective and time-consuming					
20	An online clearance is more effective than a physical Clearance					
21	An online clearance reduces cost, improve productivity and lead to better optimum performance					