

## Design and Implementation of Online Students' Complaint Management System for Institutions of Higher Learning

**Victoria Anthony Uwah,**  
Department of Computer Science  
College of Education, Afaha Nsit  
Akwa Ibom State

**Kufre J. Etim**  
Department of Computer Science  
College of Education, Afaha Nsit  
Akwa Ibom State

### Abstract

*An information system is a very important and popular tool in this present information technology era. People all over this world use this tool to get and share information. It cuts across all sides of life and people, the children, youths and elders. It is very effective when applied in institutions of learning and can avoid errors caused by users or staff in the organization; it provides easy and fast access and delivery of new information. Online students' complaint system is a set of procedures used in higher institutions of learning to address students' complaints and resolve disputes. It provides an online way of solving the problems faced by the students of higher institutions of learning by saving time and eradicating corruption. The system makes it easier to coordinate, monitor, track and resolve dispute, and to provide the institution with an effective tool to identify and target problem areas, monitor complaints handling performance and thereby improves on the present disputes resolution system of the institution. The research methodology that was used for the design and development of the system is the Object Oriented Analysis and Design (OOAD). Data was collected from the students and staff of Akwa Ibom State College of Education, Afaha Nsit, Akwa Ibom State on the types of students' complains, existing resolution procedures, and feedback. The programming language that was used in coding is an object oriented programming language known as C# (C-SHARP). The new system shall accept the students' data, and complaints as inputs, process it following the information stored in the database. It shall produce the status of the complaint and give possible feedback.*

**Keywords:** Online Students' Complaint, information system, complaint, Object Oriented Analysis and Design (OOAD)

### Introduction

The improvement in technology has posed the computer scientists and researchers to develop a complaint system, which is a set of procedures used in Universities and higher institutions of learning to address complaints and resolve disputes especially in this information system era. A complaint is an expression of dissatisfaction or concern by the public, however made, about the conduct, standard of service, actions or lack of action by an authority (*Lipsky & Loproskov, 2012*). A complaint could be made where there is a failure to provide a service at the

<https://journals.iapaar.com/index.php/aajer>

right time or to the standard expected of the Service, dissatisfaction in answering a query or responding to a request for a service, failure to follow the organization's agreed policy, orders or procedures, failure to take proper account of relevant matters in coming to a decision, discourteous or dishonest behaviour by a staff, harassment, bias and an unfair discrimination.

In an institution of learning, a complaint is any type of problem, concern or grievance about students' studies, student life in the institution. It is basically, anything which negatively affects students' studies or their experience in the institution of learning. A student can complain about the college's academic provision or a related service, or about the actions or a lack of action by the college, its partners or its staff (Academic Services, 2015), such complains include admission, deferment of admission, grades during the academic semester, academic suspension, charges of dishonesty, plagiarism, deliberate forgery of data, credit load, omission of scores, sexual harassment and other forms human right violation.

Most institutions of higher learning are committed to providing an excellent education and high quality services to their students. They continuously seek to improve the student experience, but from time to time problems arise, and students are compelled to complain and appeal. Unfortunately, only a few numbers of them who know their right are bold enough to take a step to file a complaint to the appropriate authority. Students should be supported to express their dissatisfaction and seek resolution to the problems they encounter. It is therefore necessary for the institutions to take students' complaints seriously and endeavour to improve its processes and services by listening to, responding to, recording and resolving students' dissatisfaction. Students should feel free to express their dissatisfaction and appeal for resolution without fear of victimization by the staff, unit or department involved. They should be encouraged to seek guidance and advice from a student support professional. Lack of proper movements provides complaint management operations a speed which was never envisaged in manual mode at all.

Online Information System for Student Complaint (OISSC) is a set of procedures designed and programmed to handle the booking or submission of complaints, analysis of the complaints, automatic scheduling and processing of the complaints, monitoring the resolution procedures and provision of feedback to the complainants, all in considerate period of time. The compliant software allows a booking operator to book and lodge complaints and automatically schedules and prompts operators to source complaint to concerned departments. State of the art management

<https://journals.iapaar.com/index.php/aajer>

information reports on complaint details and pending complaints with reasons and remarks provides management a better insight to problems. A “Report Wizard” not only allows you to define specific reports on demand but also allows the user to define his/her own sorting and analysis parameters which may be more relevant to him/her (Osman & Enayat, 2015). According to researchers, complaint systems in some developed countries have undergone several innovations especially since about 2000 with the advent of extensive workplace regulation. Conflict management channels and systems have evolved from a major focus on labor-management relations to a much wider purview that includes unionized workers and also managers, non-union employees, professional staff, students, trainees, vendors, donors, customers, etc (Langsdale, 2014). There is also a major need to collect, review and understand the nature of conflict management, student and complaint systems around the world. Research studies on the existing school environment have made the researcher to embark on developing an online student complaint system for Universities and Schools. Complaint systems exist in health care, in faith-based organizations, in schools, in political organizations, and in many specialized occupations (Sebastian, 2002).

According to Philip (2000), an academic growth can be of various concerns in academic environment to promote social and functioning educational system. For an effective educational system to take place there are some issues in academic environment that should properly be addressed, for instance, complaint management system in higher institutions. This issue had created a lot of problems for an academic growth in the various aspects of the educational system. To support this approach, this work identifies different types of complaints raised by students and a better way to handle them for a smooth running of the academic institutions.

Marchington and Wilkinson (2005) defined method of handling complaint as a product of labour relations environment in the 60s and 70s when there was a more explicit struggle for control in the workplace. This had two main effects; firstly, it created the requirement for clear techniques so that all specialists knew and decides to oversee implicit rules, and moves that may be made against them if these guidelines were charged. Besides, it prompted more prominent clarity and consistency of executive activities to determination the protests. Complaint management system helps to maintain an effective, timely, and equitable complaint handling system which is easily accessible and offered to complainants (students) at no charge. This work defines the policy and

<https://journals.iapaar.com/index.php/aajer>

steps for handling and resolving complaints and to appeal for an un-favoured situation, and for this process to take place there must be an automation of the system that will handle the complaints process and appeal method of registration.

In the existing system, the students must go through appropriate channel in order to submit their complaints. For example, to the Provost, through the Head of Department, through the Dean, through Deputy Provost Academic if it has to do with academics or to the Deputy Provost Administration if it has to do with administrations. Some students do send their letter of appeal to the Registrar by post. Most complainant do not receive any letter of acknowledgement nor able to monitor the progress of the resolution procedures. Some offices lack good storage system and some storage systems are manual. Manual storage systems are prone to destruction and loss of data. Manual procedures to problem resolutions are highly influenced, and susceptible to by favoritism, discrimination and victimization. This type of dispute resolution procedure is very slow and often yields no results within the required time frame. Affected students become discouraged and frustrated and are forced to resort to self-help which may snowball into institutional crisis.

Many Institutions have a long and successful history of using computing and information systems to provide administrative and operational efficiencies in areas like student records, financial aid, billing, and admission. The College has tried to shape its homegrown Student complaints System (SCS) manually to meet its needs, but is now faced with increasing access and functional requirements and the need to take better advantage of technology and data. Students make use of the manual method of writing letters of appeal or protest and submit it to the provost through the head of department, through the dean, through the deputy provost. This procedure takes a longer period, lacks privacy, it is susceptible to favoritism, discrimination, victimization, loss of data and lack of feedback.

The general purpose of the study is to design and implement a web-based students' complaint system for Akwa Ibom State College of Education, Afaha Nsit, to create an integrated database for different categories of students' complains., design a web-based student complaint management system, where students can register complaint, and monitor its progress from date registered to the date it is resolved, develop a new system called online student complaint management system for use institution of higher learning using Akwa Ibom Sate College of Education, Afaha Nsit a case study.

<https://journals.iapaar.com/index.php/aajer>

Developing the online student complaint system shall involve the creation of database of the categories of student's complaints, generate a platform for students to lodge their complaints and make request, generate a platform for the administrative officer to receive and acknowledge the receipt of the complaints, automatically schedule a sitting to address the problem and relate the information to the people involved, give feedback to the students (complaints) showing if the problem is resolved or not.

In assessing the present complaint and resolution procedures of the College, it is identified that the existing system has varieties of shortcomings which include lost of data, delay, victimization, favoritism, lack of courage by students, poor feedback method, and so on. The existing system uses manual method of processing students complaint. Therefore the important of online students' complaints system include the ability of students complaints to be treated seriously, fairly, transparently and with impartiality, to be addressed within a reasonable timescale, to be fully investigated, dealt with sensitively, in confidence and without fear of discrimination, be considered within the framework of the College's policies and practices, greater integration into the College present information systems (data sharing, security, seamless access), provides a web and network-based solutions, it will enhance student services in line with the changing technologies, enables system and process integration, on-line reporting, portal access (easy single entry point) to information and it will serve as a platform for integrating some companion systems, e.g., scheduling, ID cards.

### **Review of Related Works**

In the past, universities and large school districts in particular have created their own bespoke student record systems. One such example is the Repository of Student Information (ROSI) system also known as School Portal at most Universities. With the growing complexity in the business of educational establishments, most organizations now choose to buy customizable software, and increasing numbers are buying software as a service (SAAS). Most student information systems in use today are server-based, with the application residing on a central computer server, and being accessed by client applications at various places within and even outside the school. Student information systems have been moving to the web since the late 1990s and that trend is accelerating as institutions replace or upgrade older systems (Osman and Enayat, 2015.). Larger or more complex institutions typically require custom configuration or the coding

<https://journals.iapaar.com/index.php/aajer>

of a student information system to fit their specific business processes, student services model or academic policies. Often, these customizations can involve scholarships, grants and other forms of student financial aids. Where national or government systems exist for student finance or statistical return purposes, student information systems often provide functionality that caters for this, by way of built-in processes that are updated by SIS vendors to help meet regulatory and policy changes.

According to Stephen(2010), one of the effective ways of building lasting customer relationships is to create superior value and satisfaction for the customers, this can be achieved through implementation of effective customer complaint management system. It is necessary for every corporate organization to make complaint management system one of the key strategies needed good success in this era of high competitiveness in businesses. A complaint is an expression of disappointment, dissatisfaction or grievance expressed by the complainants. Organizations may demand the establishment of complaint system which can be made to rectify its mistakes, take disciplinary action against the suspected offenders, or resolve the issue(s) raised in the complaint. Complaint management according to (Glovsky, 1999) is a set of procedures used in organizations to address complaints and resolve disputes. The term complaint management describes the handling of customer complaints within an organization, it involves criticism. This criticism is supposed to be evaluated in a way that is systematic and orderly, and used to create a positive impact. It is also supposed to resolve the issue that prompted the customer's criticism.

Rose (2010) postulated that complaint management is all about methodically handling customer criticism. Strategies must be developed and it must be determined where complaints should be received, how one should react to feedback and which departments or individuals the criticism should be forwarded to. The allocation of responsibilities also falls under complaint management. Only once it's clear who needs to react in each instance can an actual negative criticism be transformed into something positive. The goal of complaint management is to strengthen customer loyalty as well as quality assurance. As a company gets larger, the number of complaints or critics usually grows as well. Eventually the number of complaints gets so big and the company structure so complex that one must introduce a complaint management process. Gruber (2011) postulated two basic goals of complaint management to include;

<https://journals.iapaar.com/index.php/aajer>

1. Customer satisfaction: Complaint management is supposed to reduce customer dissatisfaction and ideally even strengthen customer loyalty.
2. Quality assurance: Through complaint management, customer feedback reaches the right departments and contributes to the improvement of the product or service.

The significance of customer complaint management system in the performance of corporate organizations cannot be overstressed (Rose, 2010). Customer complaints are inevitable in any corporate organization no matter how good such an organization may be. Some complaints serve as a feedback mechanism for corporate organizations. Customers of such organizations may want to express their feelings and impressions on the quality of the product or service produced by the organization. Some complaints tend to relay a message on the taste and preference of the customers. Customers' complaints become useful when such complaints attract quick and effective response from the organization. Corporate organizations are expected to hold their customers in high esteem since the customers are the lifeblood of any corporate organization. Agu (2015) highlighted the basic features that underscore the process of service provision to include among others intangibility, perishability and heterogeneity. Variability in quality of services provided often leads to customer dissatisfaction which also leads to service failure. When service fails, customers are dissatisfied and they experienced cognitive dissonance (after purchase regret) which may lead to complaints, murmuring, protests and confrontations. These show of dissatisfaction if not properly address can lead to innate growth of a business and at the height of it, closure of a business. Customers complaints according to Agu (2015) remained an invaluable asset to best service providers globally and a tool for service quality improvement. It is believed that less than 10% of dissatisfied customers choose to complain to their service providers, others prefer to murmur among themselves, complain to friends, relations and other customers. These, of course cannot solve the problems but rather can reduce the level of trust and patronage of the service providers.

Despite the merits associated with the customer complaint management, several firms in Nigeria do not pay attention to customers' complaints hence, customers are usually left alone to "lick their wounds" whenever there is a problem with the product they bought or services rendered to them. Because of this, several firms in the country have lost their customers. This affects

<https://journals.iapaar.com/index.php/aajer>

profitability and survival of such firms. Several firms in Nigeria have collapsed because of this unfortunate situation. In educational institutions, most learners are victimized, some of them have dropped out as a result of frustrations, some other have been given extra years to repeat courses they might credited and many others have gone into emotional depression and the likes. Some of these institutions are operating under a shattered structure and have lost their glory because of stigmatization.

Complaint systems in the US have undergone several innovations especially since about 1970 with the advent of extensive workplace regulation. Notably in many countries, conflict management channels and systems have evolved from a major focus on labour-management relations to a much wider purview that includes unionized workers and managers, non-union employees, professional staff, students, trainees, vendors, donors, customers, etc. An effective conflict management procedures must therefore be rooted with a call to lay complains, listening to and taking down complains, responding quickly, taking responsibility and proffering solutions. Coupled with the foregoing, the use of information technology to manage customers' complaints in Nigeria is at its infancy stage. In the words of Agu (1998), majority of the business organizations in the country use archaic or primitive methods to manage customers' complaints. It is only few companies that use information technology or software to manage their customers, this has negatively affected the performance of such erring corporate organizations. There is evidently a wide gap between the expectation and the actual. However, this research work is designed to address these challenges which business organizations have in managing customer complaints.

Rowe and Baker (1990) said that there is a major need to collect, review and understand the nature of conflict management and complaint systems around the world. Many authors extended the work of Berenbeim, Rowe, and Rowe and Baker, on the topic of internal complaint systems. They included: Douglas M. McCabe, William J. Ury, Jeanne M. Brett, and Stephen B. Goldberg. Cathy Costantino and Cristina S Merchant, and Karl A. Slaikeu and Ralph H. Hasson extensively explored issues of designing conflict management systems. The concept of an integrated conflict management system was conceived and developed by Mary Rowe, in numerous articles in the 1980s and 1990s. She saw the need to offer options for complainants and therefore a linked system of choices within an organizational system. The idea of a systems approach has



<https://journals.iapaar.com/index.php/aajer>

endured well. In recent years however, there has been discussion as to whether conflict should be "managed" by the organization or whether the goal is to understand, deal with and learn from conflict. There is also concern about practical and theoretical issues in "integrating" a system, with some observers preferring the idea of "coordinating" a conflict system. However, 2012 research by David Lipsky et al., suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS."

### **Information and Communication Technology (ICT) and Education**

More than ever, the advent of the knowledge economy and global economic competition compel governments to prioritize educational quality, lifelong learning and the provision of educational opportunities for all. Policymakers widely accept that access to information and communication technology (ICT) in education can help individuals to compete in a global economy by creating a skilled work force and facilitating social mobility. They emphasize that ICT in education has a multiplier effect throughout the education system, by enhancing learning and providing students with new sets of skills; by reaching students with poor or no access (especially those in rural and remote regions); by facilitating and improving the training of teachers; and by minimizing costs associated with the delivery of traditional instruction.

The 21st century is an epoch of ICT and knowledge economy based on the predominant contribution of science and education (Sagitova,2012). Apart from this change in economic systems of the country affects greatly the management of economic and quality indicators of performing institutions. In this era of speedy information and communication technology development, ICT is part and parcel of quality management in our schools. Balanskat (2006) argues that the progress in the ICT application in schools has been uneven leading to considerable variations in e-maturity. As this happens countries continue to invest colossal amounts of money in the ICT in schools. One of the keys to successful management of any organization-educational institutions included is the ability to understand and apply modern management principles and techniques effectively (Valarie and Ashok, 2011). They content that as high-performance organizations, educational institutions may be interested in having an effective low-cost, efficient and multi-user integrates management information system that is aimed at creating an environment which allows for the development of the full potential of its resources. Thus, ICT occupies a very

<https://journals.iapaar.com/index.php/aajer>

central place in modern educational management of the institutions in terms of strategy, policy development and implementation, financial effectiveness and customer satisfaction which can be more possible with computerized information systems, modern methods of communications and the latest achievements in the Theory of Management. Traditional paper-based systems cannot serve educational institutions anymore. Considering aspects of student's admission, registration for examinations, accessing results and acquiring any piece of information about institutions and programmes, the on-line operations with ICT gadgets be engaged for efficiency (Mativo,2009), this phenomenon has been inevitable. According to Redox Technologies Pvt. Ltd, (2013) ICT has a number of advantages; these include improved customer service through greater access to accurate information, increased productivity and job satisfaction among staff members as it eliminates duplication of effort, more economical and safer means of storing and keeping track of information, greater accountability and transparency in operations, improved efficiency and effectiveness in administration and management due to unprecedented access to real-time information and general timely decision making due to easy accessibility to information. Whereas these benefits of the application of ICT in the management of educational institutions has been appreciated, the extent to which it has affected strategic educational standards management in public secondary school sector has not been documented in Bungoma County. Further, information about its effect on building a competitive advantage in these institutions is scanty.

However, beyond the rhetoric and of equal importance to policymakers are basic questions related to the measurement of ICT in education, its usage and potential outcomes, including retention and learning achievement. There are those who contend that computers and other ICTs have properties or affordances that directly change the nature of teaching and learning (Kozma, 1991; 1994; Dede, 1996). For instance, it is believed that ICT can help to bring abstract concepts to life using images, sounds, movement, animations and simulations. Others meanwhile argue that ICTs are merely a delivery mechanism for teaching and learning while it is the foundational pedagogy that matters (Clark, 1983; 1994). Regardless, a better understanding of ICT in education and how it is integrated across national education systems must be a priority for all countries.

Mr. Roderich A. during a UNESCO conference in Addis Ababa, Ethiopia in 1999 stated that “one of the many challenges facing developing countries today is that of preparing their societies and governments for globalization and the information and communication revolution”.

<https://journals.iapaar.com/index.php/aajer>

Policy-makers, educationists, non-governmental organizations, academics, and ordinary students are increasingly concerned with the need to make their societies competitive in the emerging information economy. Globalization and innovations in technology have led to an increased use of ICTs in all sectors - and education is no exception. Uses of ICTs in education are widespread and are continually growing worldwide. It is generally believed that ICTs can empower teachers and learners, making significant contributions to learning and achievement. Of the teachers interviewed on the effectiveness of ICT in education majority of them felt that introduction and use of ICT adequately will be extremely effective in children's learning and achievement.

ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is forcing schools to aptly respond to this technical innovation. Tinio (2002), states the potentials of ICTs in increasing access and improving relevance and quality of education in developing countries. Tinio further states the potentials of ICT to include the fact that ICTs greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for business and the poor. One of the greatest hardships endured by the poor, and by many others, who live in the poorest countries, in their sense of isolation, and ICTs can open access to knowledge in ways unimaginable not long ago. In Watson's (2001) description, ICTs have revolutionized the way people work today and are now transforming education systems. As a result, if schools train children in yesterday's skills and technologies they may not be effective and fit in tomorrow's world. This is a sufficient reason for ICTs to win global recognition and attention. For instance, ICTs are dependable tools in facilitating the attainment of one of the Millennium Development Goals (MDGs), which is achievement of universal primary education by the year 2015. Kofi Anan, the former United Nations Secretary General, points out that to attain the goal of Universal Primary Education by the year 2015; "we must ensure that information and communication technologies (ICTs) unlock the door of education systems". This indicates the growing demand and increasingly important place that (ICTs) could receive in education. Since ICTs provide greater opportunity for students and teachers to adjust learning and teaching to individual needs, society is, forcing schools to give appropriate response to this technical

<https://journals.iapaar.com/index.php/aajer>

innovation. Even though ICTs play significant roles in representing equalization strategy for developing countries, the reality of the digital divide- the gap between those who have access to, and control technology and those who do not, make a huge difference in the use of ICTs. This means, that the introduction and integration of ICTs at different levels and various types of education is the most challenging undertaking. Failure to meet the challenges would mean a further widening of the knowledge gap and deepening of existing economic and social inequalities among the developed and the developing countries. One of these challenges is the use of ICTs in handling students' complaints.

ICT is defined as a continuum of skills and abilities in respect of electronic facilities like TV, radio, computers, tablets and ipads in general management of educational performance and standards (Zuppo, 2012). According to Wikibooks "ICT is the diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information. These technologies include computers, the internet, broadcasting technologies (TV and radio) and telephony." The educational management information system (EMIS) can allow effective management of academics, financial and human resource management of academics, financial and human resource management. Application of ICT shows that data can be stored, retrieved and disseminated online with the use of MIS provided ICT is available and applicable. The Adaptive Structure Theory (AST) which can be related to the open systems Theory of management which sees school system as an open socio-technical system composed of five major semi-overlapping and interdependent subsystems made up of: Managerial, structural, psychosocial, goals and values and technical. The five subsystems interact with the external environment in such a manner that bring change in one would necessarily lead to changes in all the others. Thus, in the introduction of ICT in schools, one should consider the place of the administration, teachers and the support staff (technicians) and the interdependency that can generate performance and standards (Menjo *et al*, 2013). Research shows that adopting and using ICT in schools leads to significant expansion of education and pedagogical outcome which are beneficial to both teachers and students (Mingaine, 2003). The 21st century is an era of information technologies and knowledge economy based on the predominant contribution of science and education as well as of other high technology industries and human operations in economic development (Sagitova, 2012.) Every institution of higher learning like secondary schools have no choice but to embrace ICT in the day to day running

<https://journals.iapaar.com/index.php/aajer>

of academic, students and staff affairs. There is a continuity demand for a larger implementation and integration of ICT to meet the national goals in relation to vision 2030 (Educational Watch April, 2013). To establish the extent of ICT use in secondary schools administration in rural southern Kenya, Makewa *et al* ( 2013) assert that school administration is a key determinant for the realization of desired outcomes and success in both public and private schools. They concur with Gray and Smith (2007) that the main education managers in the schools in the 21st Century encounter myriad forces originating from technology related experiences. It is therefore important to investigate and establish the effect of ICT use in the secondary schools to establish to what extent ICT affects educational performance and standards management. The current movement towards putting the latest technology into classrooms is causing educators to reexamine the programmes and the policies and the impact of ICT on teaching and learning (Dede, 1996).

### **Student Complaint System**

It is a general saying that education is the key to success and that knowledge is power. With the advancement of society, people become more aware of their own rights and interests, and have growing expectation that schools should provide quality education to nurture future generations. They place a premium on the quality of management and services that schools provide. Key stakeholders, especially parents, consider the holistic development of students imperative. They often make enquiries and provide feedback and suggestions regarding the performance of schools. It is therefore vital for schools to maintain good communication with their stakeholders. In addition to providing effective communication channels, schools should also encourage parents, students and staff to make good use of these communication channels to express their feelings so as to build up mutual trust and confidence and avoid any unnecessary misunderstanding.

A good communication culture and a sound complaint management system are prerequisites for quality service and governance in schools (Jones,2003). It is belief that the schools will continue to strengthen communication and maintain a close partnership with their stakeholders with a view to further enhance the school governance and credibility. The need to strive for excellence and efficiency, and promoting accountability and transparency, are values that every society should uphold. In schools, services are provided to the students by the teaching and non-teaching staff. The students are always at the receiving end; where proper services are

<https://journals.iapaar.com/index.php/aajer>

provided, the students are positively impacted and this becomes advantageous to the society, and where the services rendered are inappropriate, inadequate or intangible, the reverse is the case. The services provided in institutions of higher learning are categorized into three namely; academic, administrative and extra curricula activities for the students.

Schools should handle complaints positively, with patience and understanding, and provide prompt responses within an appropriate timeframe. In fact, constructive criticisms and reasonable complaints should be valued as they may help schools improve. In addition to adopting an open attitude to diverging views, schools should also review their existing policies, procedures and measures for the continuous improvement of their administration. Should misunderstanding or insufficient communication be identified as the actual cause of any complaints, schools should undertake to explain to the complainant(s) fully and sincerely to remove their doubts. The Education Bureau (EDB) understands that sometimes schools may find their manpower greatly sapped or their service adversely affected as a result of their efforts and time devoted to the handling of unreasonable behaviour of certain complainant(s). To ensure that school operation would not be affected, the EDB recommends schools to develop appropriate policies and measures to deal with such kind of unreasonable behaviour.

In recent years, however, there has been discussion as to whether conflict should be "managed" by the organization or whether the goal is to understand, deal with and learn from conflict. There is also concern about practical and theoretical issues in "integrating" a system, with some observers preferring the idea of "coordinating" a conflict system. However, 2012 research by David Lipsky *et al.*, suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS.". Many artificial intelligence technologies are helpful in complaint resolution process, understanding the attitudes of involved parties and reasoning about them based on the belief–desire–intention model. (Jones, 2003).

## **Methodology**

The methodology applied to this work is the Object Oriented Analysis and Design Methodology (OOAD). An object-oriented methodology is defined as the system of principles and procedures applied to object-oriented software development (Fowler, 1999). Object Oriented

<https://journals.iapaar.com/index.php/aajer>

Design (OOD) provides a mechanism that encompasses three important concepts in software design: modularity, abstraction, and encapsulation (also called information-hiding). Object Oriented Analysis (OOA) is a requirement analysis technique, it starts at the top-level to identify the objects and classes, their relationships to other classes, their major attributes and, their inheritance relationships and then derive a class hierarchy from them.

Akwa Ibom State College of Education, Afaha Nsit is was established in 1991 for the main aim of training the teachers for the later deployment into the primary schools to teach the pupil undergoing primary education. It is located at the serene and quiet environment of Afaha Nsit in Nsit Ibom Local Government Area of Akwa Ibom State. Currently, the college is running 20 departments accredited by NCCE and recently a degree programme affiliated to the University of Uyo.

A questionnaire was presented to both the students and staff of the college asked the respondents to identify the most common complaints lodged by the students of Akwa Ibom State College of Education as seen in the tables below:

### Section A: Types of Students' Complaints

**Table 1: Complaints Lodged by the Students of Akwa Ibom State College of Education.**

S/N	Complaints	No in Support	No Against
1	Complaints on course registration	70	30.0
2	Complaints relating to examination	85	15.0
3	Complaints relating to results	90	90.0
4	Complaints relating to student welfare	87	13.0
5	Complaints relating to students-lecturers relationship	65	35.0
6	Complaints relating to research projects	35	65.0
7	Complaints relating to school fees	60	40
8	Complaints relating to extra-curricular e.g sports	39	61.0
9	Complaints relating to examination time table	60	40
10	Complaints relating to teaching practice	60	40

<https://journals.iapaar.com/index.php/aajer>

11	Complaints relating to on-campus students fellowship	35	65.0
12	Complaints relating to students' unions	20	80.0

(Sources: Field Survey, 2022.)

From Table 1 above, all the respondents indicated in affirmative that the above are the common complaints lodged by the students of Akwa Ibom State College of Education. According to the respondents, the methods of making these complains are normally through a manual method of writing a letter of appeal or a protest letter and submitted to either the head of department, examination officer, or the dean whom they believe will channel the complaints to the appropriate quarters.

### Section B: Effective Management of Students' Complaints

One of the items in section B of the students' questionnaire was asking the respondents to indicate if the methods of laying complaints are effective and if the complaints are effectively handled to yield efficient feedback. Responses to this question are presented in table 1.2 below:

**Table 2: Responses to Questions in section B**

Responses	Frequency	Percentage
Strongly Agree	0	0.0
Agree	5	5.0
Disagree	75	75.0
Strongly disagree	20	20.0
<b>Total</b>	<b>60</b>	<b>100.0</b>

(Sources: Field Survey, 2022.)

The responses to this question as summarized in table 1.2 above shows that management of student's complaints is ineffective. This result is probably as a result of delayed feedback, loss of data (letters) and favoritism.

### Section C: Quest for computerized complaint management system



<https://journals.iapaar.com/index.php/aajer>

One of the items in section C of the students’ questionnaire was asking the respondents to indicate if a computerized complaint management system could improve the handling of complaints to yield efficient and timely feedback. Responses to this question are presented in table 1.3 below:

**Table 3: Responses to Questions in section C**

Responses	Frequency	Percentage
Strongly Agree	40	40.0
Agree	45	45.0
Disagree	10	10.0
Strongly disagree	5	5.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

(Sources: Field Survey, 2022.)

From Table 3 above, majority of the respondents (95.0 percent) indicated that one of the most effective ways of managing complaints is to develop an electronic or mobile means for laying complaints and getting the feedback. This is in line with the work of Okoro et al (2014) which stated that customers’ complaints can effectively be managed through electronic means. However, 15.0 percent of the respondents had contrary view.

**Section D: Essence of Student Complaints Management System.**

One of the items in Section D of the students’ questionnaire was asking the respondents to indicate if an effective Students’ Complaints Management System can averts undesirable conflicts between the students and the college management. Responses to this question are presented in Table 4 below:

**Table 4: Responses to Questions in section D**

Responses	Frequency	Percentage
Strongly Agree	53	53.0
Agree	47	47.0
Disagree	0	0.0
Strongly disagree	0	0
<b>Total</b>	<b>100</b>	<b>100.0</b>

<https://journals.iapaar.com/index.php/aajer>

**(Sources: Field Survey, 2022.)**

From Table 4 above, majority of the respondents (100 percent) indicated that effective students’ complaints management system can avert undesirable conflicts between the students and the college. This finding affirmed the significance of students’ complaints management system in a tertiary institution setting.

**Section G: Deployment of Customized Software to Manage Students’ Complaints in the college**

One of the items in Section G of the students’ questionnaire was asking the respondents to indicate the extent at which Akwa Ibom State College of Education utilizes customized software and internet resources to manage students’ complaints. Responses to this question are presented in Table 5 below:

**Table 5: Extent at which Akwa Ibom State College of Education deploys Customized Software and internet resources to Manage Students’ Complaints**

Degree of Deployment of Customized software	Frequency	Percentage
Very High	0	0
High	0	0
Moderately	0	0
Low	0	0
Don’t use	60	60.0
Don’t know	40	40.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**(Sources: Field Survey, 2022.)**

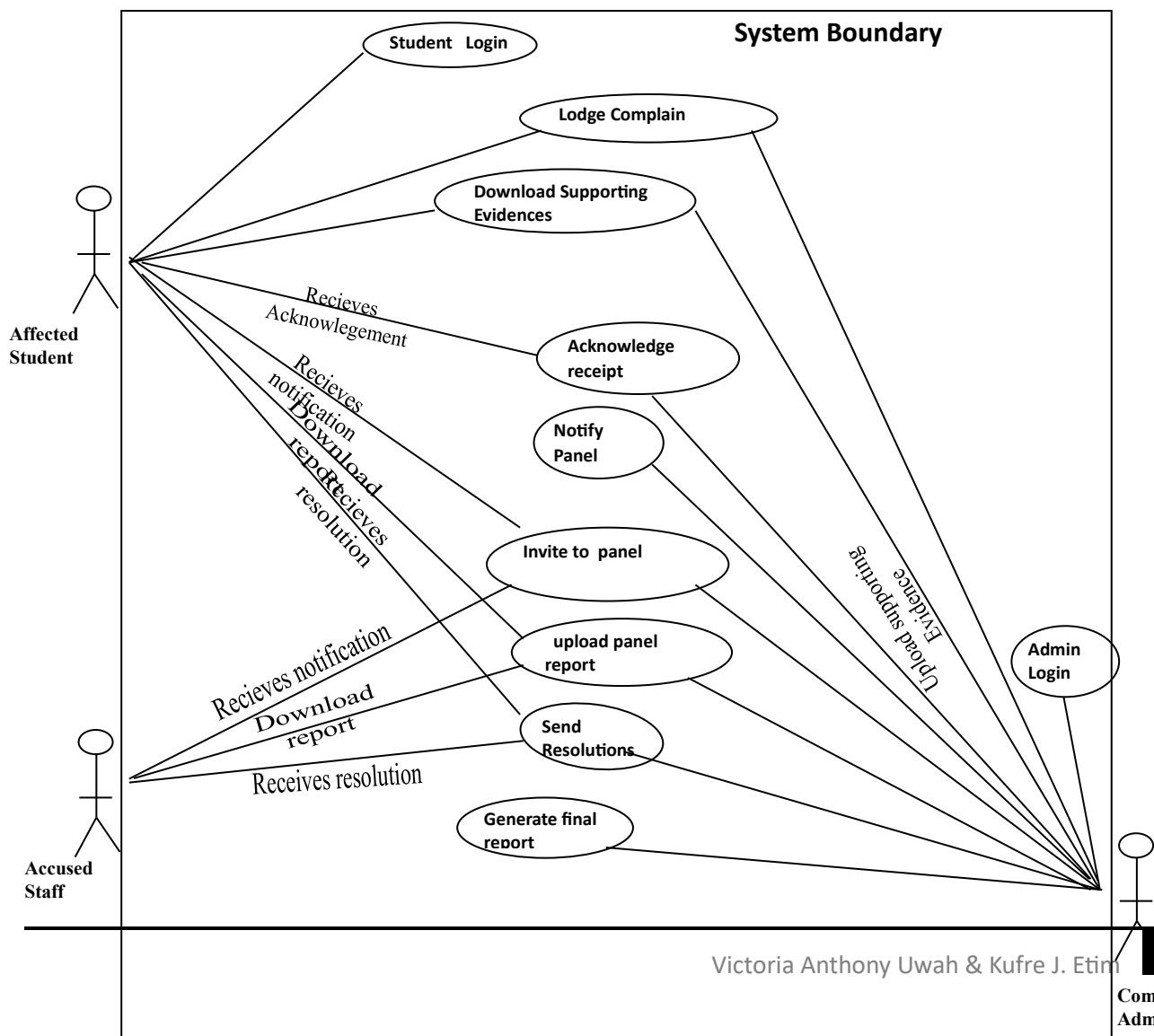
From Table 5 above, majority of the respondents (60 percent) indicated that AKSCOE do no utilize customized software and internet resources to manage students’ complaints. This suggests that AKSCOE needs to automate the students’ complaints system. However, only 40 percent of respondents do not know if the college uses a software to management complaints from students.

**Work Procedure of the New System**

<https://journals.iapaar.com/index.php/aajer>

The purpose of any analysis activity in the software life-cycle is to create a model of the system's functional requirements that is independent of implementation constraints. For this work, we choose Object Oriented Analysis (OOA). In using OOA, requirements are organized around objects, which integrate both behaviours (processes) and states (data) modelled after real world objects that the system interacts with. In other or traditional analysis methodologies, the two aspects: processes and data are considered separately. The result of object-oriented analysis is a description of what the system is functionally required to do, in the form of a conceptual model. That will typically be presented as a set of use cases, one or more UML class diagrams, and many interaction diagrams. In other to get a clear understanding of the new system, a Use-Case and a Sequence Diagram were developed.

**Use Case Diagram for Online Information System for Students’ Complaints for Akwa Ibom State College of Education, Afaha Nsit**



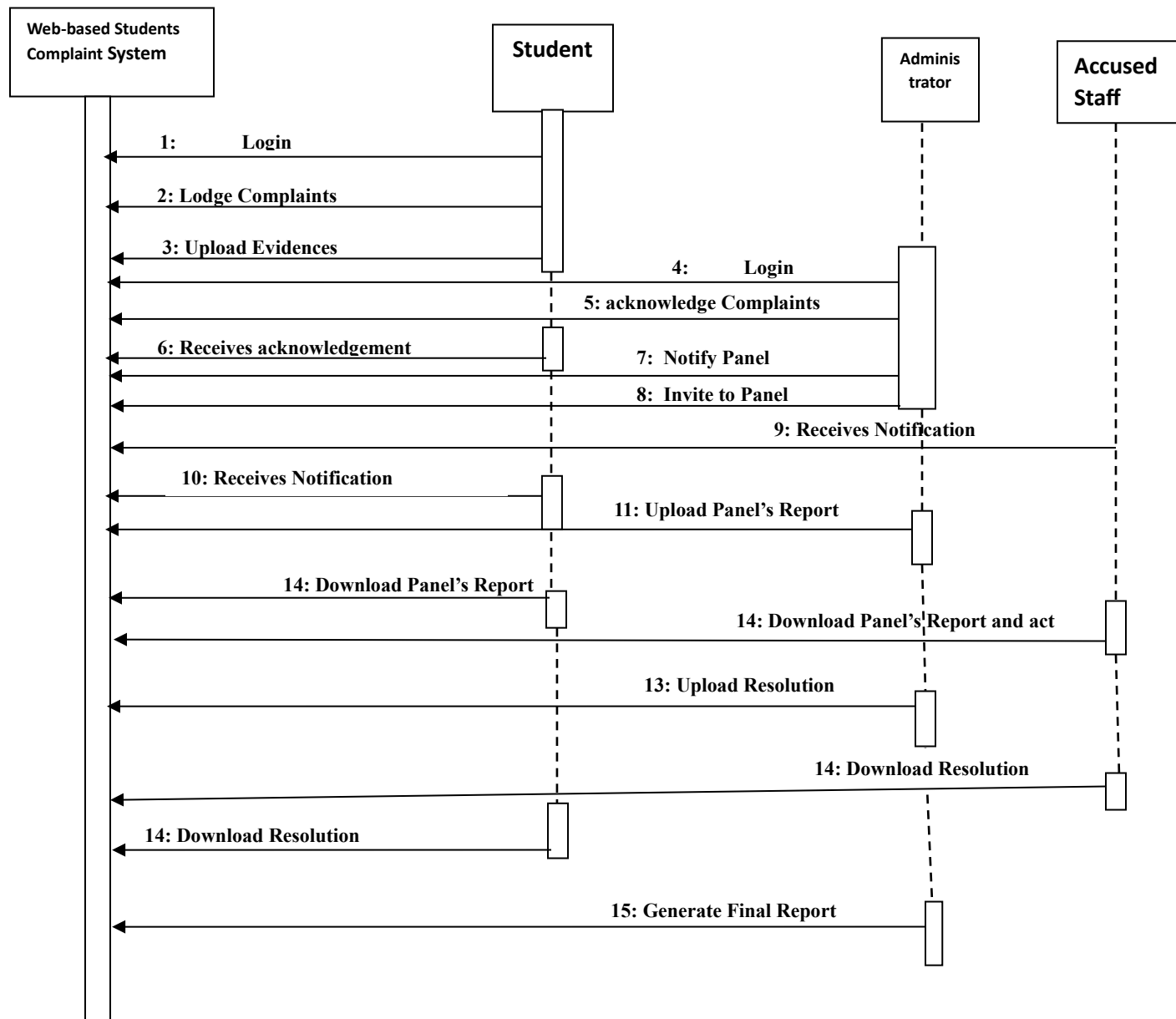
<https://journals.iapaar.com/index.php/aajer>

Objects and classes to be used in a system are usually gotten from a list of the functional requirements/objectives of the proposed system. Below is a list of objects to be used in the proposed system.

- a) Student: This represents students (complainants) in the system
- b) Complaints: This object encapsulate the actual complaints made by students
- c) Department: The department object represents the various departments/sections of the college each complaint shall be directed to.
- d) Staff: The staff object shall encapsulate any staff that has a role to play in student's complaint life cycle.
- e) User: User object shall encapsulate any stakeholder (student, employee or accused staff and administrator) that shall have the right to use the system.

### **Sequence Diagram of Online Information System for Students' Complaints for Akwa Ibom State College of Education, Afaha Nsit**

The sequence diagram of a system shows the sequence of actions by the system for successful completion of some task. It is a diagram that shows the objects as they communicate or interact with each other. It also shows the messages that trigger the communication. The objects are shown as lifelines while the messages are shown as arrows



**Sequence Diagram for Online Information System for Students' Complaints for Akwa Ibom State College of Education, Afaha Nsit**

### Results and Discussion

This section presents the results obtained in terms of designing online students' complaint. Specifically, the results divided into several pages. The coding C-sharp C# as program language and MySQL as the database. The result of this research is a information system program. This

<https://journals.iapaar.com/index.php/aajer>

information system program used to help Akwa Ibom State College of Education, Afaha Nsit in accepting complains and suggestion by students. This online students' complaint will reduce use of paper, time and energy.

## Conclusion

This research work addressed Students' complaints management system in Akwa Ibom State College of Education. It was affirmed in this study that organizational complaints are inevitable. An educational system like Akwa Ibom State College of Education receives various complaints from students almost on daily basis. The categories of the complaints include those related to course registration, lecture venues, lecture time tables, examination, results, student-staff relationship, school fees, extracurricular activities, research projects, examination time table, teaching practice, on-campus students fellowship and issues relating to the students unions. From the responses of questionnaire items, these complaints are handled manually and there is an increased need of a web-based students complaint management system for the institution. This platform allows for complaints to be lodged remotely by students which will curb the challenges posed by the manual method of handling students complaints such as lost of data, victimization, favouritism and delayed feedback.

## References

- Agu, M. (1998). *Conflict Resolution in the Work Place*. University Press Ltd, Ibadan
- Clark, R. E. (1994). Media will never influence learning. *Educational Technology Research and Development*, 42(2), 21-29.
- Conallen, Jim (2000). *Building Web Applications with UML*. Addison Wesley. p. 147.
- Dede C. (1996). Emerging technologies and distributed learning. *American Journal of Distance Education*, 10(2), 4-36.
- Gary Langsdale (2014) "What It Takes to Keep Student Information Safe in the Digital Age," The Evolutions, October 2, "we built, we bought, we shared: The Costs of Administrative Service Systems vs. the Academic Mission (EDUCAUSE Review) | EDUCAUSE.edu". [www.educause.edu](http://www.educause.edu). Retrieved 2015-06-02.
- Gruber T (2011): "I want to believe they really care: How complaining consumers want to be treated by frontline Employees. *Journal of Service Management* 22 (1), 85-110.
- Jacobsen, I., Magnus, C., Patrick J.& Gunnar O. (1992). *Object Oriented Software Engineering*. Addison-Wesley ACM Press.

<https://journals.iapaar.com/index.php/aajer>

- Jones, R. (2003). Local and national ICT policies. In: R. Kozma (ed.), *Technology, Innovation, and Educational Change: A Global Perspective*. pp. 163-194.
- Kozma, R. (1991). Learning with media. *Review of Educational Research*, 61, 179-221.
- Lipsky, D. & Loproskov, N. (2012): *Conflict Management in an Organization: The Way Out*. Livkov Publishing, Aberdin.
- Marchington and Wilkinson (2005): *Enhancing Labour work Relations*, New York Publishers.
- Martin Fowler. (1997). *Analysis Patterns: Reusable Object Models*. Addison-Wesley
- Mary P. Rowe (1984, April). The Non-Union Complaint System at MIT: An Upward-Feedback Mediation Model. *Alternatives to the High Cost of Litigation*, Vol. 2, No. 4, pp. 10–18.
- Mary P. Rowe, PhD & Michael Baker (1984, May–June). Are You Hearing Enough Employee Concerns? *Harvard Business Review*, Vol. 62, No. 3, pp. 127–136
- Meyer, Bertrand (1988). *Object-Oriented Software Construction*. Prentice Hall International Series in Computer Science. p. 23. ISBN 0-13-629049-3.
- Natalie Gagliardi (2014.). “US universities at greater risk for security breaches than retail and healthcare: BitSight,” ZDNet.
- Osman Nasr & Enayat Alkhider (2015). Online Complaint Management System *International Journal of Innovative Science, Engineering & Technology* 2(6)
- Rankin, J. (2013). How data Systems & reports can either fight or propagate the data analysis error epidemic, and how educator leaders can help. Presentation conducted from Technology Information Center for Administrative Leadership (TICAL) School Leadership Summit.
- Ricardo, B. Y. & Berthier, R. N. (1999). *Modern Information Retrieval*. Addison Wesley
- Ricardo, B.Y. and, Berthier R.N. (2000). *Modern Information Retrieval*. Addison Wesley Longman.
- Rice,D., Foemmel,M., Hieatt, E, & Stafford, R. (2002). *Patterns of Enterprise Application Architecture*. Addison-Wesley.
- Richard F. S. (2011). What forty years of research says about the impact of technology on learning: A second-order meta-analysis and validation study. *Review of Educational Research*, 81(1), pp. 4-28.
- Rose W. (2010). *Developing an Effective Complaint Policy*. Lindsley Publishers, Osburne, Australia.



<https://journals.iapaar.com/index.php/aaier>

Stephen, P. (2010). *A Look at Project Management for Software Engineers*. Wrox Publishers, Carlifornia

Sutton, R. (1991). Equity and computers in the schools: A decade of research. *Review of Educational Research*, 61(4), 475-503.

Tinio L. (2002): *Innovative ICT for Developing Countries*. pp 25-23. New Yoke Publishers, pp 25-23.

U.S. Department of Education Office of Planning, Evaluation and Policy Development (2009). Implementing data-informed decision making in schools: Teacher access, supports and use. *United States Department of Education (ERIC Document Reproduction Service No. ED504191)*

Wirfs-Brock, R. Brian Wilkerson & Lauren Wiener (1990). *Designing Object Oriented Software*. Prentice Hall.