Spreading Trade Union Activities through Cyberspace: A Case Study

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---**ABSTRACT**--
This report present the outcome of an investigative research conducted to examine the modu-operandi of academic staff union of polytechnics (ASUP) YabaTech. The investigation covered the logistics and cost implication for spreading union activities among members. It was discovered that cost of management and dissemination of information to members was at high side, also logistics problem constitutes to loss of information in transit hence cut away some members from union activities. To curtail the problem identified, we proposed the design of secure and dynamic website for spreading union activities among members and public. The proposed system was implemented using HTML5 technology, interface frameworks like Bootstrap and jquery which enables the responsive feature of the application interface. The backend was designed using PHPMYSQL. It was discovered from the evaluation of the new system that cost of managing information has reduced considerably, and logistic problems identified in the old system has become a forgotten issue.
Keywords*:* **ASUP, Cyberspace, Dynamic website, MySQL, unionism, PHP, Macromedia-Flash, Trade union.**

I.   INTRODUCTION

There is no doubt that computer and ICT infrastructure has become sin-qua-non in day-to-day activities of human endeavor. Some of the technology that exist in cyberspace are currently been reconnoitered to enhance the organization efficiency. The use of internet and its application has make organization to exist beyond their existing or physical location. The recent low cost of information, communication, and interaction on the web will offers academic staff unions or other trade unions prospects to improve services and attract members, and thus enhance members participation in the unions activities *(W. J. Diamond & R. B. Freeman 2002)*. The use of communication technology and infrastructures will enhance virtual participation both offline and online which enhance member's participation in the union activities.

This research work presents the design and implementation of a secure and dynamic website for spreading union activities among members and public. This work when completed will bring to an end the various problems associated with current methods of information spreading among members and the public.

A.   Problem statement

The complexity in spreading of information among union members is becoming unbearable to union executives and members. Some members of the union are becoming less concern in the union activities due to communication gap. This has resulted to I don't care attitude and poor quality of representation at union meetings sometimes. To overcome this complexity a secured and dynamic website is proposed to serve as intermediary between the union executives and members/public. This system if designed and implemented, it will go long way to reduce the logistics problem and cost of running union.

B.   Purpose of Study

Many labor union does not have the resources and infrastructure needed for e-solution to their problems and running of the union affairs. Information super-high way which is an integral part of cyberspace is widely used today on different unionismlevel of activities: offline and online dissemination of information, multiplex means of interaction among members and other stakeholders etc. The purpose of this research work is to design and implement a secured and dynamic website platform that will be readily available to the members and other stakeholders.

C.   Objective of Study

Some the objectives of this research work are listed below.
- Providing access to a range of resources and information related to ASUP YabaTech.
- This will allow members to contribute to the progress of union irrespective of their location. Especially some members that are on study abroad.
- It provides an opportunity to make their publication globally available to people if upload on the site.
- Support increased communications between stakeholders in education.

▪ If implemented it will reduce drastically the cost of running union to a reasonable percentage.

D.   Scope of the Study

The scope and area of study is limited to design and implementation of website for running of ASUP Yaba College of Technology activities.

E.   Significance of the Study

This research work when completed and implemented, itwill add values to ASUP Yaba College of technology in many ways as follows.

▪ It will reduce the logistic problem and reduce significantly the cost of running the union activities.
▪ It will make union material like minutes of the meetings and some other vital information readily available to members.
▪ It can also be used to showcase member's publication globally.

II.   BACKGROUND INFORMATION

A trade union is an association of workers who have come together to reach common goals asin protecting the integrity of its members and trade, improving welfare standards **(enwikipedia n.d)**. A trade unionism can also be viewed as a continuous association of wage earners for the purpose of maintaining or improving the conditions of their employment **(Sidney and Beatrice Webb 1894).**It is a membership-based organization i.e. members are mainly workers **(nibussinessinfo 2014).**

Labor unions have been in existence since 1912 when government employees formed a civil service union that was later became Nigerian Union of Civil Servants in 1914 after the merger of the protectorates of Northern Nigeria and Southern Nigeria. Another two major unions were founded in the year 1931. Nigerian Railway Workers Union and the Nigerian Union of Teachers (Economy of Nigeria 2013).

Under terms of a 1978 labor decree amendment, the more than 1,000 previously existing unions were reorganized into 70 registered industrial unions under the NLC, now the sole central labor organization.The Nigeria Labor Congress was then thefederation of trade unions in the country and it was amalgamation of four labor center Nigeria Trade Union Congress, Labor Unity Front, United Labor Congress, and Nigeria Workers Council. NLC as at today has 29 affiliated unions. In total, they gather around 4 million members, and this makes the NLC one of the largest trade union organizations in Africa **(Ayba. 2010).** Academic Staff Union of Polytechnics of Nigeria(ASUP)is an affiliate of NLC that bring together all Academic Staff of Polytechnics, Monotechnics, and Colleges of Technology in Nigeria **(ASUP, 2015).**

III.   METHODOLOGY AND DESIGN
Data Collection

We collected data about the information required to manage and disseminate information to members. The cost implication of managing and dissemination of the information was also examined. The information that ASUP used to send to members and other stakeholders includes but limited to the following:

▪ Notice of Meeting
▪ Minutes of Meeting
▪ ASUP News Flash
▪ Union Constitutions
▪ Quarterly Financial Report
▪ AGM Report

We analyzed the cost implication of dissemination such information among the stakeholders as follows. The academic Staff strength of the ASUP YabaTech is assumed to be six-hundred and fifteen (615). For the first quarter of year 2018 i.e. January, February & March. The union have circulated the following Messages at the cost attached.

TABLE I: Cost of Manual Dissemination of Information for First Quarter

S/n	Messages	Unit Cost (#)	Real Total (#)	Actual Total (#)
1	Minutes of meeting	60	36900	12000
2	Notice of Meeting 1	5	3075	1000
3	Notice of Meeting 2	5	3075	1000
4	News Flash	10	6150	2000
5	Quarterly Financial Report	10	6150	2000
			55350	**18000**

The real total in the table is the amount that it will cost the union if production is made for each of assumed 615 members, while the actual total is the cost incurred for production of the documents for only 200 members which is the practice for current executive of the union.

For a term and executive will serve for 2 years, this implied that eight (8) quarters. Assuming the information to be disseminated remain constant for each quarters. The cost implication will be as in the table II.

TABLE II: Proposed Cost of Manual Dissemination of Information for First Quarter – Last quarter of 2yeras

Quarters Q1-Q8	Real Total (#)	Actual Total (#)
Q1	**55350**	18000
Q2	**55350**	18000
Q3	**55350**	18000
Q4	**55350**	18000
Q5	**55350**	18000
Q6	**55350**	18000
Q7	**55350**	18000
Q8	**55350**	18000
	442800	**144000**

A.   Findings

If the union information dissemination remain constant with respected to table I, that implied that for eight quarters that will be available within the single term of two years the union would have spent four hundred and forty two thousand eight hundred naira as real total or one hundred and forty four thousand naira. From the analysis we believed that even the actual total can be used to design and implement a secure and dynamic website for information dissemination and other activities that can save union of million and also resolve logistic problem associated with current method.

B.   Analysis and Design of the Proposed System

Automated approach to spreading Trade Unionism Activities through Cyberspace cannot completely replace physical approaches in unionism. It is only an updating for Information Communication Technology (ICT) concepts and tools, giving new approach to modern unionism in this era of ICT proliferation. There will be three categories of users for the proposed system, Administrator, ASUP Members, and General Public.

Administrators are the people in charge of monitoring, managing, and updating the resources on the website. Administrator can access the functionality of ASUP members and General Public. Also ASUP members can access the functionality of general public but general public cannot access the functionality of Admin or ASUP members.

The admin and ASUP members have to log in to the site to perform some special purpose that is not common to other users.

C.   Users Roles

Administrator role include See Pending Approval(s), Approved Members, Read Members messages, Manage Newsletter Manage Downloadable Resources, Manage Schools, Manage Departments, Sign Out. ASUP member's role is as follows: The role of the ASUP members include Update Picture, Change Password, Submit Publication, Downloads, and Send message to the union executive, while general public can only access the newsletters, view contacts, access photo gallery, view executive profile

D.   System Architecture & Design

The design of the proposed system will be based on the architecture model and flowchart in figure I and II:
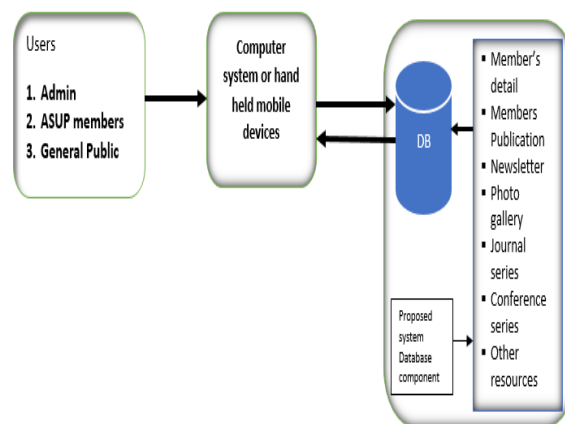

Figure 1: Proposed System Architecture

From the architectural design in figure I, it is obvious that the proposed platform will be database driven and users will interact with the system via a computer or hand held mobile devices that are internet ready. Communication with the system is in duplex mode. Having considered the users roles and capability we then designed a flowchart that will be coded with the appropriate software for implementation of the proposed system.
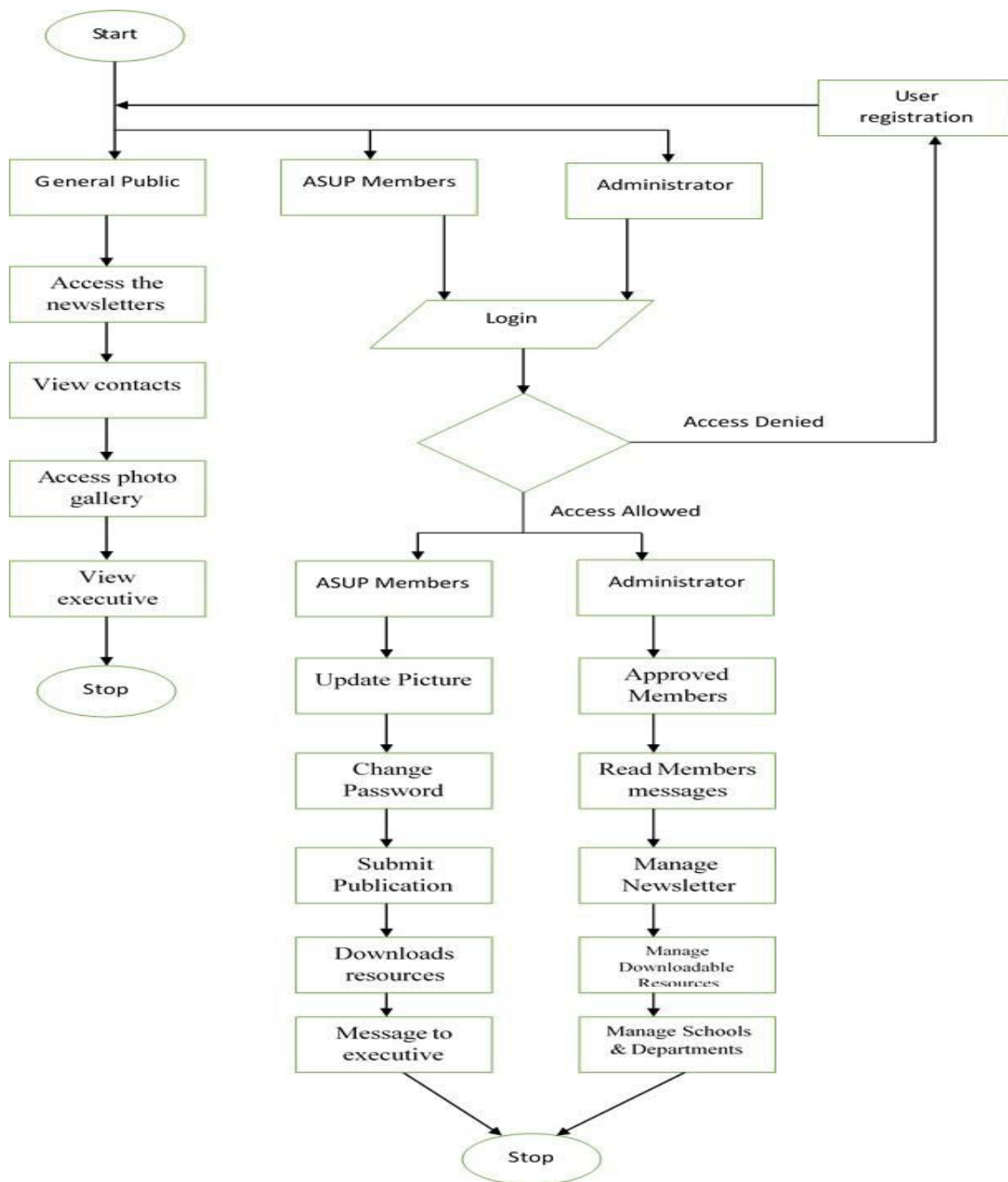
Figure 2: Proposed System Flowchart

IV. IMPLEMENTATION & TESTING

A. General Implementation

The design of the proposed system was implemented with HTML5 technology, coupled with other interface frameworks like Bootstrap and jquery which enables the responsive feature of the application interface. The Bootstrap comes as a package that contains preparatory Cascading Style Sheet (CSS) and custom jquery library. The backend was designed using PHPMYSQL. The Hypertext Preprocessor (PHP) takes care of the business logic aspect of the application while MYSQL handles the storage aspect. Figure 3gives a further insight to the implementation technology.
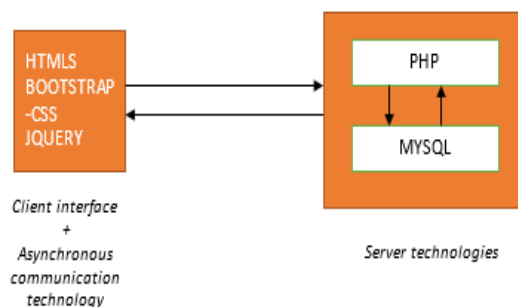
Figure 3: Proposed System Implementation Technology

B. Security Features Implementation

The system was designed with the consciousness of security requirements of dynamic web application infrastructure. The Followings security features that are put in place for the web application:Secured Socket Layer (SSL): This is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral. SSL is an industry standard and is used by millions of websites in the protection of their online transactions with their customers; Inbuilt Functions: Sensitive information like password and the likes are encrypted using MYSQL MD5 function. The URL parameters are encrypted using PHP base16_encode and base16_decode functions coupled with internal generated code; and Multi-leveled Admin Privileges:The administrators' access and privileges are ranked. This is part of security measures that are put in place to secure the administrative backend. For instance, the super Administrator has higher privilege than other users (Administrator, Editor etc)

C. Testing

The system was first tested on standalone system with wamp server via local host. The user level was seen to be in conformity with the goal and objectives of the research work. The system was then host online with domain name www.asupyabatech.com.ng. Figure 4–9 illustrate the interface for various user level testing.

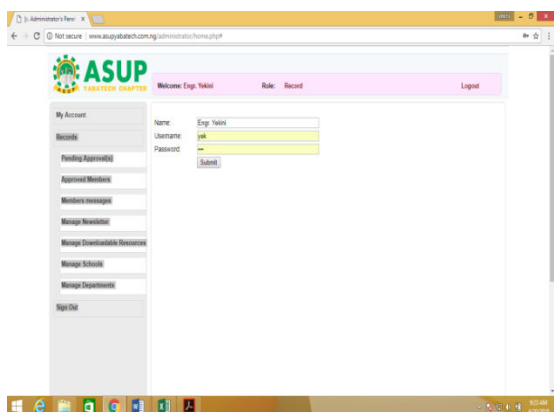Figure 4: **User's Interface for home page**

Figure 5: Admin user Interface that Shows record of activities that can be perform by admin.
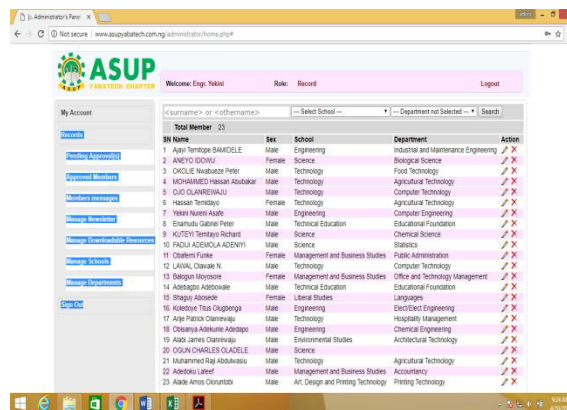

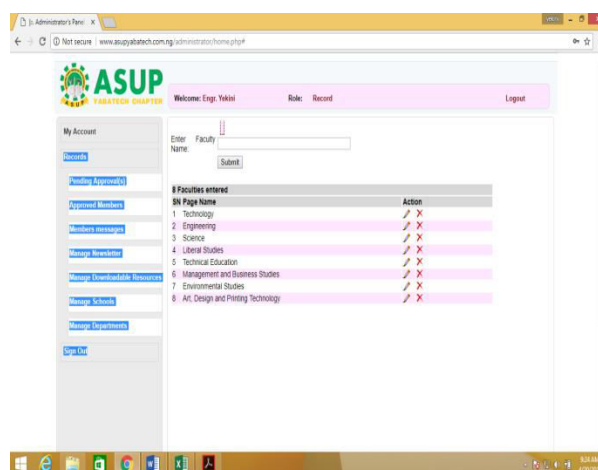Figure 6: Admin User interface that shows registered members.

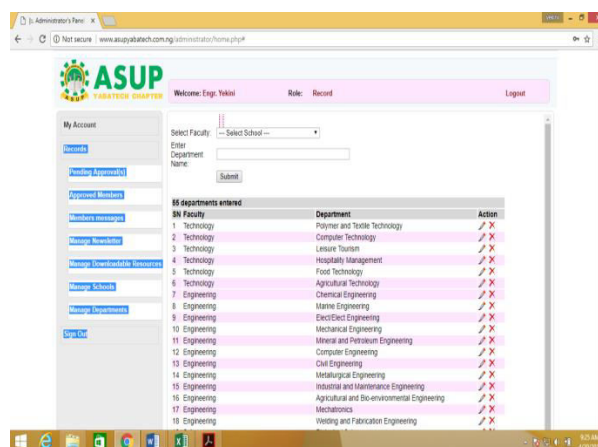Figure 7: Admin User Interface with managing Department

Figure 8: Admin user Interface that Shows record of registered departments.
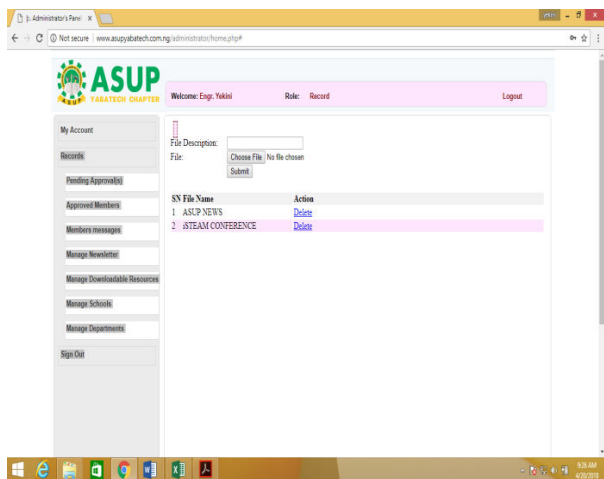
Figure 9: Admin User interface that shows news management.

V. CONCLUSSION & RECOMMENDATION

A dynamic and secured web-based has been designed and implemented to automate some of the operations of Academic staff Union of Polytechnic (ASUP) Yaba College of Technology Chapter. The system was launched on internet with domain name **www.asupyabatech.com.ng**. Several information about union activities have been posted on the site for members. Classical information are secured from public view as such information can only be assessed by approved members only when login. There is no doubt that the low cost of information, communication, and interaction on the web will offers unions opportunities to improve services and attract members attention to fully participate in the union activities thus enhance democracy in union, and also reduce cost of operation and logistic problem in information dissemination.

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