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An Investigation into the use of Web Based Application and Admission Systems in Public and Private Universities in Lusaka Province

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ABSTRACT: Throughout the world, millions of prospective students apply for admission to colleges and universities. Normally the entire application to admission process at any learning institution differs from University to university. Applicants are required to fill in application forms and complete the application processes for them to meet the admission requirements and considered. Admission is the process through which students enter tertiary education at a university. The commonly used types of application and admission system are manual paper based and web based application and admission systems. In this paper, the researcher considered online web based application and admission system. Web based Application and admission system is the software that supports administrators to automate the entire student enrolment process, from processing of application forms to handling of admission letters.

KEYWORDS: Application, Admission, Web based Application and Admission System, Advantages of using web based application and admissions, Web based Technologies, Challenges on the adoption of web based system.

I. INTRODUCTION

Application is a process by which a prospective student seeks to be enrolled into a programme in a University. The process begins with a potential student completing an application form (online web based platform or hard copy). However, the application and admission approaches differ from University to University.

Admission is the act of admitting an applicant into a programme of the University following a successful submission of filled application form that meets admission requirements.

Nowadays the number of prospective students applying in different universities is increasing manifold, as such student's admission process is getting increasingly complex with interested learners applying from different geographical locations. The application and admission processes are becoming increasingly difficult to handle a large volume of student's application forms in the traditional methods (Fujo, 2019).

With manual paper based application forms prospective students applying to universities by filling out printed applications forms physically, hand them to the admission office or place them in suitable envelopes and send them through the postal services agency (Chetan, 2013).

Admission processes are the most important activities within the university, no university can survive without students, and a poor application and admission system can mean fewer students being admitted into a university because of overly slow response time and other inaccuracies of handing application forms, (George S, 2015).

Web-based applications are no doubt replacing a paper-based process in most of the higher institutions and can help improve University reliability by way of reducing admissions processing time and cost. as applicants are able to process and submit their application form electronically and attach all the documents that supports their application such as transcripts of results, resumes, and recommendation letters. Online web based application is accessible, virtually, from any location by potential students with an electronic device that can communicate with other devices by means of World Wide Web (WWW).

WWW is a Web technology used with various programming languages that run on different platforms. Programming languages such as; Python, HTTP, Java, JavaScript, PHP, C and C+ are mostly used for transferring machine-readable file formats on computer networks.

Online web based application and admissions System that connects all the various services (modules) of an institution such as; e-library, advertisement or marketing, courses registration for returning students, online payments and many other online web based services.



II STATEMENT OF THE PROBLEM

Web based application and admission-have-become a backbone which acts as a marketing tools on which Universities break through the geographical barriers and become accessible, virtually, from any country in the world by a potential student Mwapashua, 2019).

In developed countries (e.g. the United Kingdom, France, etc.), the admission into tertiary institutions are centralized in the sense that, colleges and universities receive applications through a web portal, and applicants are not required to collect and fill the physical forms; rather they would only visit the admission website of a particular university–or college and all eligibility criteria are mentioned on the site. Such admission systems include common application in the United States of America (Mwapashua, 2019).

Accoding to Mwapashua (2019) most real world activities show numerous benefits to using of online web based application and admissions and the most apparent to this system is the unification of the entire application and admissions process and other web based services integrated with Database system providing a centralized data access. Despite the many advantages of online web based application and admission systems, it has been observed that some of the universities have implemented student’s records system with the aim of decongesting the campus during the registration period as returning students would not be required to be at the institution. The system supported the returning student's with Course registration process, checking of results and student’s payment fees status (Lusaka times 8th Oct, 2009).

However, what is currently not known is whether both public and private universities are fully utilising the online Web Based Application and Admission System in Lusaka Province.

III. PURPOSE OF THE STUDY

The study aimed at investigating the use of Web Based Application and Admission Systems in Public and Private Universities of Lusaka Province. This study further attempted to highlight the challenges that Universities face while adopting Web Based Application and Admission systems in public and private universities

IV. SPECIFIC OBJECTIVE

The objectives of the study were to:

- i. Investigate types of systems commonly used for Application and Admissions processes in public and private universities in Lusaka Province.
- ii. Examine the challenges on the adoption of Web Based Application and Admissions systems in public and private universities in Lusaka Province.
- iii. Establish measures universities have put in place to drive the adoption of Web Based Application and Admissions systems in public and private universities.

V. THE SIGNIFICANCE OF THE STUDY

The significance of this study emerges from the importance of using web based online application and admission system in public and private universities and its role of breaking through the geographical barriers and become accessible, virtually, from any country in the world by any potential student.

VI. SCOPE OF THE STUDY

This study is limited to ethical issues that arise in the implementation of online web based application and admission systems in public and Private universities and fully utilize all pre and post application and admission activities of a university, in this case Lusaka province in particular. Furthermore, the results of this study possibly will draw attention on the advantages of adopting Web Based Application and Admissions systems in public and private universities.

Web based application and admission involves a broad range of functions and it is an area that is subjected to continual change as institutions respond to the many challenges faced during enrolment period, including increasing competition and changing applicants’ expectations.



Managing Application forms and admissions can be a huge task for a university, particularly with paper based application and admission takes a large amount of time, causing strain on admission offers in short-listing the candidates and then providing them with admission letters. With paper based application forms, information may be mismanaged during the time of submitting application forms, filled in forms have the potential of being misplaced and getting into wrong hands, as such prospective students may not be considered, hence resulting in losing potential applicants.

Web based Application system is the software that supports administrators to automate the entire student enrollment process, from processing application forms to handling of admission letters. In addition, web based services act as a marketing tool by which Universities break through the geographical barriers and become accessible, virtually, from any country in the world by potential clients, students and prospective students that have Internet access (Brussel, 2017).

VII. THE STRENGTHS OF WEB BASED ONLINE APPLICATION AND ADMISSION SYSTEMS.

Web based online application systems make it very easy to upload academic and professional qualifications. This feature saves students the hassle of running around and waiting in queues to submit application forms as this can be done from the comfort of their homes. If the applicants happen to miss or forget any documents, they can simply upload the missing document electronically online instead of physically visiting the university, thus saving time and effort.

Noel-Levitz (2007) in his study showed that Universities which were utilising online web based application and admission gained more popularity and resulted in large numbers of enrollments as the services became accessible from any place in the world by potential students with Internet access. Web based application and admission system is integrated with the database system, and data entered on the web based form is directly stored in the database system. This database is the basis for all actions on the web based system and can be trivially updated, meaning all of the required information is stored in one central location and thus easily accessible. (Kadam, R. &. (2017).

Online web based systems provide different types of information such as text, graphics, video or multimedia information and the development of Web based application and admission comes with a set of rules and techniques, and the main languages used to create the system include: HTML, CSS and JavaScript or AJAX (shorthand for Asynchronous JavaScript and XML) which are a group of interrelated web development techniques used to create interactive web applications used to retrieved data from the server asynchronously in the background without interfering with the display and behaviour of the existing web page.

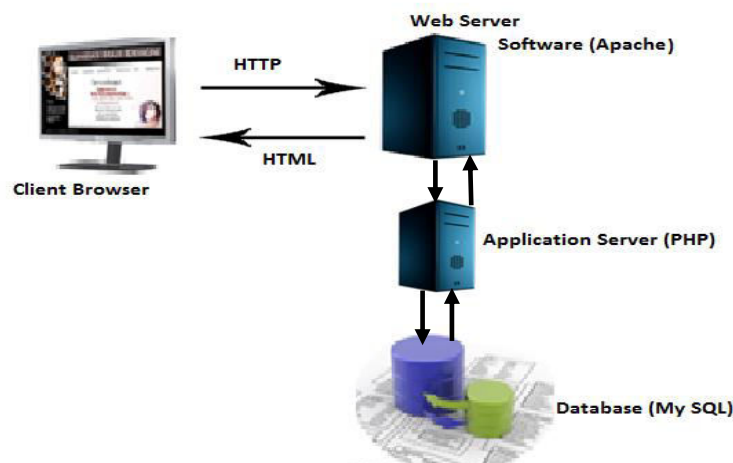


Figure 2.1 Web Server system

Picture Source: Prof. Lewis (2000. p87)



Application and admission as they are integrated with other services such as online Course registration, online fee payments transaction, hostel accommodation and all courses and programs are automated, aimed at the university achieving its set goals. For this motivation, online admissions show a competitive advantage over manual paper based application and admission processes.

The web based application and admission system is not limited to a physical site or a particular link; so far there is an internet access. People can check for updates and their admission statuses from any location. This also provides a more efficient way, reduces queues and makes the entire system fast.

VIII. THE CHALLENGES WITH MANUAL PAPER APPLICATION AND ADMISSION SYSTEM

In manual paper based application and admission systems, prospective students apply to universities by filling out printed applications forms, physically hand them to the admissions office or place them in suitable envelopes and send them via the local postal agency (Fujo.2019).

Mwapashua (2019), in his study clearly confirmed that many problems militated against manual paper admission system putting pressure on both applicants and admission officers. Such admissions were characterized by multiple problems such as delayed feedback, costly, inconsistency, inaccuracy, and difficulties in following admission procedures and potential students would suffer from inadequate information and delayed feedback from management on the status of their applications.

There are high fatigue and monotony involved in the paperwork application process and this can be a catalyst for errors. Not only can these errors be expensive to the institution but they also risk the reputation of all involved. Furthermore, paper admission system had complications in locating appropriate applicant details, programmes or course/subject applied for (Hanover, 2014).

With paper based application and admission, sharing of admission information and collaboration is extremely difficult. If several departments need to plan based on the number of admitted applicants at a particular time, they must have a list of admitted applicants printed and make all the necessary amendments and updates and then share with other departments for planning, as such admission officers waste a lot of time in processing and sending feedback information to the prospective students (Kadam, 2017).

The University incurs expenditure on the printing of application forms, and in the absence of any reliable forecasting system on how much application it is going to receive, it may overspend by printing excessive applications forms. Once printed, changes to the application forms are not only difficult but also attract additional cost. (Hennessy .et al, 2010).

In many developing countries, other constraints on the potential adoption of web based application and admission include inadequate technical infrastructure, limited human skills (qualified Technical personnel such as Software engineers or System analyst and the relatively high cost of Internet service charges. These factors reduce the scope for institutions to realise the potential of web based application and admission system services (Mambwe, 2015).

IX. METHODOLOGY

A descript Survey design was used when conducting this research. The study used both quantitative and qualitative research methods of data collection–The strategy of triangulation was also used as a way of cross validation of research findings.

The population for this study comprised students, Dean of Student Affairs, Assistant Registrars, and Admission officers in private and public universities in Lusaka province in Zambia.

The sample consisted of 100 respondents, 80 were first year students, 4 Assistant registrar's office, 4 Deans of Student Affairs and 12 Admissions officers.

The sample was drawn from the following Universities: Chalimbana University (CHAU) University of Lusaka (UNILUS), University of Zambia (UNZA), and Zambia Open University (ZAOU) and their names were changed to ABCD respectively.

The sample sizes of all respondents were 100 and only 84 out of 100 participants responded.

TABLE 3.1: shows the total Number of participants by Designation and Institution

Universities	A	B	C	D	TOTAL	Percent
Participants	25	19	20	20	84	100%



Table 3.2: shows the total number of participants by Gender

Gender	Total	Percentage
Female	46	54%
Male	38	46%
Total	84	100%

The sample that was drawn was a representative, in that those included in the sample display the same characteristics as that of a target population.

Lusaka province was purposively selected as it represents a large number of Universities.

Purposive sampling technique was appropriate for this study because the selected Universities were in the position of providing needed information due to their popularity (Kothari, 2004). The two public universities: Chalimbana and University of Zambia were selected. Furthermore, Admission officers, Assistant Registrars and Deans of students’ affairs were purposefully selected.

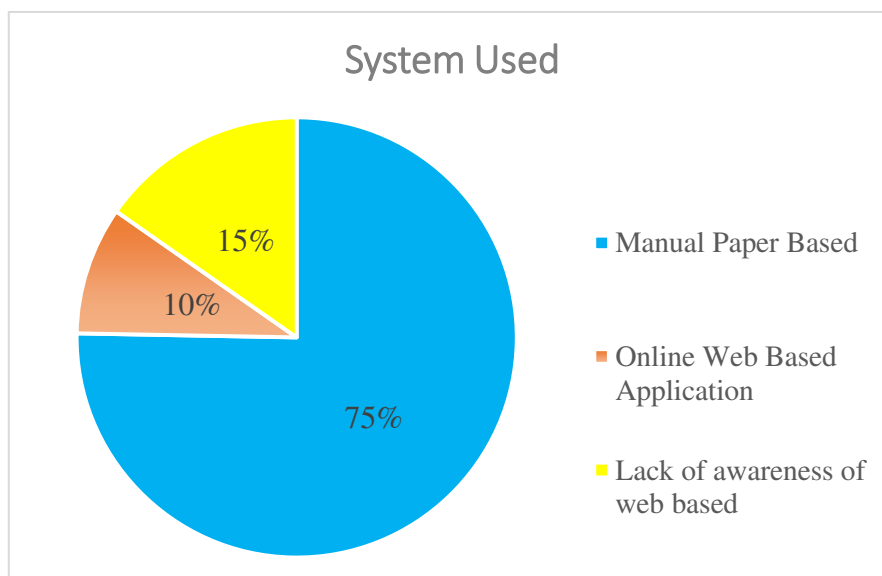
This was because the mentioned officers were directly involved in admission Semi-structured questionnaire were used to collect data from the respondents, the questionnaires contained both open ended and close ended questions. Open-ended questions were used in order to get the experiences and feelings from the respondents about the use of web based application and admission.

The data for this study was analysed both quantitatively and qualitatively. Qualitative data was analysed by coding and grouping the emerging themes. Dawson, (2013).

X. DISCUSSION OF THE FINDINGS

The study reviewed that, manual paper based application and admission system were used. 75% of the respondents indicated that printed application forms were distributed and sold to applicants.

Figure 4.1 Type of System used

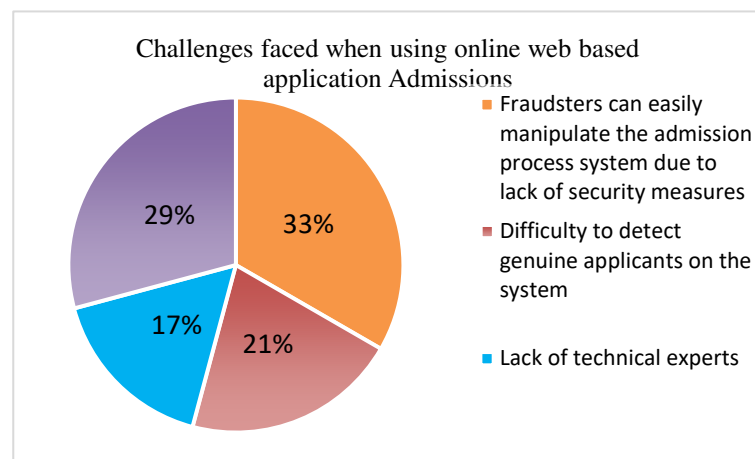


These findings were in line with (Mwapashua, 2019) who said that manual paper based system, data and information are manually stored on filing cabinets making it hard to find for an applicant’s records when all the files were piled up in their respective cabinets even though they were arranged properly. With an increase in the number of applicants, administrators wasted a lot of time in processing and sending feedback to the applicants.



As regards to the use of online web based application and admission 10% of the administrators showed a negative attitude towards the use of web based application and admission system.

This was because there were some security concerns by some of the administrators who said that they could not recommend the use of web based application and admission system to other Universities who were still struggling with Manual paper application and admission system, as administrators tend not to have control over applicants applying online and could not check for authenticity of their certificates.



These findings were in line with Eduventures, (2007), who revealed that delayed feedback from management exposed several significant risks, such as losing prospective students, causing the university inability to meet operational goals and objectives.

Today, the presence of online web based application and admission systems is not only a symbol of modernity in universities but also an evolution that has simplified the process of managing application information processing and admission records processes.

As we inevitably live in an era where time is an essential and a scarce resource, using online application and admission enabled the university to reach out to the students at their point of need, ensuring that all the processes required for admission can be done from the comfort of their home or anywhere at any time.

XI. CONCLUSION

The analysis of this research has shown that some of the universities were still struggling to pay for Internet Connectivity due to exorbitant cost of Internet bandwidth charged by Internet service Provider (ISP) were too high for the universities. The study further revealed that some of the Public Universities had a serious shortage of highly skilled IT personnel, probably because Qualified IT personnel would prefer working for Private Universities where the wages are more attractive than Public Universities.

XII. RECOMMENDATIONS

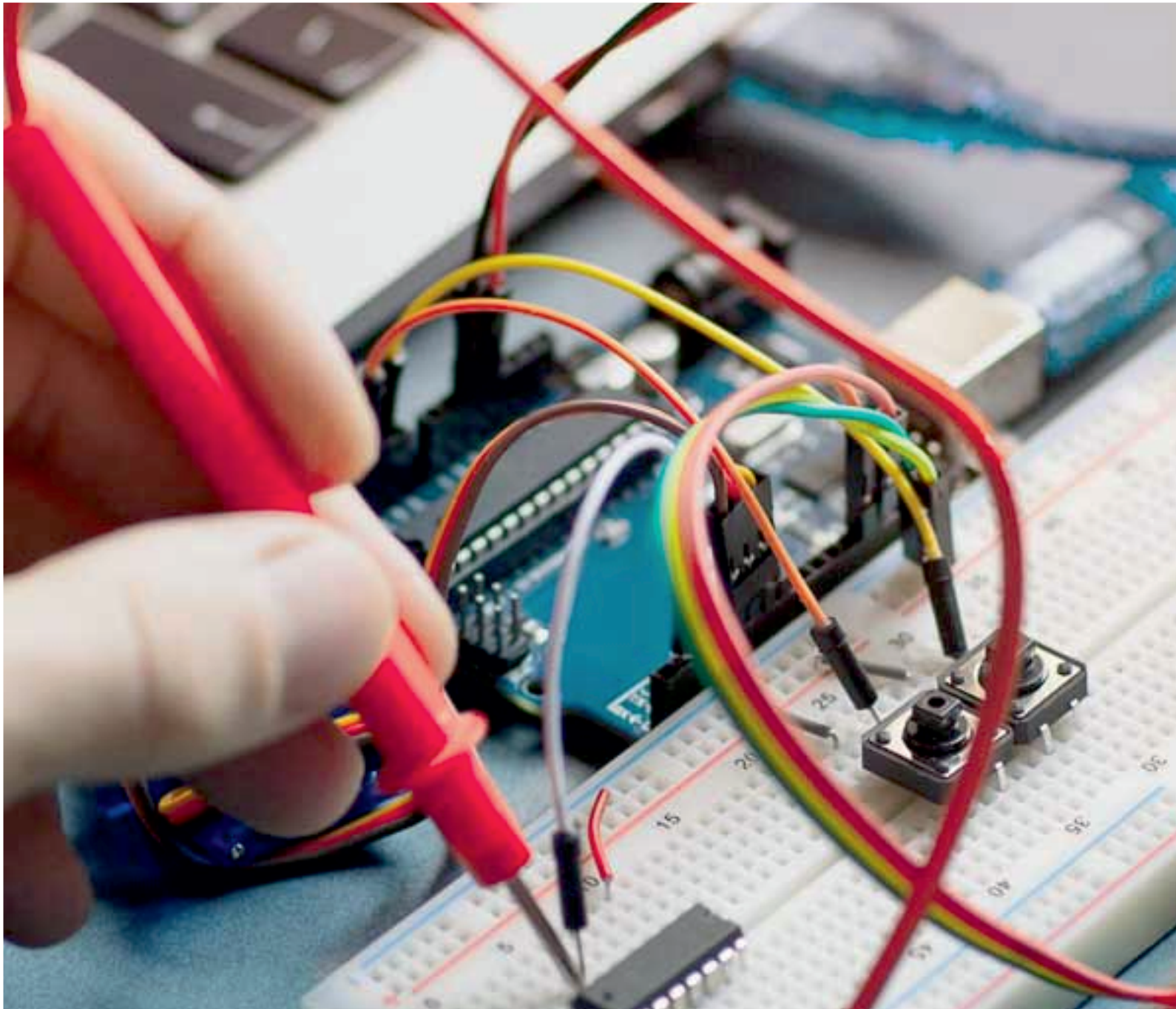
Arising from the findings of the study, the following recommendations are made

1. The Ministry of Higher education to consider increasing funding towards Internet/ Network Infrastructures in public Universities.
2. Regularly sensitize the students, stakeholders on the importance of online web based application and admission system and other Online web based services make the web address Uniform Resource Locator (URL) known to all stakeholders by way of advertising.
3. Seriously address the problem of the shortage of qualified IT Personnel in some of the Public universities.
4. Universities to invest in Internet Infrastructure and server based connection to provide web based online or Cloud web based services to all the clients.



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