

## IMPLEMENTING ONLINE SUBMISSION AND PUBLICATION FOR JOURNAL SYSTEMS.

BY:

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### ABSTRACT

This research work is a web-based system which is aimed at using the potent ability of the Computer System to solve many of the challenges faced by the current manual system of Journal and Publication processes. It provides numerous benefits which such as Automation of the Submission process, review process and publication process. Contributors can submit their articles for review and publication. A web-design methodology was used to design & implement the new system using HTML, Php, JavaScript, MySql and Wamp-Server. Finally a usability test was carried out to test if the system is easy and can be used effectively and efficiently by the users. An improved and more online payment options need to be integrated into the system also there is a need to mobile application of the system in the near future.

**Key Words:** Web-based, Journals, Online Journals, Submission, Review, Publication

### INTRODUCTION

As the need for online systems increases in our social, business, Education, Finance etc. There is also need for online systems in the Research and Publication area so as to make their activities easier and automated. Journals are mostly used by Researchers to publish their researches so that many people around the world can use their research for several purposes.

Article Submission, Review process and Publication are the basic processes that are involved in any Journal Publication. These processes are also the key process that cannot be skipped or avoided in any journal process.

This research work gave emphases on these key processes. We took Sokoto International Journal of Counselling Psychology as a case study. It is an

Academic Journal Published by the Department of Educational Foundations, Usmanu Danfodiyo University Sokoto. Some of the Problems faced by the current

manual system of Submission and Review include:

- i. Contributors that are not in Sokoto or in the country finds it difficult to submit an article for review and publication.
- ii. The system is also facing a problem of loss of manuscripts submitted by Authors because the current system only allows two modes of submission i.e. either by courier service or by sending your paper to a dedicated email address which lead to the problem of loss of manuscripts and any other form of mix-up in the process of downloading the submitted articles.

These and other problems were carefully studied and the Research came up with a web based solution to some of the problems thereby automating the basic processes that are involved i.e. The Submission, Review and Publication Process. After successful implementation of

the new System, all published articles can be accessed by Researchers across the world (***Abstract only and full article has to be purchased***).

Therefore the objectives of this research is to develop and implement a new system that will solve the problems of Submission, Review and Publication in Journal System.

### **INTRODUCTION TO JOURNALS**

Thomas (2014) defined a journal is an academic magazine published on a regular schedule. It contains articles written by experts in a particular field of study, based on research or analysis that the author, or authors, did.

According to Oxford English Dictionary, a journal is defined as “a newspaper or magazine dealing with a particular subject”.

Also Okon (2013) defines a Journal as a newspaper or magazine that deals with a particular subject or professional activity. He further defines a journal “As a magazine especially one that deals with specified subjects.

From the above definitions, we can say that a journal is made up of collection of articles contributed by different people (Authors or Contributors) of the same profession or different profession. All articles contributed are reviewed and assessed by experts of the same area with the author before publication. Some example of Journal include: Nigerian Journal of Basic and Applied Sciences; Published by Faculty of Science, Usmanu Danfodiyo University, Sokoto Conference Proceedings for Nigeria Computer Society (NCS), International Proceedings for Computer Science and Information Technology (IPCSIT) etc.

### **ONLINE JOURNALS (ELETRONIC JOURNALS)**

According to Scoles (2015), Electronic journals also known as *e-journals*,

*e-journals*, and *electronic serials*, are scholarly journals, intellectual magazines or any type of journal that can be accessed via electronic transmission. In practice, this means that they are usually published on the Web.

Most commercial journals are subscription-based, or allow pay-per-view access. Many universities subscribe in bulk to packages of electronic journals, so as to provide access to them to their staff and even students. It is generally also possible for individuals to purchase an annual subscription to a journal, via the original publisher. Most electronic journals are published in HTML and/or PDF formats, but some are available in only one of the two formats

### **FEATURES OF ONLINE JOURNALS**

Some of the features of online journals according to Scoles (2015) are:

1. Web based Submission of manuscript
2. Real time tracking of manuscript
3. Online Peer Review System
4. Online Editorial Work
5. Publishing of the e-Journal etc.

### **ADVANTAGES OF ONLINE JOURNALS**

Some of the advantages of online journals according to Scoles (2015) are:

1. Some documents are more useful in electronic form due to enhanced search ability, e.g. in allowing statistical calculations to be affected
2. Electronic format is sometimes the only alternative so it represents a net increase in the information base
3. Economy of storage: the increase in cost for keeping printed material makes electronic forms more attractive from an economic viewpoint.

4. It also, offers speed of delivery, eliminates printing, and saves money in terms of postage costs.

### **DISADVANTAGES OF ONLINE JOURNALS**

Some of the disadvantages of online journals Scoles (2015) are:

1. The lack of peer review of materials and slowness of the Internet and power outages is one of the major disadvantages of online journals
2. Lack of accessibility to online journals for those who do not have access to the Internet or any other kind of electronic service etc.

### **REVIEW OF SOME EXISTING ONLINE JOURNAL SYSTEMS**

Many online journal websites have been developed for the purpose of having electronic publications. This project reviewed some of the online journals which are:

- i. **Nigerian Journal of Basic & Applied Science** (<http://njbas.udusok.edu.ng>) is published by Faculty of science, Usmanu Danfodiyo University, Sokoto. Articles submitted to this journal for publications are articles from various fields or areas in Science such as; Computer Science, Chemistry, Physics, Biology, etc. The limitation of this journal website is that a reviewer does not have an online assessment form to fill after the assessment rather they just upload the reviewed paper online.
- ii. **International Proceedings of Computer Science and Information Technology (IPCSIT)** ([www.ipcsit.com](http://www.ipcsit.com)). It is published by International Association of Computer Science and Information Technology (IACSIT) Press. Some of the limitations of this online journal is that contributors cannot submit their articles using an online web-based submission method rather they submit their articles via an email address that is dedicated for the

submission of articles for publication. Also it doesn't have an online review process. Contributors cannot track the status of their submissions.

Other Journals that were reviewed in this research include: Online Journal of Social Sciences Research, International Journal of Applied Physics and Mathematics (IJAPM), Sokoto Educational Review, International Journal of Advanced Academic Research (IJAAR).

Most of the major problems faced by the Journals reviewed in the work and some other Journals are, Online Submission, Review and Online publication. This Research work has addressed these problems and has even added some features that make this research unique.

Some of the additional features are: Assignment of articles for review to the registered Reviewers, Online Review system where reviewers can assess the article online without printing the hard copy, online assessment form entry, online payment and Online Order of e-copy and hard copy of the Journal.

### **SOFTWARE TOOL USED FOR THE DESIGN OF THE NEW SYSTEM**

The software tools reviewed in this research work are: HTML, PHP, JavaScript, MySQL and Wamp-Server.

1. **Hypertext Markup Language:** is the basic language and foundation that makes the world wide web function accurately.
2. **Hypertext Preprocessor (PHP):** PHP is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. It was used to develop all the pages on the new system
3. **JavaScript:** is an interpreted computer programming language. It was originally implemented as part of web browsers so that client-side

scripts could interact with the user, control the browser, communicate asynchronously, and alter the document content that was displayed.

4. **MySQL:** This was used as a Database Management System (DBMS).
5. **Wamp-Server:** was used in this research as a testing server

### Design Methodology

The new system was developed & Implemented using a web-based approach. The methodology used in this research was Web-Design Methodology (WSDM).

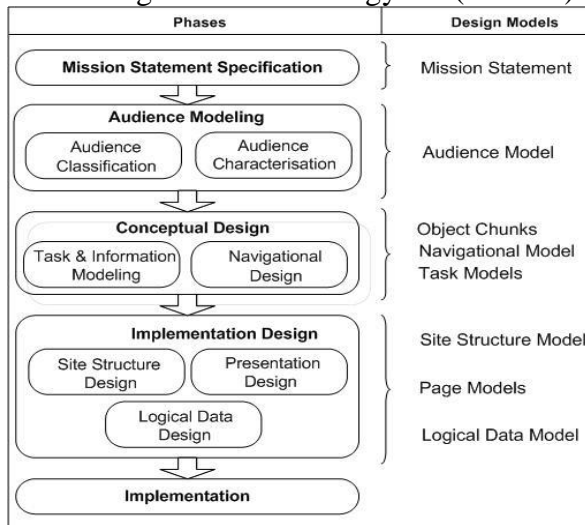


Figure 1: Web-design methodology (Achebe 2012)

### System Architecture

System architecture or systems architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system (Paul, 2014).

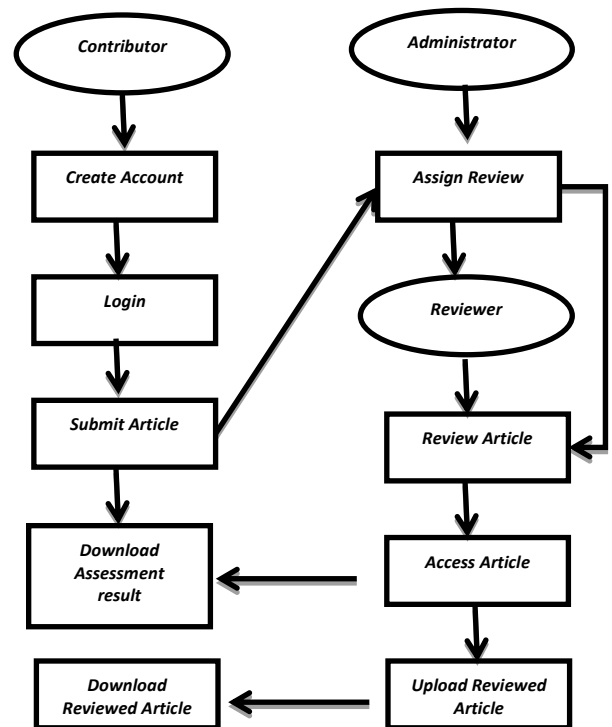


Figure 2: New System Architecture

❖ **Contributor:** The contributor is the researcher that is willing to contribute i.e. submit and article for publication. The article has to be reviewed before published. The contributor is required to **create an account** on the system that will enable him/her to **login** to access the submission form. He/she uses the submission form in the account to **submit an article** for review process. The contributor will also be able to **download the reviewed article** and the **assessment result** for every submission made by him.

❖ **Administrator:** The Administrator is responsible for **assigning review** to the Reviewers on the system. All articles submitted by the contributor will be assigned a reviewer to review and assess them before publication process. Finally, the Admin will publish all accepted articles online.

❖ **Reviewer:** The reviewer **reviews and assesses all articles** assigned to him by the administrator for Publication purpose. He **uploads the reviewed article** which is made accessible to the corresponding contributor

for him to effect the corrections (if any) made by the article reviewer.

### System Implementation

According to Williams (2014) System implementation refers to the point in software design where the analysis and modeling that are done regarding the system is realized through programming and deployment of the new system i.e. software. This section describes the actual implementation of online Submission, Review and Publication system.

### Behavioural Modeling

Williams (2014) defined behavioral modeling as the behaviour of the system, usually from the user point of view. The diagrams in behavioral modeling are used to specify the aspects of the proposed system. The diagram capture the essential aspects of the system and are able to communicate those aspects both to the developers and to the user to ensure that, the system is what he/she wants. In this section, we are going to use use-case modeling as our behavioral model.

### Use Case

According to Williams (2014): In a use-case diagram, we try to show the important users (actors) and the functionality of the system (use-case). Actors are represented by a stick figure and the functionalities are represented by an oval. Figure 3 shows the use case of the new system showing four actors which are Administrators, Contributor, Reviewer and the User with their functionalities.

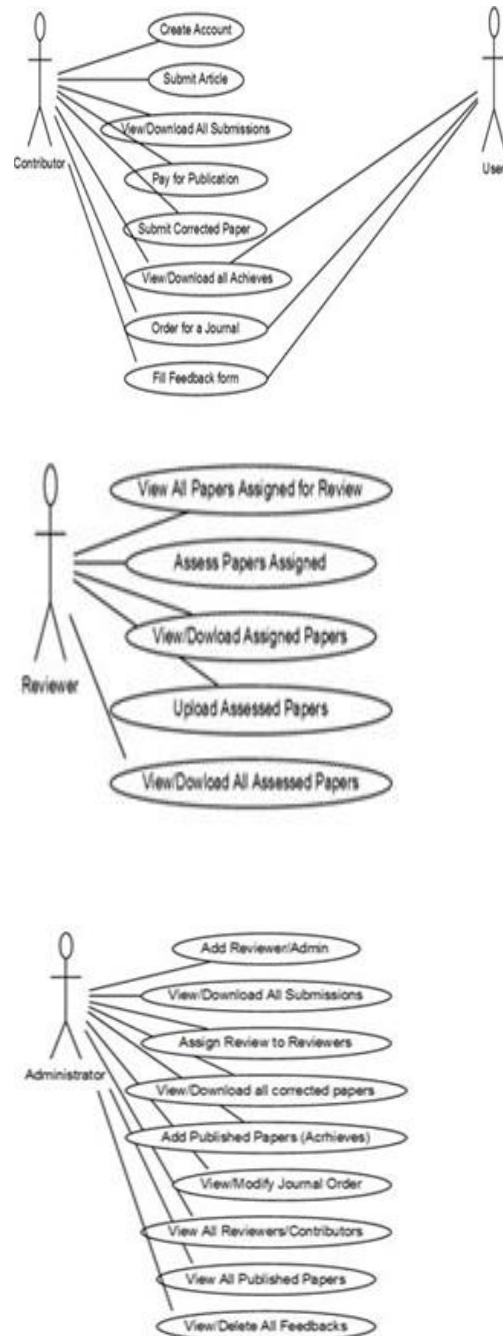
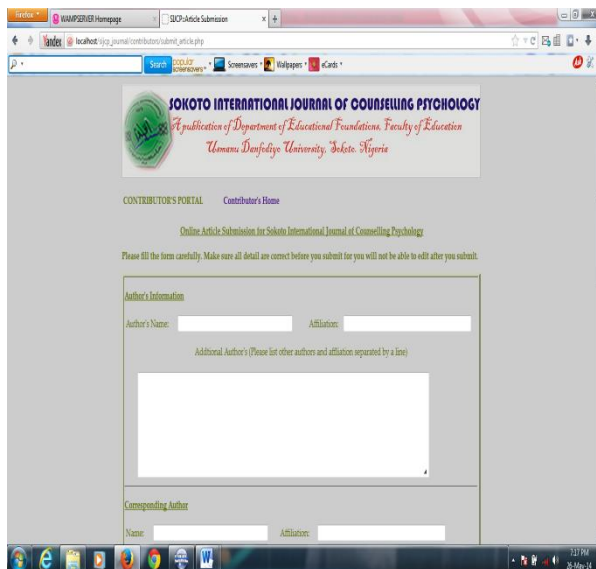


Figure 3: Use Case Diagrams

### User Interface Implementation

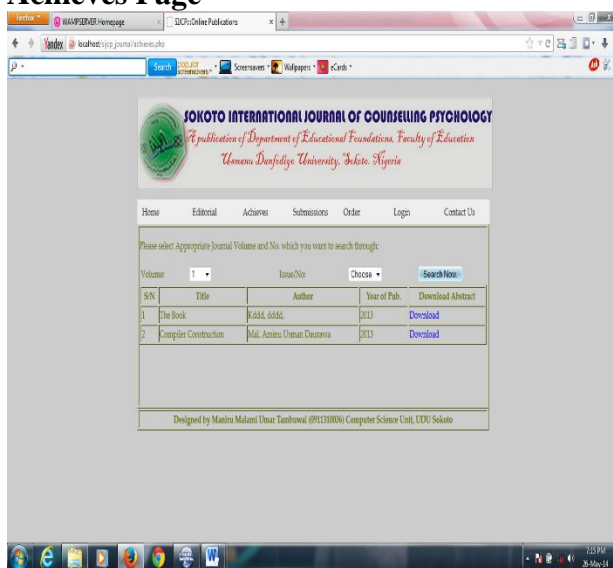
The user interface was implemented using software tools mentioned earlier. These are the languages that were used to implement the user interface. All pages cannot be shown in this research paper. Below is the screenshot of only two pages implemented:

### Article Submission Page



**Figure 4: Article Submission Page**  
This page allows registered contributors to submit their article for review process.

### Achieves Page



**Figure 5: Achieves Page**  
The page displays all published articles that have been uploaded online by the Journal Admin.

### New System Testing

Before actually implementing the new system into operation, a test run of the system is done for removing the bugs, if any. It is an important phase of a successful system. After codifying the whole program of the system, a test plan should be

developed and run on a given set of data. Monica (2009) stated that Testing a system often requires much effort as developing it. Though it does not usually involves much planning because sometimes it is regarded as the final stage of every systems development. The purpose of testing is to prove that the developed system addresses the pre-defined requirement and will operate efficiently and accurately after being implemented. Usability testing was carried out to test if the system is easy and can be used effectively and efficiently by the users. A questionnaire was administered to Fourteen (14) users after demonstrating the system to them at their various institutions. Four (4) users were from Usmanu Danfodiyo University, Sokoto, Six (6) users from Shehu Shagari College of Education, Sokoto and four (4) users from Sokoto State University Sokoto. The result obtained from the questionnaires is shown in the below table:

Q	System Features	5	4	3	2	1
1	Is the system easy to use?	6	5	2	1	0
2	Are the Font size, font type and graphics ok?	3	6	1	4	0
3	Are the Navigation, Login and other forms easy to use?	3	1 0	1	0	0
4	Is Submission Process easy and ok?	3	6	1	4	0
5	Is tracking of submission easy and ok?	4	4	2	4	0
6	Are the modes of payments for assessment, review and journal order ok?	3	4	1	5	1
7	Is the review Process i.e. assigning review, online assessment etc. ok?	3	4	5	1	1
8	Is searching or Retrieval, download and viewing of online publications easy?	4	8	1	0	1
	Total	29	47	14	19	3
	Percentage	25.8	44	10.9	16.9	2.6

**Table 5.1: Summary of data obtained from questionnaire**

**Note:** 5= (Strongly Agreed), 4= (Agreed), 3= (Strongly disagree), 2= (Disagreed), 1= (Can't say)

### RESULT INTERPRETATION AND DISCUSSION

From the table above, the research indicated that users responded to question one which is; Is the system easy to use? As; six (6) respondents strongly agreed, five (5) respondents agreed, two (2) respondents

strongly disagreed, one (1) respondent disagreed. Therefore we can say that the system is easy to use having eleven (11) respondents agreeing that it is easy to use compared to only three (3) that disagree.

The result also shows that the question “Are the Font size, font type and graphics ok?” have response as: three (3) strongly agreed, six (6) agreed, one (1) strongly disagreed, four (4) disagreed. Therefore, we can also say that the font size, type and graphics are ok since we have nine respondents that agreed with it.

The third question “Are the Navigation, Login and other forms easy to use?” have response as; three strongly agreed, ten agreed, one strongly disagree, no user disagree. Therefore the result shows that the navigations and forms are easy to use since thirteen respondents agreed with it.

The fourth question “Is Submission Process easy and ok?” gets; three strongly agreed, six agreed, one strongly disagree, four disagreed. Also from the result shows that the submission process is easy since nine respondents agreed with the question.

Question five “Is tracking of submission easy and ok?” have responses of four strongly agreed, four agreed, two strongly disagreed, also four users disagree. Therefore the tracking of submission is easy since eight users agreed that it is easy.

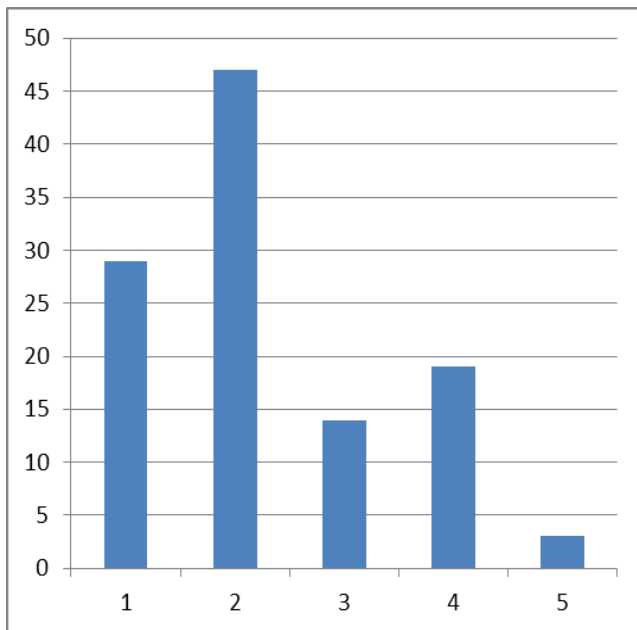
Question six “Are the modes of payments for assessment, review and journal order ok?” three strongly agreed, four agreed, one strongly disagreed, five agreed and one user doesn't know what to say. Therefore there is a great challenge here because seven respondents agreed and six disagreed with the mode of payments, this need to be enhanced.

The result shows that question seven “Is the review Process i.e. assigning review, online assessment etc. ok?” three strongly agreed, four agreed, five strongly disagreed, one disagreed and one user doesn't have anything to say. Therefore also in this aspect

we have a challenge because seven respondents agreed with it and six disagreed, this need to be enhanced.

The last question “Is searching or Retrieval, download and viewing of online publications easy?” four strongly agreed, eight agreed, one strongly disagreed, no user disagreed and also one user doesn’t know what to say. There this question has a positive answer from twelve respondents.

Finally we can say that from the above result, the responses with strongly agreed status have the highest percentage of 44.56%, followed by agreed with 25.89%, disagree with 16.96%, strongly disagreed 10.92% and respondents that can’t say anything with 2.67%. There some part of the system needs to be enhanced. These parts are the parts where we have high response of respondents that disagree which are question six and seven that are asking about mode of payments and online review process. Below is the graphical representation of the result:



**Figure 6: Graphical Representation of the data using Bar Chart**

### CONCLUSION

The effort being putten together for this research have finally yielded a positive

result. The new system will now have a positive impact on the current manual system being used by the Journal Administrators. This lead to the conclusion of saying that the aim of this research has successfully been achieved. Proper implementation of the new system will facilitate and ease almost all the processes involved in a Journal System.

### SUGGESTIONS FOR FURTHER RESEARCH

The system at its current state can be implemented and will function effectively. But for the sake of other interested students that will like to extend this project in the near future, I have the below suggestions for them:

- i. The result of the analysis obtained after the usability test shows that payments methods used by this system are not sufficient therefore the users suggests an improvement to be made in the payment method by adding more payment options like Paga, Interswitch, and PayPal which are globally accepted and secured.
- ii. Also the result indicated that the review process has not been accepted by many respondents, so the Researcher also suggests an improvement in that part.
- iii. The system should be integrated with an SMS API which will be used to send notifications to users, researchers and reviewers to their Mobile phones.
- iv. A mobile version (application) for the system that can run on Windows, androids and Black-berry mobile phones since the world is now moving to a mobile world.



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