Abstract—A complete online lecturer students interaction blog for an institution is being proposed in the course of this paper. The application that can be deployed in the development are hypertext pre-processor (Php), go programming language and MYSQL (structured query language) database which runs in every operating system that have a web browser and internet/intranet connection. The learning strategies students adopt are powerful predictors of educational outcomes, so that expertise in the selection and application of learning strategies is an important educational outcome these evaluation cues are sometimes not obvious to the instructor, the lecturer post lectures online and can also view the students comments and can take note of the students that took part of the lecture if need be [1][2]. This will bridge the gap of communication and enable the students to learn remotely at their convenient time and in the comfort of their home instead of having to struggle themselves into overcrowded class room. The System will have a database that will store all the informations/interactions for future retriever which are usually displayed on the System’s screen in an interactive format, the system will also be interfaced with a digital camera, which will be initialised on a mouse click. The design is such that, student will Register to take the part and be enabled to converse. The systems flexibility will makes it amenable for future changes.

Keywords—Teaching, Sql, Population, Html, Jquery, Virtual, Camera, Wireless

1.0. INTRODUCTION

One big challenge for lecturers is usually how to engage students and manage large number of students, particularly with increasing class sizes. Part of making content relevant is to make sure students learn what they need and that it’s at the right level. Personalizing learning to a student’s individual needs is especially hard to do with huge class sizes, but adaptive technologies can make it possible [1]. By capturing data, products are able to tailor subsequent content to learners’ level as they progress. Students also grow in confidence as they see their own progress.

Lecturer student’s interaction blog allows for flexibility of access, from anywhere and usually at any time. Essentially, it allows participants to collapse time and space however, the learning materials must be designed properly to engage the learner and promote learning.

This paper deals on a web based Lecturer/Students Interaction system, Lecturer student’s interaction blog has many promises, but it takes commitment and resources, and it must be done in a manner that will be easy to use and encourage user friendliness. This implies that online learning materials must be designed properly, with the learners and learning in focus, and that adequate support and explanations must be provided. Online learning should have high authenticity (i.e., students should learn in the context of the workplace), high interactivity, and high collaboration. This paper discusses the foundation of educational theory for the design of effective online learning materials, and suggests a model for developing online instruction based on appropriate educational theory.

Assigning tutorial problems weekly is a positive incentive to students, and instant access to students’ progress is a good way to identify less-motivated students.

Online instruction is a good ideal for Lecturers and students that are usually too busy with a job that need more education in order to advance or just keep pace professionally this is simply referring to a way of keeping learning to far individuals who wish to study close [2].

Learning online from these sources may help broaden the topic of interest, whereas in a book, we may only find limited resources, Social interaction motivates, too, we know students are engaged if they participate. We develop ideas through discussing and collaborating with others, and, as social animals, we enjoy it. Decisions by instructors of which evaluation methods to use, serve as a hidden code to students directing them to the skills and behaviours that are important for them to succeed. Many students tend to invest their Time as economically as possible, by
studying only those aspects of a course that they expect will affect their grade. Technology can help teaching here as well, even in the traditional lecture with very large groups. With online lecturer/Students interaction blog, students answer questions on their own devices. The lecturer’s screen then displays the results, which helps the lecturer gauge students’ comprehension, as well as adapt his or her response. Students can also pair up or work in groups to discuss the answers. So, in other words, the social collaboration will help to promote more learning. Thoughtful collaboration of technology and teaching does great things for student motivation. And sometimes it’s fun, too. The keys to this to work are also; having an engaging approach (make the online component fun and encourage debate and questions) and having the right technology. Project based learning can be very powerful but without the right process and technology these projects can become a nightmare [2] [3].

1.1 Background of the study

In the modern world with all the complexities involved in managing learning, university management requires well-structured and scientifically derivable information as a basis for online learning and information dissemination module for student. The survival and continuous growth relies on the management of the automated system. Some University across the globe make use of the E-learning system, this system invariably has proven to be very efficient and met so many standardization, eliminating/complementing the manual system. The study will contribute positively to the career of our teaching young student in our various colleges of education. In this era of dwindling resources, the management of public and private institution need an effective system (online learning system). With online learning system human labour is saved, time and cost is maximized effectively. Computing technologies is readily available to serve the need of mankind for innovative Educational services over the network. E-learning computing is rapidly changing the experience of Schools and Colleges, Lecturers and Students, how this is being achieved and relevance of e-learning computing will be the epic of this seminar.

1.2 Aim:

The aim of this study is:

- To design a web based interactive system for lecturers/students learning and teaching purposes.
- To complement the traditional learning method (classroom)
- To solve the problem of overcrowding in class rooms
- Learning online from these sources may help broaden the topic of interest
- It will help institution to decentralize information
- To make lecturer easily accessible to students, and to enhance instructional delivery.
- To save time and Resources
- To prevent risk in transits in result which is peculiar to class room learning, e.t.c

1.3 Scope

To use the one on one Interactive site for a cross-campus merged subject to provide consistency of advice relating to assessment whilst allowing academic autonomy within the separate face-to-face campus cohorts internet/intranet connection should be available.

You don’t really need to know the location or number of servers delivering the service, you don’t need to be a computer guru or a programmer to use the systems. What you need to do is to request a service such as, setting up a voice, video, and web conference, or viewing your examination scores, or lecturer lecture online and then you receive it.

“E-learning unbinds a service from a particular infrastructure, a collection of server’s stands at the ready, available to whichever faculty/college or department needs them at any point in time. Depending on the number of students/lecturers using a service at the same time, this is designed in a cloud form, the cloud automatically pulls in the right number of servers, adding or releasing servers dynamically as demand fluctuates.

These subjects employed Interact chat as online ‘classroom’ spaces to support the learning needs of students as well as a place for socialization. A number of dimensions of chat use including connectedness, engagement, collaboration, construction, and validation, and the characteristics and perspectives of prolific users of chat was highlighted. That chat tool supported student engagement and interaction within their own distance learning contexts. However, the blog tool in Interact has now been used as a way of capturing this aspect of face-to-face teaching and transferring it to a distance learning environment.

2.0 LITERATURE REVIEW

Several researches have been directed towards the development of a fast an efficient way of learning and writing exams without laxity. Some of the research carried out and the views of several writers concerning the development of an online learning or other related software technology were carefully reviewed. Online instruction seems to be the ideal answer for busy individuals with a job that need more education in order to advance or just keep pace professionally, this is simply referring to a way of keeping learning to far individuals who wish to study close [2]. A report by a faculty group at the University of Illinois, however, has found many on campus, students that take many if not all of their classes online a basic concept of online is facilitated around the online learning which also a very important factor [4].
As distance and Web-based learning becomes more popular and more accessible, high school, college and graduate courses are being offered via the Web as part of complete diploma and degree programs by more and more institutions. As a result students who wish to gain higher educational certificate can also write their exams online. Corporations have found online learning to be a more economical alternative than the typical corporate training session. However, little research has been done to understand some of the ramifications of this fast growing phenomena.

3.0 METHODOLOGY:

It has been established that physical archives are not always helpful, a much better alternative is to use an automated system. This implies the creation of database management system (DBMS) which ensure that computer records are kept up to date and made available on demand to those who need them for planning and operational purpose. The level of success achieved in caring out this project work is owed to the methodology adopted.

Lectures in class room have been a course of complain within the staff and students of the institutions, so an web base learning system graphical user inter face was designed using hypertext preprocessor and at the backend with MySQL database

First research methodology is a systematically programming approach of a well-defined procedure that should be followed in caring out a thorough research work. In order to attain quiet a reasonable acceptance of the research work we made use of the internationally accepted software engineering model, which is the V-model.

3.1 Structured system analysis and design methodology (SSADM).

The (SSADM) is a system approach to the analysis and design of information system. It involves the application of a sequence of analysis, documentation and design tasks concern with the analysis of the current system logical data design, logical process design, etc.

3.1.1 Design Modeling:

For the sake of this project the V-model was adopted: V- Model means Verification and Validation model. Just like the waterfall model, the V-Shaped life cycle is a sequential path of execution of processes. Each phase must be completed before the next phase begins. Testing of the product is planned in parallel with a corresponding phase of development.

The various phases of the V-model are as follows:

- **Requirements** like BRS and SRS begin the life cycle model just like the waterfall model. But, in this model before development is started, a system test plan is created. The high-level design (HLD) phase focuses on system architecture and design. It provide overview of solution, platform, system, product and service/process. An integration test plan is created in this phase as well in order to test the pieces of the software systems ability to work together.

- **The low-level design (LLD) phase** is where the actual software components are designed. It defines the actual logic for each and every component of the system. Class diagram with all the methods and relation between classes comes under LLD. Componet tests are created in this phase as well.

- **The implementation phase** is, again, where all coding takes place. Once coding is complete, the path of execution continues up the right side of the V where the test plans developed earlier are now put to use.

- **Coding:** This is at the bottom of the V-Shape model. Module design is converted into code by developers.

3.1.2 Reasons for choosing V-model:

- Simple and easy to use.
- Testing activities like planning, test designing happens well before coding. This saves a lot of time. Hence higher chance of success over the waterfall model.
- Proactive defect tracking – that is defects are found at early stage.
- Avoids the downward flow of the defects.
- Works well for small projects where requirements are easily understood.

3.2 The Existing system

The existing system is running on class room lecture, most teachers work to add interest to lecture material in an attempt to keep students engaged. If they aren’t attending, they aren’t listening, and if they aren’t listening, it’s pretty hard to imagine them learning anything from a lecture.

![Fig3.2 A Lecture Hall At Ambrose Alli University, Ekpoma, Edo state](image-url)
Though there are some benefits of this method of teaching like allows the instructor to precisely determine the aims, content, organization, pace and direction of a presentation. But there are numerous disadvantages:

- Places students in a passive rather than an active role, which hinders learning.
- Encourages one-way communication; therefore, the lecturer must make a conscious effort to become aware of student problems and student understanding of content without verbal feedback.
- Requires the instructor to have or to learn effective writing and speaking skills.
- Lack of large class room to accommodate the number of students.

Now to the down side of large classes. Teaching large classes has been found to adversely affect morale, motivation and self-esteem of teachers. Although many teachers could manage a class of almost any size successfully, this could often be at the expense of the teacher's own well-being and the range of learning experiences offered to students. Many teachers of large classes feel they spend too much time on organizing and managing class activities and not enough on meeting the needs of individual children. Large classes and overcrowded classrooms have negative effects on students' behavior and learning.

Some other problems with large classes are:

- Students become faces instead of people
- It is harder to give individual advice and guidance to students
- There can be technical problems working with large classes e.g. difficulties in projecting slides
- Monitoring of attendance can be difficult, thus encouraging students to cut classes
- Coping with large numbers of assignments and examination scripts is a source of difficulty
- The quality of feedback to students can be much reduced in large classes

Lecturer/students interaction blog is a system that enables students to study for an internationally recognized qualification without needing to attend classes on campus. It is aimed at those who wish to study for a degree qualification alongside work or other commitments. This will make it possible for students and instructors that are separated by geographic distance or by time to interact. Learning is supported by communications technology such as television, videotape, computers, e-mail, and mail. To be part of the class the student is required to have a computer with internet access. The system has more advanced functionalities, such as video conferencing/recording. This will make the student to be part of a diverse online network of fellow students from around the world and to feel confident interacting with this network through discussion boards, blogs, online tutorials or joint assignments [9].

The system offers a number of advantages for people and companies looking to develop a new content program or curricula — none bigger than the ability to offer that training anywhere, anytime. Small wonder, then, why online and e-learning has caught on with schools and universities, retail chains, top corporations, and among professional trainers. Teachers can optimize the timeliness and focus of the curriculum, students can better fit learning time into their schedules. These are other benefits of online learning:

- **Simple, Flexible Logistics:** After location, time is the greatest limitation on learning. That goes for both the instructors and the students, each of whom has to be both available and in alignment with the other for face-to-face instruction. By removing that requirement, everyone involved can participate at a time,
and for a duration, that suits his or her schedules [10].

- **Immediate Results and Feedback:** Anyone who has graded papers knows it can get tedious, and it’s time-consuming. Many of the most popular standardized tests, in fact, still rely on evaluation techniques that slow results. Most online learning technologies integrate online quizzes and other tools to more rapidly evaluate the pace of learning.

- **Better Retention:** With clever design, user experience, and multimedia, online instruction can prove to be a richer and more effective learning experience than traditional methods and channels.

- **Greater Access to Expertise:** when interfaced with a remote cloud system In different zone country or location, there are usually a handful of professionals that are experts in every field of study. Take away the limitations of geography, and expertise is free to travel almost anywhere via the system. This transformation allows information on highly specialized subjects to reach more people, paving the way for advances in fields from telemedicine to non-profit charities [11].

- **The Most Up-to-Date Content at Much Lower Cost:** The sticker shock associated with the textbook market is not news to anyone who has enrolled in even a single college course. And yet, despite the cost, our knowledge of most subjects continues to grow and evolve, making even 45,000 textbooks unreliable with a few years, and eventually of no use at all. The remote delivery of curriculum allows instructors to keep materials up-to-date, and the lower costs over time remove what for some are insurmountable obstacles to furthering their education.

### A Better Fit for 21st-Century Businesses:

As companies become more globally focused, co-workers are more likely to work in different places, if not on different continents. Online learning can help prepare employees to excel in today’s scattered, virtual office [12]. For those already working up the career ladder, online learning makes use of resources and technologies already at their fingertips.

![Fig. 3.5 A typical online learning scenario](image)

**Table 3.1 Comparing Traditional and online learning method**

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students receive less individual attention</td>
<td>Students receive more individual attention</td>
</tr>
<tr>
<td>A more restricted range of teaching and learning activities</td>
<td>Flexibility to vary teaching and learning activities</td>
</tr>
<tr>
<td>Whole-class teaching sometimes employed for control and keeping students on task</td>
<td>Whole-class teaching employed when appropriate to the activity</td>
</tr>
<tr>
<td>Group work hard to manage because of too many or too large groups</td>
<td>Group work can be employed effectively and flexibly</td>
</tr>
<tr>
<td>Restricted opportunities for student assessment and individual feedback</td>
<td>Better quality assessment and feedback to students</td>
</tr>
<tr>
<td>Limitations to practical activities</td>
<td>More opportunities for active learning</td>
</tr>
<tr>
<td>Teachers work extremely hard to offset the effects of larger class size</td>
<td>More reasonable workloads enabling teachers to put their energies into meeting the needs of students</td>
</tr>
</tbody>
</table>

3.4 **Database:** The system was interfaced with MySQL database at the background, the database holds the data’s and interactions that is going on in the blog.

![Fig.3.6 Database Entity Relationship diagram](image)

4.1 **System Testing, Results And Implementation:**

Educational institutions are moving toward the use of the Internet for delivery, both on campus and at a distance. However, for organizations and institutions to make this often expensive move, there must be a perception that using online learning provides major benefits. For learners, online learning knows no time zones, and location and distance are not an issue. In asynchronous online learning, students can access the online materials at any time, while synchronous online learning allows for real time interaction between students and the instructor. Learners can use the Internet to access up-to-date and relevant learning materials, and can communicate with experts in the field in which they are studying. Situated learning is facilitated, since learners can complete online courses while working on the job or in their own space, and can contextualize the learning. For the instructor, tutoring can be done at any time and from anywhere.

Online materials can be updated, and learners are able to see the changes at once. When learners are able to access materials on the Internet, it is easier for
instructors to direct them to appropriate information based on their needs. If designed properly, online learning systems can be used to determine learners' needs and current level of expertise, and to assign appropriate materials for learners to select from to achieve the desired learning outcomes[4].

4.2 The blog system design
The blog was designed using php and go programming language, which are for the interfaces that made the blog user interactive, then it was interfaced with a mysql database. The system is designed to have several menus and pages in Php scripting and go programming, this tend to create the unique interaction between the student and system to support them into achieving their exam task. The form has been simplified to have various object representing certain identity that enable the student accomplish the exam and result process in due time. The forms and object feature have been elaborated below.

Fig4.1: Typical display of the homepage

The welcome page is the system home page that comprises of login form to enable a user to login with username and password.

4.3 Verification/login form
In the online examination system the verification process helps recognize only registered student for the system. In this form we have some required information to enter to accomplish this process such information include:

Table 4.1 login

| ✓ Users name | idumuesah |
| ✓ Password | ************** |

This information is displayed on an object called label while the input object for this feature is the textbox. When a student logs in after the welcome page he/she is expected to enter the user name and password. When this information are entered into the required field the system connect to the database to verify this acclaimed person and ensure that he/she has registered for the system if the verification process was successful, the user would be taken to the home page and it will display like this:

4.4 To make a post or comment on others post
To Make a post the user should click on discussion on the menu up at the home page, select the particular discussion to engage on, the discussion page will automatically opened, as shown below.

4.5 Discussion page
This is the main hallmark of the system where e-learning takes place. In this page live discussion is enabled and interaction is sure. In the test menu, questions are provided and a space is also provided for the students to type in their answer and click submit, but the lecturer can also choose to post the question and expect the students to send the comprehensive answer to him privately using the inbox menu.

4.6 User requirements definition
The user requirement for this system is to make the system fast, flexible, less prone to error, reduce expenses and save time. Time can be saved by scheduling the tests, if it is available a question bank to store questions for different subjects (Saving them in a text editor e.g Microsoft word, then copy and paste it on the test panel). The system can automatically grade the students answers and display the result as soon as the student finishes his/her test. The system has records of students department, colleges, level and course that are accessible in the system which can be used only for the authorized
person. The system is more secure for management user records and more reliable to work at any conditions [3].

4.7 The products and process features
This system is designed as user required. So, the complete requirement must be found:

- **Quick scheduling:**
The system helps the Department generate an automatic lecture note/assessment instead of using papers. Which save time for writing, checking and for inputting marks. Also, student can only see interactions/assessment question when he/she logs-in as an individual to the system.

- **Immediate help, conversation, results and solutions:**
When the student/lecturer post live comment, immediately everyone on the system will see it and can add comment/reply, when the lecturer post an assessment or lecture the system will have the ability to notify each students about the new update. When the student finishes his assessment, the system checks her answers and compared with the correct answer. And the system saves the incorrect and correct answers and calculates the mark of correct answers, then display the total mark. And send a report immediately for student to see where he/she fail, this process is not up to 1 second.

- **Easy to store and retrieve information:**
Rather than saving the information on a papers or in separate sheets. There is a database to store and retrieve the information needed by the administrator / Department/lecturers or student when there is need for that.

4.8 Available features
4.8.1 The features that are available to the administrator are:
The administrator has the full-fledged rights over the other privileged levels.

* Can view post
* Can post
* Can view and modify questions
* Can view and modify Results

4.8.3 The features available to the students are:
* Can view post
* Can post
* Can change password.
* Can view the various reading material.
* Can view and modify its profile but can modify it to some limited range.
* Can write test
* Can view score/grade
* Can immediately print out the test result/lecture note.

4.9 Non-functional system requirements:

- **Performance Requirements**
Some Performance requirements identified is listed below:
The database shall be able to accommodate the records of all the staff and students.
The Portal shall support use of multiple users at a time. There are no other specific performance requirements that will affect portal.

- **Safety Requirements**
The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.

- **Security Requirements**
Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. * Keep specific log or history data sets
* Assign certain functions to different modules
* Restrict communications between some areas of the program
* Check data integrity for critical variables
* Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

4.9.1 Software quality attributes
The Quality of the System is maintained in such a way so that it can be very user friendly to all the users. The Portal quality attributes are assumed as under:
* Accurate and hence reliable.
* Secured.
* Fast speed.
* Compatibility.
* Cross platform

### 4.9.2 System interfaces:

This section describes how the software interfaces with other software products or users for input or output.

- **User interface**

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above, Mozilla Firefox, Operamini and other latest browser. No user would be able to access the exam page without logging on to the system.

- **Hardware interfaces**

- **Server Side:**
  - Operating System: Windows 9x/xp, Windows ME, 7-10
  - Processor: Pentium 3.0 GHz or higher
  - RAM: 256 Mb or more

- **Client side:**
  - Operating System: Windows 9x or above, MAC or UNIX.
  - Processor: Pentium III or 2.0 GHz or higher.
  - RAM: 256 Mb or more

- **Software interfaces**

- **Client Side:** .HTML, Web Browser, Windows XP/2000/Vista

- **Web Server:** .HTML, Windows XP/2000/Vista/7-10

- **Communications interfaces**

The User must connect to the Internet with an enabled gateway or be on the same LAN/INTRANET network to access the portal:

- Dialup Modem of 52 kbps
- Broadband Internet Dialup or Broadband Connection with an Internet Provider.

### 4.9.3 Software interface

#### Program Code

```php
<?php
require_once("includes/connection.php");
?>
<?php
include_once("includes/form_functions.php");

// START FORM PROCESSING
if (isset($_POST['submit'])) { // Form has been submitted.
  $errors = array();
  // perform validations on the form data
  $required_fields = array('username', 'password');
  $errors = array_merge($errors, 
    check_required_fields($required_fields, 
      $_POST));
  $fields_with_lengths = array('username' => 30, 'password' => 30);
  $errors = array_merge($errors, 
    check_max_field_lengths($fields_with_lengths, $_POST));
  $username = trim(mysql_prep($_POST['username']));
  $password = trim(mysql_prep($_POST['password']));
  $hashed_password = sha1($password);
  if (empty($errors)) {
    $query = "INSERT INTO users (username, hashed_password) 
    VALUES (" . $username . ", " . $hashed_password . ");
    $result = mysql_query($query, $connection);
    if ($result) {
      $message = "The user was successfully created.";
    } else {
      $message = "The user could not be created.";
      $message .= " <br />
      . mysql_error();
    } } else {
      if (count($errors) == 1) {
        $message = "There was 1 error in the form.";
      } else { $message = "There were 
      . count($errors) . " errors in the form.";
    } }
  $username = "";
  $password = "";
  ?></p>
  <?php
  include("includes/header.php");
  ?>
  <table id="structure">
    <tr>
      <td id="navigation">
        <a href="staff.php">Return to Menu</a><br />
      </td>
      <td id="page">
        <h2>Create New User</h2>
        <?php if (!empty($message)) {echo "<p class="message" >" . $message . "</p>">
        <?php if (!empty($errors)) {display_errors($errors); "
        ?>
        <form action="new_user.php" method="post">
        <table>
          <tr>
            <td>Username:</td>
            <td><input type="text" name="username" 
              maxlength="30"
              value="" />
            </td>
          </tr>
          <tr>
            <td>Password: </td>
            <td><input type="password" name="password" 
              maxlength="8">
            </td>
          </tr>
          <tr>
            <td>Binding: </td>
            <td><input type="text" name="binding" 
              maxlength="30"
              value="" />
            </td>
          </tr>
          <tr>
            <td>Submission: </td>
            <td><input type="text" name="submission" 
              maxlength="30"
              value="" />
            </td>
          </tr>
        </table>
        <input type="submit" name="Submit" value="Submit" />
        </form>
        </td>
      </tr>
    </td>
  </table>
</body>
</html>
```
5.0 RECOMMENDATION/ CONCLUSION

A complete online lecturer students interaction blog is a plus to our educational system cutting across its effectiveness and efficiency of the result. Over the past years, students have had cause to bother about the way and the manner of taking lectures and the stress they pass. Hence the need for fast and reliable way that could help ensure an immediate learning process on their convenient and the convenient of their instructor too is necessary. This system is found to be very interactive and user friendly as it has all the command controls that would allow student successfully accomplish their learning process and for the lecturers to deliver effectively, having their interaction/lectures displayed using the simplest graphic styles. All that the user needs to do is to register by clicking register and obtain a username and password with which login for blog. Efforts should be geared towards the minimization, if not the total elimination, of the problems associated with manual elections. A number of techniques can be introduced to ensure that time and other resources are efficiently used. The most effective and desirable of these options is online learning.

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