

# Enhancing Organisational Excellence: The Impact of Performance Management and Appraisal System in Gombe State Treasury

Aminu Umar Yuguda<sup>1</sup>, \*Albashir Ahmad<sup>2</sup>, Sani Ari<sup>3</sup>

<sup>1,3</sup>Department of Computer science, Gombe State treasury

<sup>2</sup>Department of Computer science, Federal Polytechnic Kaltungo

\*Corresponding Author

DOI: <https://doi.org/10.51584/IJRIAS.2023.81117>

Received: 20 November 2023; Accepted: 23 November 2023; Published: 25 December 2023

## ABSTRACT

The implementation of performance management and appraisal system in any organization is to accomplish its strategic goals and objectives. The foundation of any organization is the performance management system (PMS). Organizations would not be able to survive if workers did not perform their assign duties. Organizations would be competitive and productivity would rise if workers gave their best effort. Performance appraisals (PA) are seen to be a useful Human Resource Management (HRM) tool that measures the standards that any organization or company sets for its workers by monitoring each worker's performance in relation to the organization's objectives. In Gombe State Treasury, staff evaluation performance is conducted manually which result to a lot of problems such as data inconsistency, inadequate storing of posting history, limited accessibility and flexibility among others. To address these issues online appraisal system was developed and implemented in the organization using water fall model as the adopted methodology and it is evaluated by distributing questionnaires to the staff and the management, analysis was carried out based on the defined hypothesis to see the impact of the system in the ministry which was found that the system has significant impact in conducting the appraisal exercise on both the staffs and the management as such it overcome the mentioned challenges faces during the exercise. The new system was designed to be more effective and productive for conducting staff appraisal exercise, eliminating all types of delay and tension. This research work made use of data collected from the organizations materials and journals from various authors and software was developed to effectively achieved aims of the research. The implementation of the system was carried out using PHP, JAVASCRIPT, CSS, APACHE and MYSQL for the database was carried out in the research. The system will automatically reduce the time and effort in the process. The system also evaluated by the staff of the organization and the data collected were analyzed and concluded that the system has significant impact in conducting the process based on the defined hypothesis.

**Keywords:** Staffs, Performance management, Appraisal, Treasury

## INTRODUCTION

An online performance appraisal is a software system that is developed to ease the process of employee promotion, it facilitate the performance of every staff best on his qualification and his criteria for promotion. The traditional method of paper and pencil courses a lot of difficulties and unnecessary damages to the process like ways of keeping data and computational points for the promotion are done manually which can lead to waste of time and can even lead to data redundancy and the method is not consistent. This research aims to provide necessary solutions to the problems so as to improve the standard of the ministry and to save the time waiting for confutation as this will be done automatic open filling the online appraisal form.

Human Resource Management (HRM) is one of the methods that designed to improve the efficiency of any

organization and resolve the personnel or organizational issues systematically [1] human capital plays an important in determining how the organizations operate in order to achieve their objectives. There are study shows that performance appraisal system plays a vital role in human resource management practices as it is designed to monitor, motivate and enhance employees' performance in the future [2] Moreover, the performance, motivation and satisfaction level of the employees will be affected by the performance appraisal system that will be conducted by the supervisors.

### **Problem of the Existing System**

In the context of modern workplaces and need for efficiency and accuracy, traditional method of employee performance appraisal relying on paper and pencil has become increasingly inadequate. This approach suffers from several critical challenges which lead to the development of the online system to address the issues below:

1. Inadequate storing of posting history
2. Data inconsistency
3. Security and confidentiality concern
4. Manual process of staff evaluation
5. Limited Accessibility and Flexibility

### **Aim and Objectives of the System**

The aim of online employee performance appraisal system is to design, develop and implement a modern and efficient platform that automates the process. The system will enhance the accuracy, accessibility, efficiency and security of the performance appraisal and also to contribute to the organizational effectiveness. While the objectives include:

1. To develop an online platform
2. To automate appraisal workflow
3. To ensure data security and confidentiality
4. Customize appraisal criteria
5. Integrate HR systems
6. Provide training and support

### **Hypothesis**

**Null hypothesis (H0):** the adaptation of the online performance appraisal system at Gombe state treasury has not significantly enhances the efficiency and effectiveness of the appraisal process.

**Alternate Hypothesis (H1):** the adaptation of the online performance appraisal system at Gombe state treasury has significantly enhances the efficiency and effectiveness of the appraisal process.

### **Scope and Limitation**

The implementation of this study is required for every organization that want to be Information and Communication Technology oriented and ready to eliminate the different issues that impede the proper storage, posting, and performance evaluation of its employees. The scope of this study should be for the Office of the Accountant General Gombe. The limitation of the system is the inability of the application to send sms & email verification.

### **RELATED LITERATURES**

According to the research by [7] employee satisfaction can be defined as the state or level of pleasurable

emotional of an individual which results from the outcomes of his/her tasks. The satisfaction of an employee in an organization is all related to the feeling of an employee has about the tasks that he/she performed in an organization. Employee satisfaction can be defined as the state or level of pleasurable emotional of an individual who result from the outcomes of his/her tasks. This study [8] present the motivation of an employee can be referred as a driving forces that within an employee for reinforcing and providing the guidance to the behavior and boosting the tendency of the employee for persistence. When an individual has the desire to pursuit his/her goals in life, there will be a driving or impulsive force is then produced that will cause the individual's willingness to apply those power in performing the tasks and responsibilities to achieve that particular goals or objectives in terms of intrinsic and extrinsic rewards. Based on [3] the supervisors play an important role in evaluating the performance and behaviors of the employees. Supervisors who are responsible for the performance appraisal should be observed fairly towards all the employees and they should provide the results and feedback to the employees in a good manner. A biased performance appraisal system that happens in a ministries or organizations will affect the employees from different aspects, which including their work performance, motivation and employee job satisfaction. Past study by [4] showed that eighty percent of the managers are most likely being biased while conducting the appraisal of the employees. According to [5] biased performance appraisal system and the negative feedback can increase the employee turnover rate in any organization. Higher rate of employee turnover and lower level of commitment are some of the negative impacts due to the dissatisfaction from the employees towards the unfairness performance appraisal. Past study by [6] stated that improper implementation of performance appraisal system in a manufacturing company will cause the decreasing in the productivity. Moreover, a biased and unfairness performance appraisal system will influence the employee motivation.

## METHODOLOGY

The process of developing the application begins with the collection of relevant data. The hardware and software requirements for developing the system are determined by technology. A few questionnaires were distributed to various system users in order to collect the needs for this system.

Numerous research facets and techniques are included in research methodology. Compared to research methods, research methodology has a broader reach. The researcher primarily uses this when doing this study. On the other hand, methodology is a systematic process for a collection of activities. It is the general principles and rules of a system approach. These definitions suggest that a methodology includes all of the techniques applied in a study.

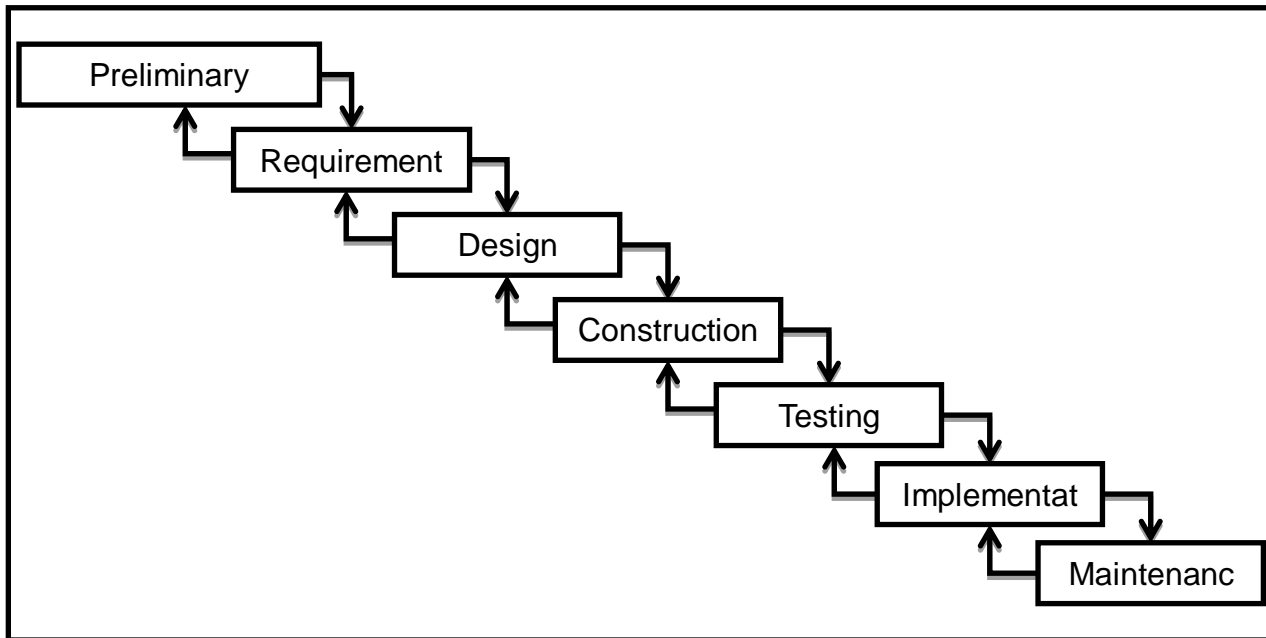
The application system is created using a waterfall model, which is a component of the software development life cycle (SDLC). Information systems or software can be created or modified by system developers using it. It separates the process of development into multiple phases or steps. It will logically move to another stage after one stage is over, it will go on to the next. When something goes wrong in the current stage, it's often necessary to go back to the previous one.

During the research process, time, money, technology, and expertise will all be considered. Schedule building must consider time constraints encountered during project development, such as the necessity to complete multiple activities at once. Consideration must also be given to the availability of resources, including knowledge, reference materials, and the internet. Planning for the schedule will also be impacted by the developer's lack of technology and expertise. Waterfall Paradigm is an important approach because it is behind the success of many large projects development. Without the structure and organization provided by a Waterfall Paradigm method, development projects would be at severe risk of missing deadlines, escalating budgets and low-quality system. As a methodology, the Waterfall Paradigm provides the structure, method, controls and checklist needed to ensure successful development. Figure below shows the phases in Software Process Waterfall Paradigm.

## System Development Approach

The software Process Waterfall Paradigm is chosen as the methodology in developing the application System. The idea of a Waterfall Paradigm includes management, planning, organization, scheduling etc.

Figure 1: Waterfall Paradigm



## PRELIMINARY INVESTIGATION

In the Preliminary Investigation phase, the problems are briefly identified and a few solutions suggested. This phase is a preliminary investigation of the proposed project to determine the need for a new Software System.

The Software System will be developed for Office of the Accountant General Gombe, because of the manual system they are using. It is identified that the major requirement for the system, is to provide a robust way of saving staff information, making of posting and performance evaluation for the staff. The system is also expected to provide an avenue to generate staffs that are due for promotion and retirement as well. These features are in order to enhance the efficiency and performance to the software system platform and also the service to the organization.

### Analysis:

System requirement is very essential to be defined clearly and also requirements' gathering becomes more important in designing a system. The basic objective of requirements analysis is to identify some major requirements of the user in-terms of the software elements of the system. To achieve the above objective of the requirements analysis, fact-finding techniques have been used to identify the requirements. The fact-finding techniques that have been used are:

- Questionnaires and surveys are effective methods for gathering information from users and stakeholders in requirements analysis. These techniques include designing structured sets of questions or inquiries that are delivered to a specific group of people in order to collect information about their needs, preferences, and expectations for the software system.

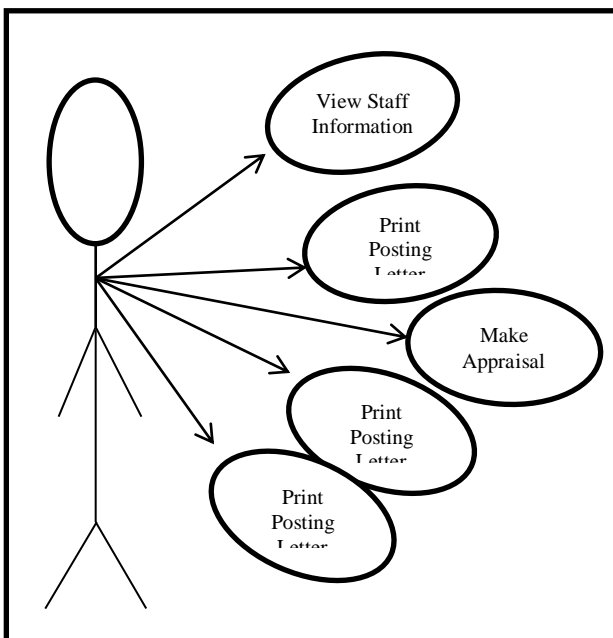
### Design:

This is the most important phase in developing a system. In this stage a detailed design is done defining the

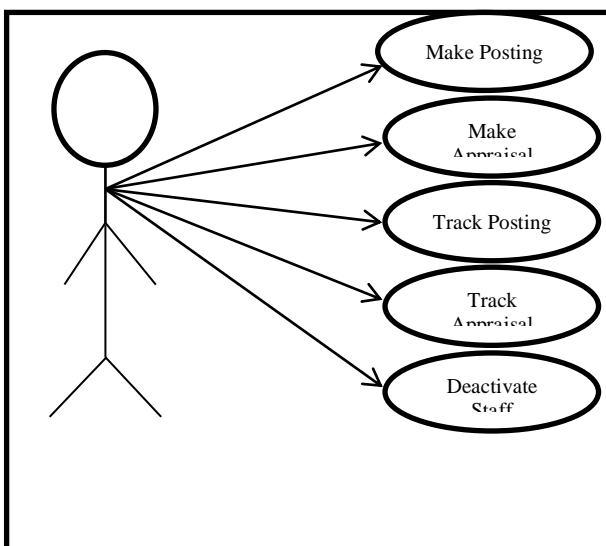
core elements of requirements for database, input, user interface (application) and output.

- **Use-case Diagram:** A use case diagram is a representation of a user’s engagement with the system that displays the relationship between the user and the many use cases in which the user is involved. A use case diagram can identify different sorts of system users and use cases and is frequently supplemented by other types of diagrams. The following are the many use-case diagrams for the Software System’s users (Accountant General, Head of Departments, Director Admin & Finance, and the Paying Officers):
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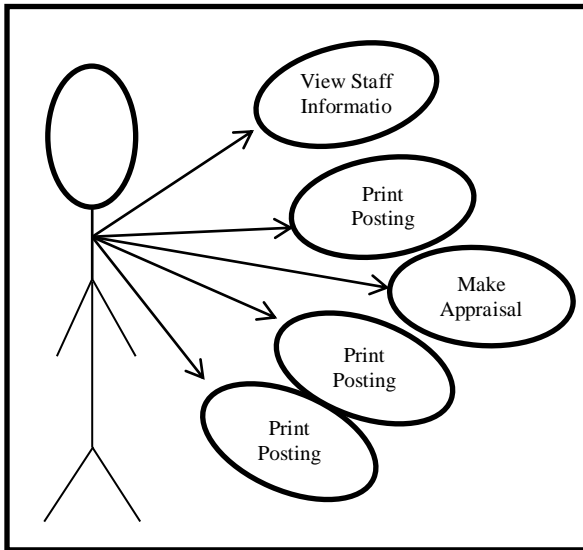
**A) Paying Officer**



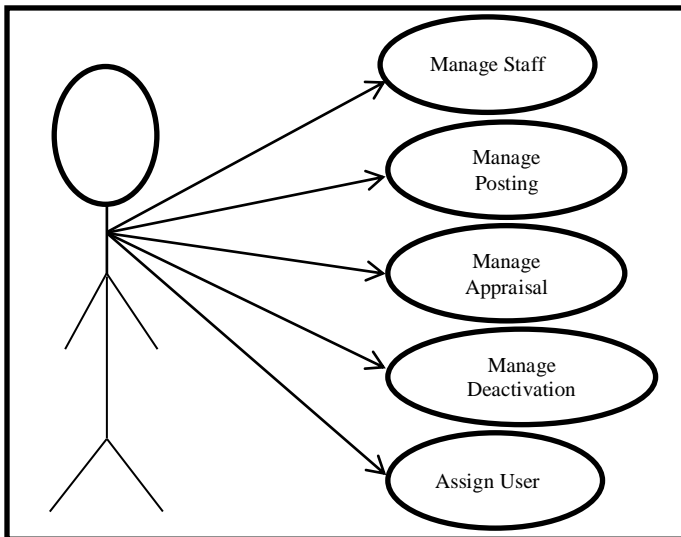
**B) Head of Department**



**C) Head of Department**



**D) Accountant General**



**C) Director Admin & Finance D) Accountant General**

**Paying Officer**

Below are the basic functions that a Paying Officers can perform in the system:

- View Staff Information: A Paying Officer can view the staff posted to his workplace.
- Print Posting Letter: A Paying Officer can print posting letters of his staff.
- Make Appraisal: A Paying Officer can appraise his staff at the end of every quarter of the year.
- View Appraisal History: A Paying Officer can monitor the progress of their previous done appraisal.

**Director Admin & Finance**

Below are the basic functions that a Director Admin & Finance can perform in the system:

- View Staff Information: A Director Admin & Finance can view the staff posted to his/her Ministry.
- Print Staff Posting Letter: A Director Admin & Finance can print posting letters of his/her staff.
- Make Appraisal: A Director Admin & Finance can appraise his/her staff at the end of every quarter of the year.

View Appraisal History: A Director Admin & Finance can monitor the

### **Head of Department**

Below are the basic functions that a Head of Department can perform in the system:

- **Make Posting:** A HOD can suggest a posting of staff to a different workplace prior to final approval by the Accountant General.
- **Make Appraisal:** A HOD can make appraisal of his/her staff four times in a year.
- **Track Posting:** A HOD can keep track of every posting that is being initiated him/her or by any other HOD.
- **Track Appraisal:** A HOD can keep track of every appraisal that is being initiated him/her or by any other HOD.
- **Deactivate Staff:** A HOD can initiate a deactivation of any staff that retired, resigned or got promoted outside the treasury.

### **Accountant General**

Below are the basic functions that Accountant General can perform in the system:

- **Manage Staff:** The AG can manage all staff information and can be able to update their information when necessary.
- **Manage Posting:** The AG can approve or reject posting initiated by the HODs and can also make posting when necessary.
- **Manage Appraisal:** The AG can approve or reject appraisal initiated by paying officer, director admin & finance and HOD within various MDAs in every quarter of the year.
- **Manage Deactivation:** The AG can deactivate any staff who resigned, promoted or dismiss from the Treasury House.
- **Assign User:** The AG can give access level to various users of the system

### **Programming Language Used:**

In developing the application, there are some programming languages that have been used. Moreover, the programming languages used are categorized based on client side and server side respectively. The client-side programming languages include:

- **HTML:** Hyper Text Markup Language (HTML) is used for creating and visually representing a web page. HTML adds “markup” to Standard English text. “Hyper Text” refers to links that connect Web pages to one another, making the World Wide Web what it is today. By creating and uploading Web pages to the internet, you become an active participant in the World Wide Web. HTML supports visual images and other media as well. HTML is the language that describes the structure and the semantic content of a web document. HTML has been used to create the static pages of the site (i.e. Online Hotel Reservation System).
- **CSS:** Stands for “Cascading Style Sheet”. Cascading style sheets are used to format the layout of web pages. They can be used to define text styles, table sizes, and other aspects of web pages that previously could only be defined in a page’s HTML. The basic function or use of CSS is to format HTML tags; it has been used in almost the entire site.
- **JavaScript:** is a dynamic programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control browser, communicate asynchronously, and alter the document content that is displayed. It is also used in

server-side network programming with runtime environments such as js, game development and the creation of desktop and mobile applications.

- JQuery: is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML. JQuery is the most popular JavaScript library in use today. JQuery is a fast and concise JavaScript library created by John Resig in 2006. JQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for Rapid Web Development.

The above scripting languages are used to develop the application and also for the rest of the client-side languages. Below is the server-side language that was used, these include:

- PHP: is a recursive acronym for “PHP: Hypertext Preprocessor”. PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites. It is integrated with a number of popular databases, including MySQLi, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.

#### **Database Used:**

- Mysqli: My SQLi, launched in 1995, has become the most popular open source database system. The popularity of MySQLi and php My Admin has allowed many non-IT specialists to build dynamic websites with a MySQLi backend.

#### **Testing:**

The system is tested to ensure that it satisfies the user requirement accurately and completely. Typically, two levels of testing are performed. Firstly, the unit testing; where each unit or module is tested independently to ensure each of them function correctly. Some of the modules include Staff Posting, Appraisal and Promotion. Secondly, the system testing is where modules, which comprise of the system’s interface and database are integrated together in a correct, stable and coherent manner to ensure all modules interact correctly.

#### **Implementation:**

This includes system installation and training system users. Once the system has been tested satisfactorily it is delivered to the customer and installed for used.

#### **Maintenance:**

It is most likely that the system will subject to change during the time of operating life. The delivered system may operate erroneously or corrections have to be made to the software. Certain aspects of the system’s behaviors may not have been fully implemented (because of cost or time constraint), but are then completed during the maintenance stage. The operating environment may also change in various ways causing requirements changes that have to be adapted.

#### **Justification of Methodology Selection**

Methodology is very important in developing the application. Choosing a right methodology will help to produce a better-quality product, in terms of documentation standard, acceptability to the user, maintainability and consistency of software.

Waterfall paradigm methodology can ensure that user requirements are completely met and also help the development of project by giving better control of project execution. The software process waterfall paradigm methodology also promotes communication between project users, by defining essential users and

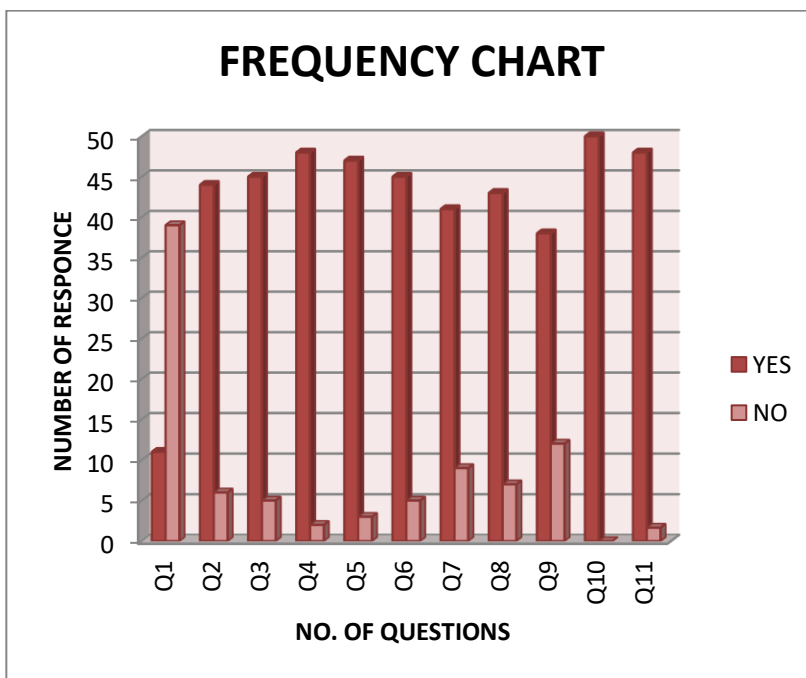


interactions, and by giving a structure to the whole process.

If the application is develop using spiral development approach. Each iteration may include a combination of planning, analysis, and design or development steps. It is believed that the spiral model is more suitable to be used for project that needs modification, enhancement or upgrade. This model is not suitable for this project, because all planning and analysis are done before starting the design of the system. Also, comparing the waterfall paradigm methodology with incremental development approach; which complete parts of a system in one or more iteration and put them into operation for users. This model is not also suitable for this project. As such, the development of this application has adapted the suitable methodology, i.e Waterfall Paradigm methodology.

## EVALUATION

To evaluate the performance of the system questionnaire was used with 50questions distributed and analyzed accordingly to see whether the system has or doesn't have the significant in the appraisal process. Below is the analysis of the responses given by the staffs of the Gombe state treasury.



Expected frequencies would be for:

$$\text{YES} \quad RT * CT / GT = 460 * 50 / 550 = 41.8$$

$$\text{NO} \quad RT * CT / GT = 90 * 50 / 550 = 8.1$$

After obtaining the respected value of YES and NO we now move further to create a contingency table with the obtained values:

$$X^2 = 59.34$$

$$\text{Degree of freedom} = (C - 1)$$

$$DF = (11 - 1) = 10$$

From the  $x^2$  table 10 using 5% (0.5) level of significance = 18.3

## DECISION RULE

The calculated value of  $X^2 = 59.34$  which is greater than the table value  $T_{10} (18.3)$  at difference of 10 by 5%. Therefore, we rejected the null hypothesis and uphold the alternate hypothesis which state that: the adaptation of the online performance appraisal system at Gombe state treasury has significantly enhances the efficiency and effectiveness of the appraisal process.

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