

**WEB-BASED HUMAN RESOURCE REPORTING MANAGEMENT
INFORMATION SYSTEM
ACASE STUDY: PRESIDENT'S OFFICE PUBLIC SERVICE COMMISSION
(PO-PSC)**

**By
Alex A. Mero
13412004/T.16**

**A Thesis for Master of Science Information Technology and System
(MSc-ITS) of Mzumbe University
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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommended for acceptance by the Mzumbe University, a thesis entitled The Web-Based Human Resource Reports Submission and Management Information System. The Case Study President's Office PSC (PO-PSC), in part of the requirements for the reward of the degree of Master of Science Information Technology and System of Mzumbe University.

Major Supervisor

Internal Examiner

External Examiner

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DEDICATION

This study is devoted to my dearly loved parents, late Mr. and Mrs. Mero without their great help and sacrifices during my upbringing, I would not have gone to school may their soul rest in eternal peace.

ABBREVIATIONS AND ACRONYMS

B2B	Business to Business
ccTLD	country code top-level domain
CLF	Converged Licensing Framework
CRC	Class Responsibilities Collaboration
CRM	Customer Relationship Management
DSS	Decision-Support Systems
EAI	Enterprise Application Integration
e-GA	e-Government Agency
ESS	Executive Support Systems
FCM	Form Creation Management
GoT	Government of Tanzania
GOVNET	Government Network
HR	Human Resource
HRM	Human resource management
HROs	Human Resource Officers'
HRRSMS	Human Resource Report Submission and Management System
HRRSMIS	Human Resource Report Submission and Management Information System
HTML	Hyper Text Markup Language
ICT	Information and Communication Technology
IFMS	Integrated Financial Management System
INM	Institution Management
IP/MPLS	Internet Protocol/ Multi Protocol Label Switching
IS	Information System
ISO	International Standardization organization`
ITM	Institution Type Management
IXPs	Internet Exchange Points
LAN	Local Area Network
LGAs	Local Government Authorities

MDAs	Ministries Departments and Agencies
MIS	Management Information Systems
NICTBB	National ICT Broadband Backbone
NICTP	National ICT Policy
NPS	National Payment System
NSGRP	Tanzania's National Strategy for Growth and Reduction of Poverty
OLAS	Online Loan Application System
OPRAS	Open Performance Review and Appraisal System
PHP	Hypertext Preprocessor
PME	Planning Monitoring and Evaluation
PO-PSC	Presidents' Office Public Service Commission
PSTN	Public Switched Telephone Network
RAM	Reporting Area Management
RGM	Region Management
RM	Reporting Management
RPM	Reporting Plan Management
RSs	Regional Secretariats
RYM	Reporting Year Management
SM	Section Management
SQL	Structures Query Language
TCRA	Tanzania Communications Regulatory Authority
TISS	Tanzania Interbank Settlement System
TPS	Transaction Processing Systems
USM	User Management
WAN	Wide Area Network
WBHRMIS	Web-based Human Resource Report Management Information System
WBIS	Web-based Information System
WIS	Web-based Information System
WWW	World Wide Web

ABSTRACT

The study was conducted at the Public Service Commission (PSC) located at Ilala Municipal in Dar es Salaam, Tanzania. The general objective of this study was to addressing the challenges facing the current human resource reports management system for PSC. Purposive sampling technique was used in selecting respondents who participated in the study. Data was collected through three methods which were interview, focus group discussion and documentary review while qualitative analysis was being used in analyzing data by putting together similar ideas. The study was guided by two specific objectives which were; to identify challenges facing current HRRSMS for PSC, to develop a Human Resource Reports Web-based Submission and Management Information System at PSC.

The findings found that HR report submitted at PSC at low rate annually. The study found that the common challenges facing current report submission and errors occurrence during long calculations and proper generation of report, difficult in monitoring the submission, limited hours of operation, funds, management commitment, and continues fall of HR reports submission from the stakeholders.

The study also describe ways to develop a Web-based Human Resource Reporting Management Information System at PSC where the prototyping were adopted in system development, unity testing, user testing, system testing were conducted before official deployment of the system.

It was concluded that the existence of the challenges that facing current (papers) reporting management system at Po-PSC, which hinders supervision and compliance monitoring HR status in Public Service. The study recommends the PO-PSC to use web-based reporting management information system at PSC as the best solution to those listed challenges. On top of that, the study recommend that for smooth adoption of web-based reporting management information system must have strongly stakeholder's involvement, committed management change, and government support.

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CHAPTER ONE

INTRODUCTION AND PROBLEM SETTING

1.1 Introduction

This chapter seeks to address the understanding of the research problem, which includes the background of the study, a statement of the problem, the purpose of the study, research questions, objectives, scope, and the significance of the study. Thus, the understanding of the research problem conducted was elaborated in this chapter.

1.2 Background

Enlightening efficiency and effectiveness for Human Resource Management has been a challenge in developing countries. The timely submissions and management of human resource reports indicates good governance and proper supervision. HR reports submission and management aids in monitoring, planning, assessment of the status and the managing of staffs, in so doing providing a foundation for responsibility. Recently the Government of Tanzania has put much effort into building policies and frameworks for Information and Communication Technology (ICT) field. These initiatives aim at ensuring sufficient equipped ICT infrastructure to support the implementation of various ICT projects.

According to ISO 15489 (2016), effectiveness is about doing the right things. Proper management and submission of reports bring good governance and administration as it aids in the formulation and evaluation of policy and the management of resources, thereby providing a basis for accountability in government institutions. The opportunity of web-based applications has developed extremely and has moved to become a platform that can support all facets of organizational work (Isakowitz, Bieber and Vitali 1998). Moreover, web technology offers much more in comparing to traditional technology because it provides a new medium of communication

Web-based human resources report submission and management system is a system that focused to collect and manage data relating to Human Resource (HR) status. It is

one of the Information Systems required to accommodate every change that occurs in HR status in the Government of Tanzania (GoT). There have been changes on HR status in the Public service which includes public servants terminating their services, being confirmed on promotion, seniority list, getting training, and disciplinary cases and public servants case in the court of law.

Human Resource report Submission and Management Information System (HRRSMS) integrates information from all Public institutions with provision of a clear picture of compliance to public service laws, regulation and guidelines. Currently receiving, compile, analyses and processing quarter and annual reports which provides the similar reports as done by manual at PO-PSC . The manual system has weaknesses which needed to be cured with the storage of data shifted from files, manual ledgers, and books to a computer system. This study focused to study whether there are ways addressing the challenges facing the current human resource reports management system at PSC.

1.2.1 The Public Service Commission

The Public Service Commission (PSC) is among the Public offices in the Tanzania Government. It has about 102 staff located at Dar es Salaam. The main general obligation of Commission is to offer advice to the President regarding HR matters. These matters include delivering guiding principles as well as monitoring its implementation in the Public Service. In addition, PSC deals with the processing of appeals from public servants against the Disciplinary Authorities.

In wisdom, PSC can be recognized as a regulator, respondent and information oriented authority. The efficiency of the PSC is widely depends upon the response and present information on time.

1.3 Statement of the problem

In accordance with Sec. 10(2) of the Public Service Act. No 8 of 2002 the PSC may require any employing Authority to provide information, which the Commission may need in carrying out its functions. PSC receives Human resource reports about public

servants terminated their services, confirmation status, promotion, seniority list, training, disciplinary cases, list of public servants with the case in the court of law and OPRAS.

Currently, PSC mainly processes are paper-based, characterized with the moving of hard copies files. For example PSC Human resources, report submission and management are based on the paper, which is a tedious process. The main challenge that the PSC has been facing from its establishment is that Human resources reports were received through decentralized registries distributed on department wise throughout the office. Reports submission and management until now operates on a paper file system. The weaknesses under the current system are more time taken responding, locating files and unnecessary repetition of documents. This is therefore potentially slow, tediousness in processing and very likely prone to errors due to the possibility caused by manual compilation and processing of reports. Notwithstanding its importance, PSC report submitting information system encounters challenges in receiving, compiling, processing and managing on a regular report provided by Appointing Authorities, Employers and Disciplinary Authorities.

Steen, Wang, Tao, Cross, and Drusche, (2008) see the ability to use the Internet as a reporting tool has created important and timely changes in the way registries all over the world can collect data. It leads to the discovery of the value web-based application as the platform that can support all facets of organizational work. Furthermore, according to Turoff and Hiltz, (1998), the web-technology differs from the traditional information technology in that it might be labelled as a new type of information system, but it is fundamentally a new medium of human communication. Therefore it is importance to study the challenges facing the current HRRMSM paper system at PSC so as to deliver useful Web Based Human Resource Reporting Management Information System (WBHRRMIS) for the aim of eradicating the current challenges facing paper system used by PSC.

1.4 Objectives

1.4.1 General Objective

In this study, the broad objective was to addressing the challenges facing the current HRRSMS at PSC.

1.4.2 Specific Objectives

The research aims to address the following definite objectives:

- i. To identify challenges facing current HRRSMS at PSC.
- ii. To develop a Human Resource Reports Web-based Submission and Management Information System at PSC.

1.5 Research questions

To attain the above specific objectives the following questions were formulated.

- i. What are the challenges facing the current Human Resource Reports Submission and Management Information System at PSC?
- ii. How to develop a Human Resource Reports Web-based Submission and Management System at PSC?

1.6 Scope of the study

As the objective of the study was to address the challenges facing the current human resource reports management system at PO-PSC. The management and staff of PO-PSC helped in providing relevant information, which required accomplishing the study.

1.7 Significance of the study

This research study provides a blueprint on issues of web-based technology particularly on the Human Resource Reports Submission and Management. Further, the study helps to review the Human resources and information system analysis. This

study is more valuable to the Tanzania Government particularly in the management of work force status of the entire public service as it enhances the knowledge about the possible usage of web-based Technology in Human resource reports submission and management. In addition, the study is beneficial to the Government stakeholders like local government as employer, employees, donors and non-government, these groups will benefit from the proposed solution which will be provided. To future researcher the study facilities to carter for the scarce of literature in the area of Human resource report submission and management.

CHAPTER TWO

LITERATURE REVIEW

According to Hart, (1998), a literature review requires breadth and depth, rigor, and consistency, clarity and brevity, and effective analysis and synthesis. Further, the practice of concepts in the literature to defend the specific tactic, the choice of ways and means, and ensure this research donates new knowledge. In this chapter, Web-Based HRRSMS reviewed.

2.1 Meaning of Concepts

2.1.1 Systems and Information Systems

A system refers to an entity of components which is a group of modules that work together on the way to the realization of itemized goals. Kroenke, (2011) also argued that an information system should compose a number of essentials like devices hardware and software, facts, measures as well as individuals. This literature study did not try to generalize on information system but will focus on Web-Based Human Resource Reports Submission and Management Information System (WBHRRSI) as among the system. Extensive lists of different writers on information systems have explorer several features linking to the information systems field. In examine of information system focus emphasized on matters and insights given from practical and behavioral. This study in a large extent focuses on the behavioral approach.

Information systems change the way organizations operations. It leads to contest nationwide and international depend on the use of information systems. To attain the organization's goals and objectives they need information systems in ensuring reliability, accuracy and consistency of information on organization activity. Also information system is so essential today because helps in Operational excellence, New products, services and business models, Customer and supplier intimacy, Improved decision making, Competitive advantage, and promote Survival, Kenneth and Jane, (2012)

2.1.2 Management Information Systems

Management information system defined by many authors Heidarkhani, khomami, Jahanbazi, and Alipoor (2013) defines Management information systems as a kind of computer system that could collect and process information from diverse foundations for official decision making in the level of management. Also O'Brien and Marakas, (2007) view Management information systems in the way of providing information in the form of pre specified reports and displays to support business decision making. It comprises systems that are planned to support management in checking and governing the business handling accomplishments that happen at the middle level. MIS usage gathered data by the TPS to offer administrators an important regulator report. MIS concise data from the organization into a significant form of management reports and use them to support decision constructing by management.

2.1.3 The World Wide Web

Lee, (1994) donates since its commencement the World Wide Web (WWW) has originated to opinion for a number of diverse perceptions. The WWW seems to be a tool in driving organization operations. Organizations with WWW presence achieve practical difficulty, functionality and an unresolved design all are advantages commencing using the WWW. However, there still contest of changing and mixing current corporate activities to benefit from the chances obtainable through the WWW. The web changes the nature of doing business and its operation.

2.1.4 Web-based information system

Webb, Pollard and Ridley, (2006) view that, the last decade has seen an unprecedented rate of development of Web-Based Information Systems (WBIS) which has formed the opportunity for sophisticated WBIS, such as portals, online gaming, infotainment, aggregators, e-commerce applications, Customer Relationship Management (CRM) and Enterprise Application Integration (EAI) applications. Throughout this era, the idea of MIS has evolved from earlier uses of legacy systems. The innovation of Internet and information technologies raise lead to many traditional

information systems, to be converted into Web-based Information Systems that its accessibility is readily easier.

Takahashi and Liang, (1997) defined Web-based information system as an application that not only disseminates information but also proactively interacts with the user to aid them in their task. It is extra composite than old-style IS engineering as it advances several innovative features that include presentation, describing and navigation. Internet as the third wave of the industrial revolution changes everything in organizations, its manifestation and starter of WBIS lead to raise productivity, competence, accountability, reliability and transparency in most institutions. Thus, WBIS is an application hosted in a server reachable via browser anywhere.

An extensive analysis of WBIS found in Guo, (2008). WBIS is composed of five major components that include the website, online business processing, knowledge management, database, and software agents. It drives beyond the prospects and services presented by web sites by supporting business processes. As it has innovative styles, amplified storage and contact to material that processed extra rapidly and well. The function aspect permits customers to enhance detailed roles that can be attained in a quick way. The product aspect connected to the capability of editors to implement an innovative system and marketable products new development. The final aspect concerns the features of human use WBIS and the special effects they have on the user.

For the system to access the document must be in the form of the WWW links. This WWW permits linked information stored to a computer accessed through the Internet.

The opportunity and difficulty of existing Web applications differ broadly from the small, medium, large, and enterprise-scale system spread crosswise the intranets, Internet and extranets. The applications into the seven categories into informational application such as online newspapers, and online books, interactive application such as registration forms and online games, transactional such as electronic shopping and online banking, workflow application such as inventory management and status monitoring, collaborative work environment application such as online communities

and marketplaces such as chat groups and online auctions and portals which include online intermediaries

2.1.5 Quality criteria for Web-based information systems

Offutt, (2002) views that we evaluate the software by measuring the quality of attributes such as reliability, usability, and maintainability, yet academics often fail to acknowledge that the basic economics behind software product has a strong impact on the development process. The qualities driven by knowledge of software engineering that provides metrics and means to ensure quality assurance. The quality standards for Web application achievement such.

Reliability

It refers to the capacity of the WBIS to work as per user requirements that means it has accuracy and integrity that ensures success in providing service.

Usability

In Web application refer it must be easy for the user to interact with through its challenge to know the system has usability one sign of usability is the loyalty of the system to a user that is to do what the user intends to do.

Security

This is the key quality to avoid any security flaws as the application accessed through the internet. In this regard, security is a key component to ensure data of organization are secure.

Availability

WBIS must be available 24/7 or 365 days as a protection service available through the web browser.

Scalability

WBIS necessity is ably scalable with a number of customers and services as the need arises.

This refers to the ability to be maintainable in such that it is modifiable, flexible and testable.

Time-to-market

The WBIS should be on time in the market as the technological and competition has been rising to ensure that the product reaches the customer at the right time.

Quality is not a different idea in IS management and research. IS experts have continuously been alert of the essential to increasing the IS role such that can respond to both outer and inner strains and express the precarious contests to development and survivability. Quality is a wide concept when it comes to software development. The main goal is to ensure it meets organization specifications to meet standards and procedures of good software.

2.2 ICT in Tanzania

Development in Information and Communications Technologies contribute to changes in various fields of ICT such as content management, computing, telecommunications and broadcasting. For ensure the environment is conducive for changes lead to development in Tanzania particularly areas such as knowledge management, health sector and human resources improvement. The ICT status in Tanzania has a remarkable journey. Tanzania attained remarkable advancement in ICT field regardless of the 1974 Injunction Command on computers and television sets. Through looking the status of ICT in Tanzania ensure

Infrastructure

Tanzania in communication infrastructure in ICT for Tanzania has changed from depending on low volume and costly satellite bandwidth for national and worldwide

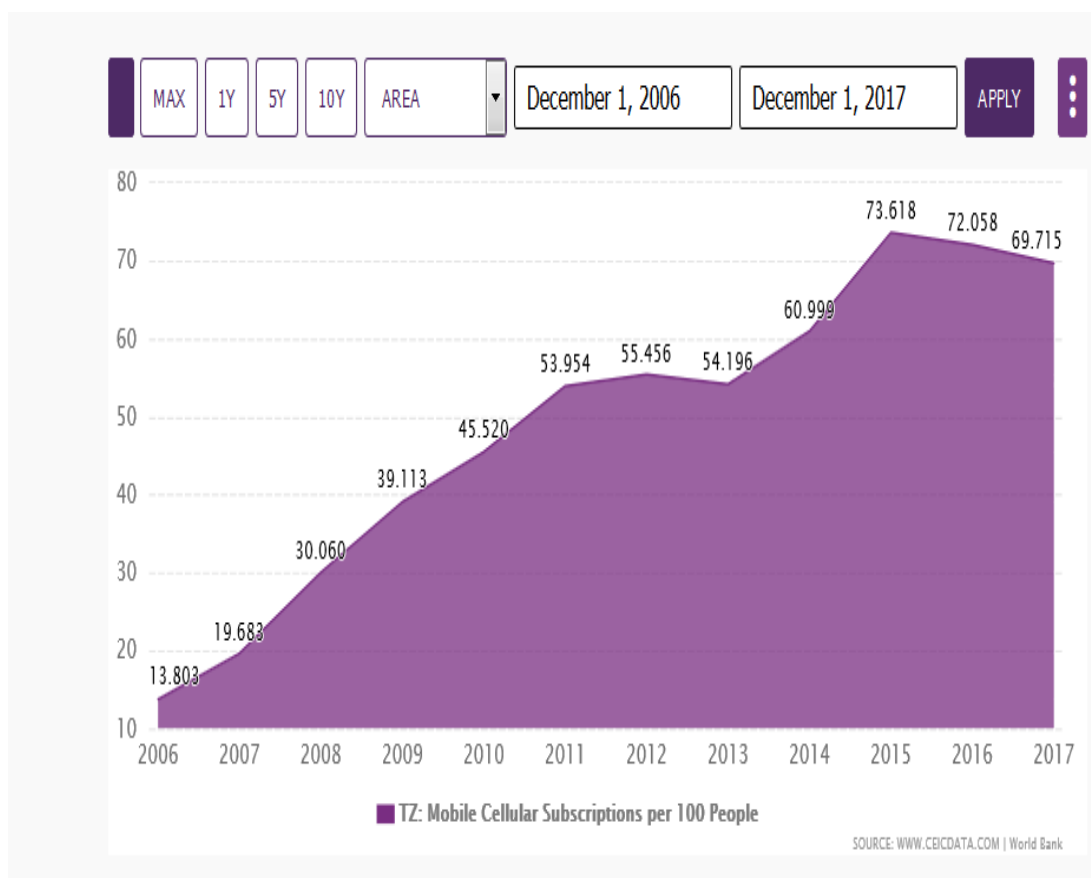
communication. The National ICT Broadband Backbone (NICTBB) provides a new way of communication infrastructure to guarantee the accessibility of trustworthy and inoperable ICT infrastructure and the addition of ICT exposure to underserved zones, respectively. According to National ICT Policy (2016), as of the year 2015, Tanzania has a high capacity broadband connection to the rest of the world through EASSy, with the capacity of 4.72Tbps, SEACOM with the capacity of 1.28 Tbps and coverage of 7,560 Km long NICTBB Optic Fiber Cable with the capacity of 4.8Tbps. The NICTBB and submarine cables have reduced the cost of backhaul transport bandwidth by about 99% compared to the situation in 2009.

The National ICT Broadband Backbone that has covered regional control centres inside the country and delivered the connection to nearby countries such as Rwanda, Kenya, Burundi, Uganda and Zambia. Likewise, the readiness the ICT infrastructure improved by the partnership between public and private telecommunication stakeholders. The placement of six Internet Exchange Points (IXPs) situated in Dar es Salaam, Arusha, Mwanza, Zanzibar, Mbeya and Dodoma and the founding of code top-level domain (ccTLD) was grater accomplishment in ICT status.

The investment leads to a rapid increase in Tanzania tele-density since independence with exponential increase. During the independence, Tanzania mobile user's concentration was very low with 0.00 until 1993. The CEIC, (2016), reported by World Bank Tanzania's Tele-density Mobile was reported at 72.06 Number in Dec 2016. Tele-density mobile data leftovers a lively position in Tanzania. The mobile charges are split into postpaid and prepaid which uses Public Switched Telephone Network (PSTN). This ensures that the availability of different services allowed by ICT. The network infrastructure is available to town areas which are different from rural areas are poor service. Therefore, in communication infrastructure, Tanzania has recorded positive progress when compared to the period of independence.

Figure 2.1 below shows a gradual in increase tele density in Tanzania from 2015 to 2016 rising from 7.52 in 2005 to 72.06 in the year 2016 though during 2017 there is slight drop up to 69.715.

Figure 2.1: Showing rising increase in tale density in Tanzania



(Source: CEIC (2019))

Internet availability

Tanzania has shown exponential growth since 2000. Internet usage though as compare to total population internet penetrations is only 38% up to 2019. Unlike the revealed attainments, utmost people still cannot utilize broadband services. However, there is progress in ensuring the availability of the internet to the citizens. According to National ICT Policy 2016, the use of finite telecommunications and ICT resources including spectrum, internet numbering and country code Top Level Domain (ccTLD) namely dot tz (.tz) which is a national resource in the cyber-space, has been increasing in recent years. For instance, a cumulative number of dot tz domains registration increased from 1,703 in June 2005 to 9,558 in April 2015. With such advancement, the safe servers in 1 million people were 35 % also 2014 Tanzania

ranked position was 120 in the world that shows significant progress between 2014 and 2016.

In all East African Region countries regarding percentage of internet penetration, Kenya leads usages then Rwanda, Uganda, and Tanzania, respectively in internet usage respectively as shown in Table 2.1 Therefore, Internet availability in Tanzania has shown exponential growth since 2000 grows with population growth. Table 2.1 below shows that currently there are about 23,142,960 users, which is 38 % for the entire population. Therefore, internet usage increases with the population.

Table 2. 1: Shows number of internet users and its percentage for the entire population

Country	Population (2019 Est.)	Internet Users 31-Dec-2000	Internet Users 30-June-2019	Penetration (% Population)	Internet Growth % 2000 - 2019	Facebook subscribers 31-Dec-2018
Kenya	52,214,791	200,000	46,870,422	89.8 %	23,335 %	7,000,000
Rwanda	12,794,412	5,000	5,981,638	46.8 %	119,532 %	490,000
Tanzania	60,913,557	115,000	23,142,960	38.0 %	20,024 %	6,100,000
Uganda	45,711,874	40,000	18,502,166	40.5 %	46,155 %	2,600,000

Source: Internet world stats (2020)

Policy, Laws and Monitoring Atmosphere

In the area of policy, law and monitoring atmosphere, Tanzania has shown recognition of ICT. Tanzania started effectively start operation of the National Information and Communication Technology Policy (NICTP), 2003. This brought considerable advancement in the positioning and application of ICT. The policy act as fuel to ensure the progress of ICT in Tanzania. As a result, the Government introduced lawful requirements that permit and distinguish the acceptability of electronic evidence over the adjustments of evidence Act No. 15 of 2007, Act No. 3 of 2011 and other adjustments. Further, the Government passed the Electronic and

Postal Communications Act No. 3 of 2010 and the Universal Communications Service Access Act. No. 11 of 2006 and 2016.

The NICTP was revised in 2016 and came up with NICTP 2016. These Acts aimed at helping communications, end-user protection, and addressing computer-generated safety matters.

Tanzania Communication Regulatory Authority (TCRA) Act No. 12 of 2003 recognized a regulatory authority called TCRA whose mandate is to control the communications services. According to the National ICT policy (2016) following the establishment of TCRA, marked a new era in the communication sector in Tanzania, which led to the introduction of the Converged Licensing Framework (CLF) in 2005. As a result, during 2013, there are 21 network facilities, 17 network services, 91 application services, 85-radio content service and 30 television contented service operators get the license.

Hardware and software

In Tanzania currently, the manufacture of ICT hardware does not exist. However, local agents who import hardware and software. There are no principles controlling the buying and selling of hardware and software, only scarce corporations are innovating applications. All hardware and the majority of software that are used are imported based on user specifications and market price. Generally, Tanzania lacks adequate skilled personnel to backing the ICT business in the area of emerging, selling and supporting hardware and software.

Education System

The NICTP, (2003) aimed at promoting the usage of ICT, where the ICT added vital value to improve actual and efficiently in the education system. Conversely, with the recent state, this advantage is found mainly in institutions located in town. Currently, rare educational organizations largely fused the practice of ICT in the delivery of education. Furthermore, tertiary education has scarce ICT accommodations to encounter the need. Present countless efforts that the regime in making to endorse the

practice of ICT in teaching. Experiences from several countries', which try to apply ICT in learning, would deliver Tanzania with suitable programs and motives for working out the caution for effective putting into practice of ICT in the education system.

2.2.1 Status of ICT in Tanzania Public Service

The Government adopted the first formal NICTP in 2003 with the main themes being to assist Tanzanian Society to achieve the 2025 millennium development goals. Since the deployment of the National ICT policy, the different Government institutions has made significant progress to achieve goals. The resolutions obtained grouped into electronic government and electronic governance. Wangwe, (2010) argues that the Government of Tanzania (GoT) already recognizes the central role of ICT in improving and supporting national socio-economic growth and poverty lessening strategies and programmes.

The push of the nationwide growth agendas like Vision 2025 and Tanzania's National Strategy for Growth and Reduction of Poverty (NSGRP) is clearly on development and poverty decrease. The infrastructure the paper of Infrastructure Development and its Contribution to the Transformation of Tanzania towards Becoming a Middle Income Country by 2025 advocates NICTBB is considered as the ICT roadmap for Tanzania. Phase I and II of the project which has a 7,560 km network has been completed and is operational. The NICTBB connects all regions and districts to national and regional broadband infrastructure as well as undersea (Seacom and Eassy) landing on its shores.

On e-Government Infrastructure: Best Practices and Current Status in Tanzania report (2015) indicates that Tanzania has the aim to have GOVNET is an independent Government Communication Network based on IP/MPLS network technology with goal is to connect all Ministries Departments and Agencies (MDAs), Regional Secretariats (RSs) and Local Government Authorities (LGAs) throughout the country into single scalable, robust, flexible network. Initially, 72 MDAs within Dar es Salaam, Pwani and Dodoma are being connected. Also, 77 LGAs in different areas

will be connected. This indicates in infrastructure public institutions start to be on the right track, which can favor the implementation of Human Resource Report Submission, and Management Information System (HRSMIS) though it lags behind compared to the need due to a large number of Government Institutions being around 400 institutions.

According to the National ICT policy (2016) in 2010 the-Government made a remarkable step of establishing the e-Government Agency (e-GA) which coordinate, oversee and promote e-Government initiatives and enforcement of e-Government standards to Public Institutions. Other steps contain the usage of combined HR and Payroll systems covering about 280,000 public servants and the adoption of an organizational web portal in the Government. Today, various Government Institutions are making progress in changing their operations by installing ICT solutions. Successful utilization of e-government systems includes the National Payment System (NPS), which involves the use of Tanzania Interbank Settlement System (TISS) and, Integrated Financial Management System (IFMS).

Therefore, to ensure further and faster progress in the government a complete and comprehensive e-government strategy must be developed aimed at vital execution. This might improve government efficiency and allow the government to be a role model of ICT, turn out to be an energetic strength for justifiable advancement in the domestic ICT field. The likelihood of electronic governance services rests on upon the presence of actual government facilities through which the organization can interconnect within and with the anticipated recipients.

2.3 Human Resource Management

Armstrong, (2016) defines Human resource management as a strategic, integrated and coherent approach to the employment, development, and well-being of the people working in organizations. Boxall and Purcell, (2016) defines Human resource management as the process through which management builds the workforce and tries to create the human performances that the organization needs. Reilly, (2011) argue that HR needs to reflect more both on its own capacity and on the roles it plays

in organizations. While supporting the organization in achieving its objectives will always be central to the mission of HR, the following roles also matter:

- Doing the basics right (paying people, recruiting efficiently, responding quickly to queries), while adopting a ‘customer mindset’ neither should HR get trapped into a situation where it simply delivers what the customer wants without objection
- Supporting line managers, providing good quality people, data and a provider of ‘workforce intelligence’, which can only be obtained by ‘HR staff getting out more, talking and listening to staff, and not relying only on employee surveys
- HR’s role as a challenger, champion of good people management, guardian of organization values, conscience of the organization and governor

HR career necessities to demonstrate noble HR exercise to ensure healthier public service and good governance. PSC to act as a regulatory authority, therefore, may necessitate any hiring Authority to deliver records that Commission might necessity to accomplish its function. Human resource reports regard public servants terminated their services, confirmation status, promotion, seniority list, training, disciplinary cases, list of public servants with the case in the court of law and OPRAS are submitted to the commission. Through HR Records provided form Public service enhances worth practices that influence absolutely on efficiency.

2.4 Empirical literature review

This part presents reviews from various Human resources management systems and studies done by other researchers that relate to this study.

Martell and Carroll (1995) mentioned two types of HRM: strategic and operative with four characteristics, these are long-term oriented, corporate strategies, organizational performance, and decisions regarding human resource management system. Paauwe

(1994) demonstrate the process of how an organization establishes a human resource management system and how that system affects the organizational performance.

The model indicates that the formation of human resource management system is affected by factors in three dimensions: one is the product, market and technological dimension, second is the organizational, managerial, and cultural dimension and the third is political, cultural, and legal dimension (Jun-Long Hong, 2002). Meanwhile, Jun-Long Hong (2002) noted that HRMS comprises equal employee status; employee recruitment, training and investments; and lastly organizational-capital management.

Therefore human resource management in organizations need to be handled by the information system in collection of data, process, store them and produce information to users. Now days Tanzania governments' activities almost are performed by information management system under e Government agency.

2.4.2 Simple HRM

Simple HRM is an easy-to-use affordable open source Human Resources Management solution and intuitive application done in PHP and hosts MySQL Database. Simple HRM, (2019). Simple HRM provide an open source platform for HR professional. It provides the time supervision which usually runs from server. As the human resource information system the Simple HRM provides features which help the management of employee information such as leave, travel, expense, benefit and reporting. This application also helps in hiring process whereas can check curriculum vitae for job applicant check suitability for hired.

Simple HRM as the human resource software provide major objective that natural and easy use for users which can suite small to medium size organization and provides good reports. The Simple play great role in management of employee information and fail provide statistical summary which can provide quarterly and annually HR status reports.

2.4.3 Waypoint HR

Waypoint HR is the human resource application suitable for both small and medium size institutions which a comprised platform user with different experience level, can interact with it. as the Waypoint HR mainly focused in manage employee information such as personal particulars, holiday, sickness, absence history, employment contract details such as job and salary details, also discipline records, performance appraisals, exit interviews and termination and export reports to PDF .This application schemes an lively support forum as well as an on-demand solution for organizations which not prefer e installation on their a local machine. Despite all the capabilities Waypoint HR did not enable to provide statistical summary which can provide quarterly and annually HR status reports.

2.4.4 Sage HR Africa

Sage HR Africa software focus on Human Resource and payroll services mainly in African continent. This application ensured services to at least 35 countries which provide an general network of business associates that can assist in installation, training and any on-site support needed by organization. Sage HR dedicated to offering robust, innovative and easy-to-use human resource and software applications in order to make business operation much easier. Among the benefit of sage HR is compliance with local authorities payroll system ensure abide with country-specific payroll and HR rules and regulations. This system as the HR and Payroll software is suitable for organization with any size and any type of business. Sage HR Africa focuses much on payroll and fails to show statistical summary which can provide quarterly and annually HR status reports.

2.4.5 Sentrifugo

The Sentrifugo system is considered as among the supreme essential existing systems to be designed as a Human Resources Management system (Sentrifugo, 2019). The sentrifugo provides several services offered. As an open source system programmed in PHP and MySQL on database system. It has countless modules such as the human

resources management, the employee self-service, powerful analytics tools, the performance appraisal, staff backgrounds checks ability, a leave management but not large organization, and a customizable service request.

This system was mainly focused for all sized organization and it has a modernized HR practice, and it is has rich features such as natural and flexible to organize with a simple interface which makes it user friendly interfaces. Sentrifugo with all analytics tools did not provide statistical summary which can provide quarterly and annually HR status reports.

2.4.6 Lawson

Lawson, is a software that monitors the management and administration of all human resource functions and activities contained by the organization, the software manages the employees information's since first appointment to retirement or resignation. It is software which helps handling the accomplishment of duty of all employees within the organization. Human Capital Management Information System (HCMIS) is the product of Lawson which is a Corporation that leases the software and offers the initial operation check to 4000 client locations in industrialized, circulation as well as provision of initial successively services crosswise 40 nations among of them the Government of Tanzania.

Lawson, Version 9 refers to a most recent network based tool which manages the payroll and stores all employees' vital data and other particulars with the perseverance of bring into line all the human resource activities to the system so as to establish the efficiency of the system (Kassim, 2013). Lawson payroll and stores all employees vital data and other particulars with the perseverance of bring into line all the human resource activities to the system so as to establish the efficiency of the system but no HR status reports.

2.5 Research gap

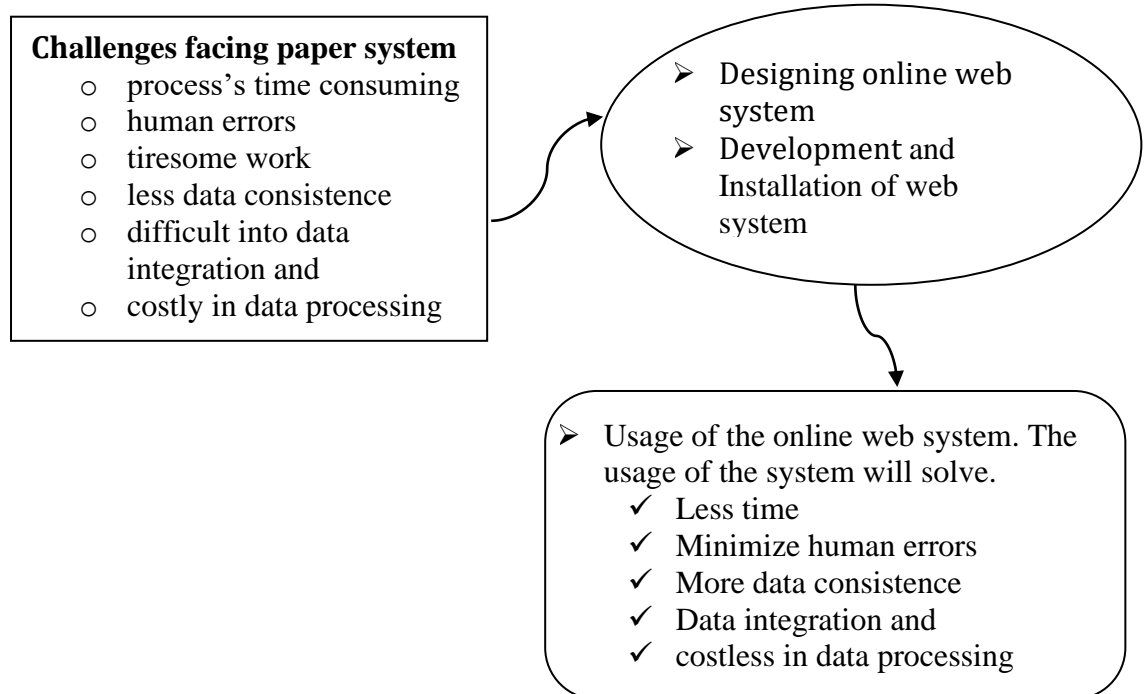
In this study, the focal point has been on review various human resources management systems, the way they work, nature of the data they deal with, storage and various reports generate with the systems. Unfortunately, these reviewed systems did not capture provision of HR status reports that means quarterly and annual also inability of the Systems to provide accurate results of compliance.

The WBHRMIS to be developed will eliminate the main shortcomings of the existing systems. This appears are a gap which needs to be enclosed and thus why this study focused on how to address the challenges facing the current human resource reports management system at PSC. The Reason as to why the researcher needed to analyses the challenges facing the current human resource reports management system at PSC is that, the primary duty of public service commission is primary controller and auditor on Human resource compliance matter over the entire public service.

2.5 Conceptual framework

This study seeks to investigate the challenges facing the paper system currently used by PSC to correct, process and store public servant information. These challenges include process's time consuming, human errors, tiresome work, less data consistence, difficult into data integration and costly in data processing. The challenges form the independent variables while the usage of web-based human resource reporting management information system forms the dependent variable. The independent variables directly influence the usage of web in managing reporting of human resource information in PSC. The interrelationship between variables is as shown in figure 2.2 below.

Figure 2. 2: Shows the conceptual frame work



CHAPTER THREE

METHODOLOGY

3.1 Introduction

Conducting a study involves merging of various segments. Among the major components of research is to describe a topic. The research topic continues to keep an eye on applicable research method or methods. Kothari, (2013) outlines the research methodology as a way of systematically solving research problems. This chapter gives a detailed explanation of a number of methods applied by the researcher in leading this study. It comprises design, population, sampling technique and sample.

3.2 Research design

Kothari, (2004) defines research design as the conceptual structure within which research is conducted; it constitutes the blueprint for collection, measurement and analysis of data. The study used a case study where Welman, Kruger and Huysamen, (2005) argues that the term case study pertains to the fact that a limited number of units of analysis are studied intensively. Regularly case study design permits a researcher to thoroughly, look at the data contained by a particular situation. This study investigated challenges facing HRRSMS at the PO-PSC.

3.3 Approach

In the research, only two categories of research methods which are qualitative and quantitative method. Gill and Johnson, (2010) suggest that, no one best approach to study management research. Consequently, the approach that is most effective for the resolution of a given problem depends on a large number of factors such as including the nature of the problem. This study adopted a qualitative approach using documentation, interviews and focus groups discussion in gathered data then run analyzing them on non-numeric data.

According to Gorman and Clayton, (2005) recently qualitative research has generated much interest in the study of information systems because information systems theories still need a lot of exploratory work to reveal the major concepts and influences associated with its development and use from a socio-human perspective. It assisted the researcher in understanding the adoption of human resource reports web-based submission and management system. Bryman and Bell, (2007), define a Quantitative research approach as a systematic empirical investigation of phenomena and quantitative properties and their relationships. This study used a case study which makes a qualitative approach more suitable as compared to quantitative or mixed approaches.

3.4 Area of the Study

The study area is a zone where the researcher decides to do the research, which means the sample obtained from that zone. This study conducted at PO- PSC.

3.5 Population and target Group

Nachmias C, and Nachmias, D, (1996), describes population as an aggregate of all cases that conform to some designated set of specifications. Also, Mugenda M and Mugenda, G, (1999) define, population as an entire group of individuals, events or objects having a common observable characteristic. With the definitions given, the population of this study included Planning, Monitoring and evaluation staffs and Human Resources Officers with suitable criterion for this study.

3.6 Sampling and sample

3.6.1 Sampling

This is a method used in determining who participate in the study. According to Mugo, (2002) Sampling is the act, process, or technique of selecting a suitable sample or a representative of a population for determining parameters or characteristics of the whole population. In this study, the researcher adopted the non-probability technique particularly purposive. Gorman and Clayton, (2005) argue that the selection of such a

sample depends on the subjective judgment of the researcher. The investigator simply concentrates on those individuals who to his judgment expected to consume the essential information and are eager to provide them. Hereafter, the determination technique was appropriate as the investigator is familiar with the research and sample used.

The samples selected by this technique are tabulated in table 1 above. The researcher used purposive sampling technique to select Human resources officers, from all departments' employees who participated in the study. As the definition indicates that researchers use their judgment, under this study preferred to use this technique in order to select respondents who meet the purposes of the study. Basing on that understanding, the researcher selected Human resources Officers due to their experience of working on receiving and processing human resources reports also because they had the right information on the issue of challenges facing the current human resource reports management system at PSC.

The information acquired from them include their perceptions and attitudes towards Report submission and management system, challenges encounter in current Report submission and management system at PO- PSC, satisfaction with the current system used in Report submission and management system at PO- PSC. Also the challenges encountered in managing reports at PO-PSC, ways solve those challenges, and the technology used currently, the need of Web-based HRRSMS in PSC, benefit from adopting Web-based HRRSMS. Then attains political support between law, the politics and the Web-based HRRSMS, significant factors affecting the adoption of Web-based HRRSMS and benefits of using Web-based HRRSMS at PO-PSC. The researcher believed these groups of employees are in a well position of giving relevant and adequate information since they were familiar with the process of report receiving submission and organization.

Besides that, they are used to challenges facing the current human resource reports management system at PSC .The information from respondents was obtained from them through face-to-face interview.

3.6.2 Sample

The sample goes on a selection of a part of the population used for a study to represent the entire population taken from the population under study. A suitable sample has matching features as those of the whole targeted group. Nachmias C, and Nachmias, D, (1996) argue the fact that a sample is considered to be representative if the analyses made using the researcher’s sampling units produce results similar to those that would have been obtained, had the researcher analyzed the entire population. Furthermore, LoBiondo-Wood and Haber, (1998) describe a sample as a portion or a subset of the research population selected to participate in a study, representing the research population. The sample size in this research was 25 PO-PSC staff. As on table 3.1

Table 3.1: Sample size of the research

Organization	PME Unit	Appeals and complains	HR Standard and Compliance	Total
Presidents’ Office PSC	5	10	10	25
Total	5	10	10	25

3.7 Research Instrument

This includes devices that were proper to gather data before identified selected parts of the identified target group to represent the entire targeted group. The devices comprise questionnaires, tests, interviews, checklists, documentation, literature review and focus group discussions. The researcher used interviews, documentation and focus groups discussion. They participated gather material about the research when other methods engaged it is a simple cover for the flaws identified from those methods. In this study, interviews were taken as the major data collection method so

as to achieve the purpose of the study. It guaranteed that views and possibilities were explained well and details more than captured by the questionnaires.

An interview guide and focus group discussion were prepared and set of questions were set to help explore the inner most required data. I conducted interviews and 2 focus group discussion from 2nd to 8th May 2019. The interview and focus group discussion done with the PSC staff considering their vital role on identified challenges facing the current HRRSMS at PSC, range between 20 minutes to 40 minutes.

The interview and focused group discussion aimed to get the information, which cannot be obtained by the use of questionnaires. I used open – ended format to form the interview questions and the interviews were “semi structured, which enabled me to probe for relevant answers, such questions as: what are users’ perceptions and attitudes towards Report submission and management system at PO-PSC?, what challenges do you encounter in current Report submission and management system at President’s Office PSC?. Other include are you satisfied with the current system used in Report submission and management system at President’s Office PSC? And do you think there is a need of WBHRRSMS in PSC?. The data were recorded on the notebook and interview note was typed for analysis.

The methods above provided qualitative data on identified challenges facing the current HRRSMS at PSC for the case of documentation various PSC documents and Government where reviewed such PSC strategic plan, budget, HR report for 2017 - 2019 to captured data and PSC ICT policy.

3.8 Data Collection

Data collection refers to gathering specific information aimed at proving or refuting some facts. Data collection is important in research as it allows for dissemination of accurate information and development of meaningful programmes Kombo and Tromp, (2006). This study fetches data from both primary and secondary sources which enabled analysis, discussion and validation of the study

3.8.1 Primary Data Collection

The primary data are data which are collected a fresh and for the first time and thus happen to be original in character (Kothari, 2004). They include opinion of the people who are interviewed at PSC. The interview was used as the main tool for data collection. The interview were administered 5 PME officers who prepared the HR quarter and annually report and 20 Human resource officers who responsible for preparation and compilation of HR report from departmental level. Also PSC strategic plan, and budget, HR report for 2017 -2019 to captured data and PSC ICT policy.

3.8.2 Secondary Data Collection

Secondary data is the data that would be collected from different secondary sources and then critically analyzed the collected data with the aim to identify challenges. In this study the researcher conducted document review from academic journals, articles, and books as secondary source.

3.9 Validity and Reliability

According to Kothari, (2004) validity indicates the degree to which an instrument measures what it is supposed to measure. Validity is the degrees to which variances initiate with a measuring instrument reflect true variances amongst those tested. It is more focused with the dimension of the data and the integrity of the conclusion arrived in the research.

Thus validity denotes to the truth, legitimacy and relevancy of data. In this study, validity was considered. The study validity was ensured through the careful selection of research design, selection of the sample size and data collection instruments. The study mostly adopted the design and instruments used by other studies of similar nature so as to ensure validity of the data obtained.

Kothari, (2004) reliability is an estimate of the accuracy and internal consistency of a measurement instrument. In this study data were collected by the only by researcher and this obviously leads to stability matters. The reliability of the data was ensured through sharing the study instruments with other researchers and professional for editing and provision of inputs until arrived to the final document of interview guide. The researcher conducted all interview and moderated the focus groups himself.

3.10 Proposed data analysis

In order to arrive to the realistic decision and make reasonable recommendations gather data is essential to analyzed data subsequently collection. Therefore, according to Sapsford and Jupp, (2006), the aim of data analysis is to transform information or data collected into an answer to the original research question. Data analysis brings order, structure as well as sense to the gathered data. In this research, the similar tools that directed the data get-together process were used for the primary analysis.

Data analysis ensures that collected data are summarized and organized in such a way to produce findings that makes interpretation easier. Welman, Kruger and Huysamen, (2005) suggest that the analysis of information obtained from unstructured interviews and focus groups is based on the interviewer's records. Furthermore, the researcher may record summaries of the contributors' replies with a vision to write a whole description later.

Thus, the researcher did satisfied analysis refers to the analysis of the subjects of a conversation and focus group discussion to recognize the key subjects that arise from the answers given by the respondent. Since this study was done in Qualitative approach, it also used to analyses information's collected during the study. The information's analyzed was collected using interview, focus group, and documentary review. Analysis was conducted in for the sake to discover if the study questions had been responded by the primary data that was acquired from the primary sources.

This process involved transcription of data obtained through face to face interview and data adjustment in order to sort them into expressive in advance moving to further stages such as data coding, classification and tabulation.

The process of data analysis initiated through arrangements of data, which involved dictation of data into text or a written document. These were through listening to audio recorder quite a lot of times and write down responses from individually participant careful. At this moment, the researcher read the written down data to capture the logic of the study findings and noted essential ideas.

Then was followed by preliminary data analysis stage where data exploration was conducted to be familiar with what is in the data exactly, characteristic of the data that includes the amount, totality and truthfulness of the data and possible association among the data elements. This intended at attainment a comprehensive representation of important inclinations and major points to study in detail.

Data coding was also involved in the process of analyzing data for the purpose of accomplishment of the significance of the data given by participants. Coding is a process of classifying the text or other data items in order to form a framework of thematic ideas sentences and phrases with similar idea or meaning were sorted and named using codes. Themes were created by refining the preliminary codes where redundant codes were identified and codes with similar perspectives were grouped into large theme. Data entry convention were also formed to identify each participant involved in the study of such as P1, P2, P3 etc. to represent each person involved.

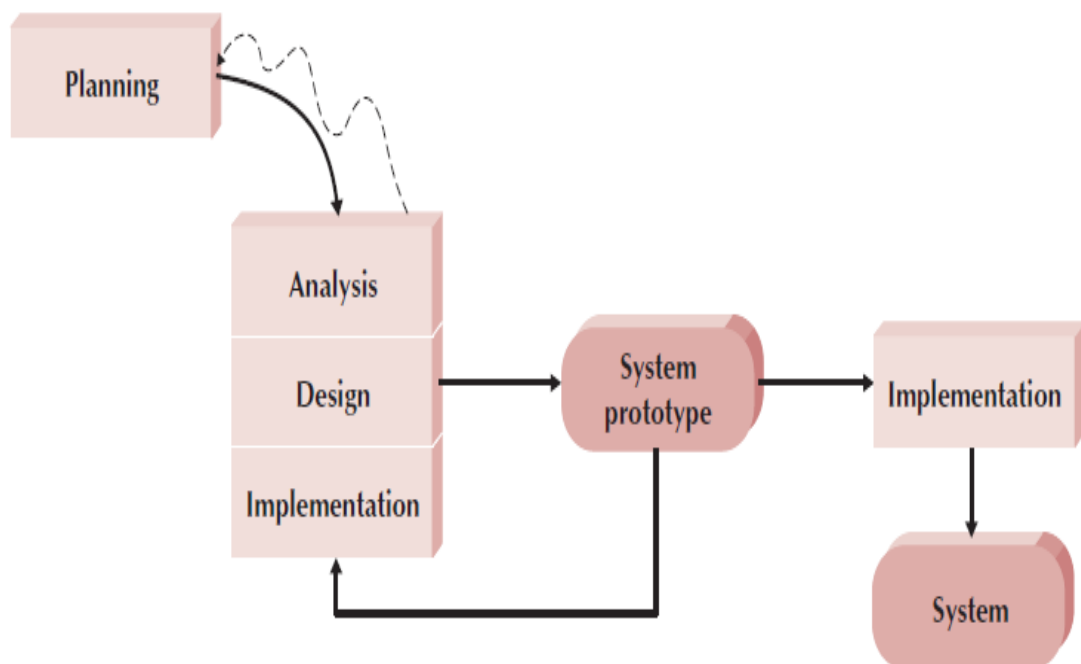
3.11 System Development

The system developed using prototyping methodology. Regarding system development, a prototyping methodology was used. Saxena and Upadhyay, (2016) define a prototype as a system development that does not require freezing the requirements. The system was developed using prototyping methodology. Also Dennis, (2009, page 32) argue that “A prototyping-based methodology performs the

analysis, design, and implementation phases concurrently, and all three phases are performed repeatedly in a cycle until the system is completed” (see figure 3 below). These steps minimize development time. A prototype is an evolutionary methodology that is more useful in developing a new system with a series of steps.

Prototype methodology as an evolutionary approach has greater advantages, which enables the developer to opt over other methodologies. Prototype methodology is useful to create systems that completely changes the way to perform activities but never introduced earlier. If it is difficult to define complete systems requirements at the commencement of a process during development. The approach accommodates organizations ability to use new knowledge, as it will get its solution on numerous repetitions.

Figure 3.1: Shows prototyping methodology



(source: Dennis, (2009, page 32)

This methodology ensures the system is readily accessible for customer testing rapidly. Thus, customers may use a working application in quickly learn based on the released version of the working prototype. This helps in the identification of any problem if exist and solved by the developer. The interactive nature of the approach with the early availability of a working model of the system ensures strong top-down commitment based and the system justification resulting after involvement with an early sample. The likelihood of initial user acceptance of the system developed with the prototype is likely to be higher. Therefore, the developer chooses this approach as a suitable solution

3.12 Ethical Consideration

Fouka Mantzorou, (2011) argue that researchers are professionals hence, research ethics as a branch of applied ethics has well-established rules and guidelines that define their conduct. Research ethics is important in our daily life research endeavors and requires that researchers should protect the dignity of their subjects and publish well the information that is researched.

This often involves specifying how long the interview would take, the potential impact, and the outcomes of the research. The researcher provides respect to the participants during data collection. The researcher must ensure that he/she does not have to put participants at any risk. Participants were told their right to participate willingly and the privileges to pull out as their wish, so not being forced to participate. The researcher assured the participants' privacy is protected before any data is collected. Frankena, (2001) sees ethical consideration as it implies that the benefits of the research findings could be weighed against the costs of acting unethically. However, this depends on the comparison made about the relative good over the evil produced. Therefore, the researcher took care of all ethical cases and complied with these factors such as participate willingly, no mischief to participants, protect individual privacy, recognizing resolution and supporters as well as reporting morals.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF THE FINDING

4.1 Introduction

This chapter presents the findings and analysis of the findings that were found through interviews, focus group and documentations, and make available some clarifications of the findings basing on study's objectives.

The chapter is organized into three areas that are demographic characteristics of the respondents, challenges facing the current Human Resource Reports Submission and Management Information System at PSC, develop a Human Resource Reports Web-based Submission and Management System for PSC. There are various ways of analyzing qualitative data as argued by different writers such as Gill and Johnson, (2002). In this research, content analysis was applied, where concepts and theories were compared to practice. Direct quotations were used to display what participants said about the issue being analyzed, there by supporting the statistical information.

4.2 Participants Profile

The study was taken through consideration of various variables such as duration of service and status of participants. In this study twenty five respondents involved in study were selected from case that PO-PSC.

4.2.1 Category of Participants by duration of service

The participants were required to provide information their work experiences at PSC regard report submission. As a result, the selection of respondents for this study was done with the consideration to their duration of service. This guaranteed the researcher that the participants had valuable information regarding addressing the challenges facing the current human resource reports management system at PSC, challenges facing the current Human Resource Reports Submission and Management Information System at PSC and develop a Human Resource Reports Web-based Submission and Management System at PSC. Actually, the findings in the table

below demonstrate that the largest number of participants had been in the public. Moreover, the study showed that most of the participants had enough work experience in the public service. This indicates that the duration of service for the participants was a significant factor regarding addressing the challenges facing the current human resource reports management system for PSC.

Table 4.1: Demographic Participants by duration of service

Variable	Frequency	Percentage%
Duration of service		
0-5 years	5	20
5-10 years	11	44
10-15 years	5	20
15 years and above	4	16
Total	25	100.0

Source: Field data (2019)

4.2.2 Category of respondents by Status

The study also thought it was important to consider the participant's seniority at PSC as summarized in Table 4.2. The researcher asked the participants to situations their position and professions to understand whether they were familiar addressing the challenges facing the current human resource reports management system at PSC. The findings in Table 4.2 shows that the participants were employees that were HRO-HOD, HROs in other sections and HRO from PME staffs who actually had experience and relevant information concerning employees turnover at PSC.

Table 4.2: Demographic respondents by status

Variable	Frequency	Percentage%
HRO -HOD	4	16
HRO's in other sections	16	64
HRO's from PME	5	20
Total	25	100.0

Source: Field data (2019)

Before providing information on addressing, the challenges facing the current human resource reports management system for, it was necessary to identify challenges facing current HRRSMS at PSC. This was important because challenges facing current HRRSMS at PSC provided a picture to what magnitude the problem is serious at PSC. Documentary review and interview with the HROs who are Heads of Departments/Units, HROs in sections and HRs from PME were used as the tools of collecting information regarding to identify challenges facing current HRRSMS at PSC.

4.3 Identify challenges facing current HRRSMS for PSC.

This objective was prepared in detail to catch available challenges facing current HRRSMS for PSC). The challenges provided would be in good position in addressing the challenges facing the current human resource reports management system for PSC, also a researcher will be in a good situation to make recommendations on the best means of eliminating or minimizing the problem at PSC. Several challenges facing current HRRSMS for PSC were obtained from these participants of the study. The challenges facing HRRSMS at PSC includes shortage of staff, time-consuming, lack of data security and errors as the result of long calculation. Other includes proper generation of the report, management commitment, fund, difficult in monitoring the submission and limited hours of operations.

4.3.1 Shortage of staff

Shortage of human resources is the most popular challenge provided by respondents as one of the challenge in report submission and management. Staffs are highly valuable resource to ensure that the reports are better in submitted and managed. Below are typical explanations on challenges facing current HRRSMS.

Participants, P1,P7 and P19 were quoted saying;

“PSC registry there is a shortage of staff and the 8 staff available are also involved in managing confidential file and open files in their sections, which are a huge task, compare to their number of Record Management Assistants need which are 20 ” (P7 Interviewed on 4th May, 2019)

“PSC registry there is a shortage of staff involved in managing both confidential and open files.” (P1 Interviewed on 4th May, 2019 and P19 Interviewed on 5th May 2019)

“PSC registry there is a few staff involved in handling files.” (P19 Interviewed on 5th May 2019)

This proves that there is shortage of employees in current HRRSMS. Similar response was given by participant P5;

“Officers involved in the management and compilation of report in section reported that among the responsibilities which they supposed to perform are recording, compiling reports from other institutions and prepare a report for the Section which is overwhelming to them” (P5 Interviewed on 5th May, 2019)

The explanation given implies that employee’s feel overwhelming with duties due to shortage of staff as compared to the sensitivity and intensity of the job they do.

Another Participant, P8 added that challenges facing current HRRSMS. He was quoted saying;

“As administrator in the section who supposed to ensure the section has all office equipment’s and staff who involved in preparing the final report but unlike there are few staff which results them to use more time and energy. (P8 Interviewed on 5th May, 2019).

Shortage of staff seemed to be a problem that forces employees uses more time and energy during preparation of report.

Participant P14 said

“PSC has 25 officers with responsibilities to assist the President in the Public Service matters, dispute procedures and control obedience in the Public Service, take and perform on appeals from authorities that are complex and huge tasks, therefore, there is a shortage of staff. ”. (P14 interviewed on 4th May, 2019)

This indicates that PSC have shortage of staff as compared to the duties which they supposed to advise President. Participant, P22 gave similar response that;

“It is complicated for them to prepare the report and submit each quarter for few officers who perform duties”. (P22 interviewed on 6th May, 2019)

The description given indicates that at PO-PSC there is a shortage of staff that supports the Human Resource Reports Submission and Management Information System for PSC. These individuals have extra responsibilities but are required to properly manage these reports submitted takes immediate precedence over other tasks, which affect their overall productivity.

4.3.2 Time-consuming

Among the challenges which PO-PSC facing under the current HRRSMS. As to attain efficiency task must require to accomplished within allocated time not a lot of time lead to delay of report submission as well as compilation and production of quarter and final report. As each quarter PSC required to receive HR reports submitted from at least 400 institutions and the report must be prepared be the commission seat for meeting in every quarter.

During the interview, Participant P9 said;

“The most time is consumed as since file movement takes time also compiled a report from each institutional file until obtain the quarterly report for the department it is tedious and time-consuming as it takes a month to complete report to present before the commission. “(P9 Interviewed on May 6th, 2019)

As per the answers from this participant, it is clear that one challenge facing report submission and management at PSC is more time is consumed in file location than preparing section quarter report which is manual. Similar reason was also given by P17 and P22

Participant, P17 and P22 responded that

“Some employees felt manual compilation consumes more time than anything as section officer”. (P17 interviewed on 6th May, 2019)

“Employees felt manual compilation is too complicated and takes more time than anything as section officer”. (P22 interviewed on 6th May, 2019)

This indicates that compilation of statistics submitted from various institutions takes much time at PSC as the statistics received from institutions to confidential records from there to commission secretary for preview the section registry send to HOD to section officer for compilation so at least 400 files move down the return to secretary on same sequential order then sent to PME for preparation of the entire report through compile three section reports manually. This problem is likely to occur.

Participant, P22 in his response on challenges facing current report submission and management system said;

“The business process for report submission and management currently takes a lot of time from receiving up preparing of report automation is needed”. (P22 interviewed on 6th May, 2019)

The response given indicates that most of time is consumed in submission up to production of report.

Another participant, P18 was quoted saying; *“It is difficult to compile report for HR status which takes a lot of time”* (P18 interviewed on May 6th, 2019)

This is the evident that the current system consumes most of time in report processing.

4.3.3 Lack of data security

Security is most important in data management for successful to retain integrity, confidentiality of valuable information in organization. Unlike Lack of security seems to a big challenge in HRRSMS.

During the interview, Participant P19 was quoted saying:

“File movement involves manual movement and sometimes remains in office tables or stay in racks where there is the possibility of removal of documents without traceability. In this regard, sabotage is very easy under the manual system.” (P19 Interviewed on May 5th, 2019)

Basing on the explanation above, one can see that poor security characterized by lack of enough control are among the reasons that lack of surety being among of the challenges facing current report submission and management system at PSC.

Another participant, P23 said that lack of security is a problem at PSC. He said;

“In the current system, staff can read documents any time since files are placed in their office mates hence confidentiality cannot be guaranteed at 100%.” (P 23 Interviewed on May 8th, 2019)

Basing on the explanation above, lack of confidentiality shows that lack of security being among of the challenges facing current report submission and management system at PSC.

Another participant, P24 said that lack of security is a problem at PSC. He said;

“The manual system has no proper guaranteed security as files and reports moves to various staff and even stayed on staff table even weeks.” (P 24 Interviewed on May 8th, 2019)

Basing on the explanation above, since no proper security, it shows that lack of security being among of the challenges facing current report submission and management system at PSC.

As from the views of these participants, lack of security at the Public Service Commission have been identified as the challenge that facing current report submission and management system. According to the explanation provided by one of the participants, lack of security at PSC is associated with the challenges that hinder reporting production and its value. Thus the manual system seems can be compromised in terms of security which indicates it is not secure and data inconsistency.

4.3.4 Error occurs during long calculations and proper generation of report

PSC has a burden to ensure that all Public institutions comply with the Rules and Regulations Governing Public Service. Among the duty is HR report submission from all public institutions which can provide status of compliance and advise them accordingly. To ensure this duty done efficiently must involve receiving, compilation and processing up to generation of reports. Thus, all these tasks needed employees to undertake them at the required level. During the interview, Participant P5 was quoted saying;

“Calculations of submitted reports that involve 180 LGA and around 246 MDA that requires the officer to summing entries from all government institutes. Manual calculation and generation of the report are slow, tedious in processing very prone to errors”. (P5 interviewed on 3rd May, 2019)

The participant’s explanation shows PSC level of computations done in manual for Human Resources reports is tedious job with high risk of errors. This fact show Mistakes occurring during long calculations and proper generation of report as challenge facing current report submission and management system.

Furthermore, another Participant, P3 interviewed especially on the number of organizations to be inspected by the Commission said;

“In total we are require all 426 Public Organizations including Ministries, Independent Departments, Local government Authorities, Executive Agencies and Public Institutions every year to provide HR reports. All organizations reports done in manual compilation done

each organization reports sum up combine to next until the last institution.” (P3 interviewed on 3rd May, 2019).

HR reports submitted need to be compiled that involves summing and generation of graphs the job has great chance to introduce error in manual system. Therefore, show Mistakes occurring during long calculations and proper generation of report as challenge facing current report submission and management system.

Also Participant, P1 when interviewed on challenges facing current report submission and management system said;

“Manual compilation and processing of reports should be done cautiously otherwise, errors can be made.” (P1 interviewed on 2nd May, 2019)

Therefore, the current system has likely arisen in the mistake that occurring due to long calculations during the process of report generation.

4.3.5 Difficult in monitoring the submission

Preparations of Human Resources reports status are required to base on submitted HR reports once submitted then processed and let to the concerned authorities within each quarter after exercise receiving, compilation and production of reports. This becomes possible only when there were proper monitoring of the submission reports in order to doing that job as per timeline. The Participant P24 interviewed on the challenges facing current system in the Commission responded;

“The current system is hard to monitor submission and management because submission is done via several channels such as poster, e-mail and physical submission.” (P24 interviewed on 6th May, 2019)

The participant’s explanation shows at PSC the manual system of report submission in PSC makes it difficult to do the monitoring.

Similar response was provided by Participant P20 who was quoted saying;

“This is difficult to know the cause of the delay or missing reports since reporting come through various channel and registry”. (P20 interviewed on 2nd May, 2019)

This means that it’s difficult to monitoring the submission that prevent PSC from accomplishing its task on time which may in turn as among challenges facing current system of the Commission’s image to the public.

Response was provided by Participant P 25who was quoted saying;

“It is difficult to obtain an actual number of Government institutes that do not abide with the needful of HR report submission to the PSC”. (P25 interviewed on 7th May, 2019)

This is also a challenge facing current HRRSMS.

4.3.6 Limited hours of operation.

In order to accomplish the job public servant need time is among the resource needed. The current report submission and management system found among the challenges which facing is limited working hours. The Participant P26 interviewed on the challenges facing current system in the Commission responded;

*“Unless PSC offices provide service24*7, there is a restricted space for people to submit reports. This challenge for reporting, as they should contact organizations during normal operating hours” (P11 interviewed on 7th May, 2019)*

Documentary review was also undertaken to determine limed work hours as related to challenges facing current system. Through documentary review on standing order , found that according to Reg. f (1) of Standing Order (2009) Government office, intended to be open for operation all working days started 7.30 a.m. in the morning up to 3.30 p.m. Therefore, close by limited of 8 working hours, which poses a big challenge in the report submission system.

4.3.7 Fund

Money is among of the resource needed for successful execution of the activity. As for current report submission and management system found among the challenges which facing is fund is scarce resource. The Participant P27 interviewed on the challenges facing current system in the Commission responded;

“All the time they are allocated funds on the budget but the flow of income was not in their side because of lack of funds for purchase tools such as computers, scanners and UPS.” (P12 interviewed on 7th May, 2019)

In addition, fund seems to be challenge investment in terms of money and training for staff to achieve goals and benefits from the system.

4.3.8 Management commitment

Management commitment in any activity can be useful weapons for the function ability of the activity to attain goals. It seems the current report submission and management system lack of adequate management commitment one of the challenges.

During the interview, Participant P9 said;

“One of my colleagues left the commission because he was in he tired to compile the quarter reports made him to collide with his head of department as he put pressure on him.”. (P9 Interviewed on May 6th, 2019)

As per the answers from this participant, it is clear that one of the can challenge is management commitment, as staff not feel supported by management as compare to the weight of the job. Similar reason was also given by P17 and P22

Participant, P17 responded,

“Employees felt not valued and disrespected by their immediate supervisor as what they need is job to be done regardless lack of equipment’s like computers, file covers”. (P17 interviewed on 6th May, 2019)

This indicates that an environment where employees feel disrespected is not also can be challenge in current way of done submission and management of HR reports.

Participant, P22 in his response as to why he decided to quit said;

“My employer was not ready to continue working with me because I was constantly asking for working tools to ensure compilation goes smooth, and he felt I was disrespecting him”.(P22 interviewed on 6th May, 2019)

The response given indicates that the working environment is not friendly. There is no good relationship from leaders to their subordinates.

Another participant, P18 was quoted saying; *“management does not take care of the resources needed to ensure working environment is in good place.”* (P18 Interviewed on May 6th, 2019)

This is the evident that when employees feel management not take care of the needed resource such as papers, computers, printers and pen.

From interview indicated lack of top management commitment in need of which is the challenge to the current system.

4.3.9 The trends of report submission at Public Service Commission (PSC)

At Commission, it was necessary to look at the trends of Public Institutions to submit HR reports at the Public Service Commission (PSC). This was important because trends of reports submission at PSC provided a picture to what magnitude the problem is serious at PSC. Documentary review and interview with the HRO-HOD, HROs in other sections and HRO from PME staffs were used as the tools of collecting information regarding to trends of report submission at PSC for two consecutive years, that is the year 2017/18 and 2018/2019.

Participant P1 gave her experience on the problem of HR report Submission at PSC.

“We have been experiencing the problem low rate of report submission as time goes. (P1 interviewed on May 2nd, 2019)

Those explanations imply that magnitude of report submission at PSC is low rate despite being one functions of the Commission.

Participant P2 shared his experience on HR report Submission by expressing;

“I know we had critical condition during the year 2015/16 as reporting was dropped from the commission”. (P2 Interviewed on May 2nd, 2019)

This indicates that the rate report submission decreases every year. Similar explanation was provided by Participant P3 who said;

“Since I joined PSC I have noted that there is a problem of corning report submission though a lot of effort done but still it is challenge.”(P 3 Interviewed on April 29th, 2019)

This proves that PSC is facing the problem of employee’s on report submission have to be taken to rescue the situation.

Participant P4 explained how he realized that the organization is facing problem on reporting HR status;

“.” In my experience I have witnessed low rate submission of HR status reports from Government agency in every year” (P4 interviewed on May 3rd, 2019)

The explanation shows how big the problem is because of low rate from Agency every year. Similar notion was given by Participant P5 who was quoted saying;

“Though I cannot tell magnitude of the problem is but what I can say is that the problem real exists. This is because few institutions voluntarily submitted reports”. (P5 interviewed on May 3rd, 2019)

The explanations given shows that reporting to PSC is a serious problem as few Institutions responded voluntary for a long period as it is expected.

In addition to what has been said by the participants who were interviewed, the researcher reviewed documents such as Annual PSC Reports for the year 2017/18 – and 2018/19. The researcher noted that those documents provide real picture of the trends of HR reports submission at PSC.

Table 4.3: Poor Trends of HR reports submission at PSC 2017/18

S/N.	TYPES	Existing Entities	Entities Submitted HR reports	Entities Not Submitted HR reports	Rate of Compliance (%)
1.	Ministry	19	16	3	84
2.	Regional Secretariat	26	15	9	58
3.	Government Agency	37	26	11	70
4.	Independent Department	21	14	7	67
5.	Public Institution	143	6	137	4
6.	Local Government Authority	185	110	75	59
TOTAL		431	187	242	43

Source: Public Sevirce Commission, 2017/2018

Table 4. 4: Trends of HR reports submission at PSC year 2018/19.

Na.	Types	Existing Entities	Entities Submitted HR reports	Entities Not Submitted HR reports	Rate of Compliance (%)
1.	Ministry	26	10	16	38.5
2.	Regional Secretariat	26	15	11	57.7
3.	Government Agency	37	13	24	35.1
4.	Independent Department	22	8	14	36.4
5.	Public Institution	169	5	164	3.0
6.	Local Government Authority	186	74	112	39.2
TOTAL		466	125	341	27

Source: Public Sevirce Commission, 2018/2019

This section offers a discussion of all research findings found during data collection and presented. The discussion is more based on each objective of the study as the relationship will be made between the findings obtained and the objectives prepared. Findings from the study show that participants were aware with existence of challenges facing current HRRSMS at PSC and they have experienced problems associated with the challenges. One of the objectives of this study was to identify challenges facing current HRRSMS at PSC which eased the study to derive the recommendations on ways for addressing the challenges facing the current human

resource reports management system at PSC. Questions were asked to the Human resources Officers as to what are challenges facing current HRRSMS at PSC

According to the study findings the reasons provided were shortage of staff time-consuming, , lack of data security, mistakes occurring during long calculations and proper generation of report, difficult in monitoring the submission, limited hours of operation, fund, management commitment, poor trends of HR reports submission at PSC. The study found that shortage of staff was one of the challenges facing current report submission and management system at PSC. This proves that PSC lack sufficient employees which lead low productivity as compare to the workload on number of HR reports needed to be processed in each quarter and annual.

Also the study findings showed that time-consuming as another challenge facing report submission and management system. It was found that the duty consume a lot of time from receiving, analyzing and processing data as it need daily basis to keep on track to ensure the results are in quality.

Moreover, the study found that lack of data security was among the challenges that facing current report submission and management system. The current system has allot of vulnerability which can compromise security of data. As one can temper with document in manual system a loss credibility of the report and integrity of institution.

Another challenge facing current report submission system which was found by this study was mistakes occurring during long calculations and proper generation of report. This study showed that mistakes occurring during long calculations and proper generation of report at the Public Service Commission were the big challenges. As most of HRO during manual compilation which introduce errors and mislead generated report.

Moreover, the study found that difficult in monitoring the submission. The decision of the PSC to stay with multiple submission channels with different located registry. As the results delay preparations of Human Resources reports status since once submitted it requires processed and let to the concerned authorities. This challenge when there has no proper monitoring of the submission reports in order to doing that job as per timeline.

Limited hours of operation is another challenge, which the study found as the Government operation time was to be open 8 working hours, which poses a big challenge in the report submission system. As more time need to allow submission and processing therefore the study found to pose as challenges. This proves that PSC limited hours for working which lead low productivity as compare to the workload on number of HR reports needed to be processed in each quarter and annual.

The study found that Fund as the challenge facing current report submission and management system. The financial constrains given as a challenge for training employees is not justifiable as most officer complains about tools such as file, pens and office equipment's which made the difficult to done compilation of the reports so fund is the real threat.

The study found that management not been given much attention by the Management of PSC. Management commitment given as a challenge at PSC for report submission and management which noted that management and other staff have gap which hinder employees to enable them perform their duties at the required standard . These in most cases hinder the organization from achieving its objectives.

Lastly the study found that poor trends of HR reports submission at PSC. The researcher was found through reviewed documents such as Annual PSC Reports for the year 2017/18 –and 2018/19. The researcher found poor reporting on HR reports which pose due to most of organization fail to respond.

The researcher proposed to develop Web-based Submission and Management Information System at PSC that will cure the challenges and increase the efficiency of information support. Web-based Human Resources Reports Submission and Management System (WBHRRSMS) is a software solution which can perform tasks, which are habitually performed manually by professionals in human resources management, freeing up staff time for more important and profitable tasks while minimizing errors and improving business processes. Therefore the research moved on objective two on how to development of WBHRRSMS at PSC.

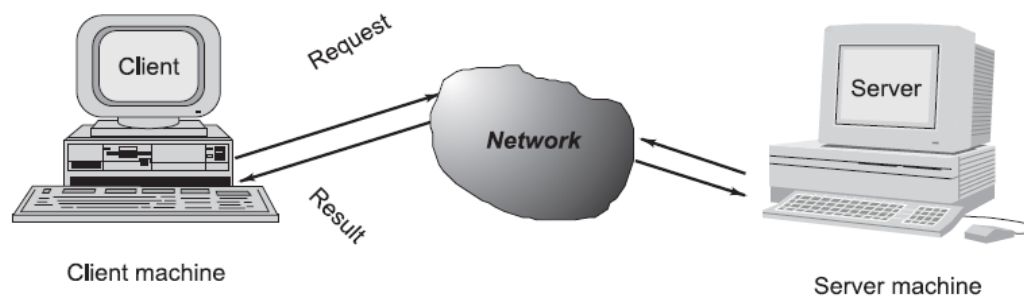
4.4 Development of Web-Based Human Resource Reporting Management Information System for PSC.

Human Resource Reports Submission and Management Information Systems is a subset of MIS, which supports complex HR practices and status in the submission, and management of human resource reports. As a web-based information system that is hosted on a computer server which primarily includes a database and application. The database is placed on PSC Local Area Network (LAN) and is dedicated to Human Resource Reports Web-based Submission and Management Information System for data storage and retrieval. The Application Server hosted Human Resource Reports Web-based Submission and Management Information System software applications and files to enable online access by network clients over a LAN and Wide Area Network (WAN).

WBHRMIS is built depend on the client/server is simple, and it works well with web-based technology. This architecture monopolizes in many applications in the ICT field. The client-server architecture is particularly compatible intended for the LAN-based single Server establishments. That indicated they account for around most of the systems to days are client/server installations. In the client-server architecture, clients attend like the customers in an in the architecture whereby demands to provide service to users to accomplish their responsibilities. Likewise, the server provides results to the clients that play the part of the manufacturer, facility needs for customers through the network as shown in figure 4.1. Therefore, Government Institutions do not need extra cost on ICT infrastructure because they do not need to

handle the system themselves rather than using it as the service from the server machine.

Figure 4.1: Client server architecture



The WBHRMIS is a thin client where the client stores nothing in the device. All presentation logic and data logic are hosted in PSC servers and backup at e-government Agency (eGA). Clients from all Public Institutions will access the system via the internet to submit HR reports. The service provider will handle security, backup and upgrades. Institutions, therefore, submit their report via the internet provided by the Government in their respective local area network (LAN).

The system developed using various technologies that are Hypertext Markup Language (HTML), Bootstrap, Hypertext Pre-processor (PHP) and MySQL: HTML is the finest for a web application like mobile platforms. HTML is calm to add various data type, justify bounds, ensure uniform performance across different screen sizes and work seamlessly across browsers. HTML 5 is affordable in terms of cost and common amongst developers.

For the case Bootstrap is for the front end, Bootstrap is a framework developed to support creating flexible web applications. It is appropriate for interface fast development. It works with most major browsers and fast loading responsive pages. Bootstrap comprises templates for HTML and CSS designing modules of the interface that focus on simplifying web development.

Developer choose bootstrap after considering the benefits that offered from Bootstrap during development such as

- i. Bootstrap has a greater advantage that speeds up development. The developer of web-based application can ensure promptly development through using it
- ii. Responsiveness. It enables hide and show particular section content for given screen size based on the responsive utility classes feature.
- iii. Bootstrap ensures consistency without depending on the developer, who is working on the application.
- iv. Customization. It enables the developer to design tailor web-based application. It assures customization of the application based on the specification.
- v. Support. Bootstrap has a large support community that helps the faster, easier and better development.

PHP as the all-purpose scripting language, which mainly used to make dynamic interactive web pages can be embedded with HTML source document. Developer considers these advantageous factors for choosing PHP over other languages for this web-based information system development. PHP runs in various server platform that includes Windows as well as Unix-based operating system. As a language, it has a wide base therefore, programming experience can be largely available.

In development, the developer opted MySQL as the choice of a database that can be compatible with PHP. MySQL employed for Back end as it is purposely designed and optimized for Web applications. MySQL ensures the solution for a suitable platform for web application developers and the default database for web-based applications. The developer opted MySQL due to the following factors

- i. Cost. The developer chooses MySQL for applications because the use of MySQL database ensures cost saving as it requires architectures that utilize reasonable cost hardware while achieving very high levels of, availability performance as well as scalability.
- ii. Performance. MySQL responds rapidly to users inquiries. Therefore, MySQL database ensures Web-based applications provide high performance for both read queries and write operations. It quickly adapts with the growing and expanding user's workload, without interruption of service.
- iii. Reliability. The Web-based application need to available in 24/7 any downtime can hinder service. Therefore, MySQL ensures the Web-based application high code quality, fault tolerance, rapid restart and restore and dynamic.
- iv. Cross-platform availability. The MySQL potential choice to developers. It ensures the ability to run MySQL on nearly all platforms also to write applications in java, PHP and python as well as various operating systems such as Ubuntu and Windows OS.
- v. Security. MySQL provides security capabilities that ensure the protection of data. Also can provide privileges framework, which ensure users view the data they are supposed to view and encryption and decryption data.

Users of the includes institution officers Human Resources Officer (HRO) from public Institutions, section officer, approver, Planning Monitoring and Evaluation (PME) officer and administrator from PSC staff. The system offers exceptional functionality to each user.

It clear based on the analysis that adoption WBHRMISh as much more value than remaining with the existing report submission and management system. However, there are challenges facing WBHRMIS at PSC. It is currently not adopted at the commission currently is not at all, notwithstanding of Government investments and determinations made ensure its success.

This objective was introduced in order to explain ways in which the technical solution was developed. The researcher provided opinion based on documentation review on how to develop a Human Resource Reports Web-based Submission and Management Information System at PSC. Introduction Web based Human resource report submission and management information system was as the measures to cure challenges facing current report submission and management at PSC.

CHAPTER FIVE

TECHNICAL SOLUTION

5.1 Introduction

This chapter pursues to address the understanding of the WBHRMIS based on steps of methodology used in the system development. The prototype methodology used to develop a technical solution which was used to encounter the challenges facing Report submission and management system at PO-PSC. The current system is paper based manual with a lot of challenges such as shortage of staff, time-consuming, lack of data security, mistakes occurring during long calculations and proper generation of report, difficult in monitoring the submission, limited hours of operation, fund, management commitment and poor trends of HR reports submission at PSC.

Thus the technical solution for report submission and management system at PO-PSC will be web based system instead of manual system, the web based system will solve the challenges of current system which is paper based. In addition, security will be enhanced through use of username and password to access data, therefore data confidentiality, integrity and authenticity will be ensured also the system will be available 24*7 for the employees to enter data and be able to generate the required reports online and any delays could be easily tracked.

5.2 System Planning

This subsection covers issues relating to the planning of system development which involves the initiation and management of the entire project. According to Denis (2015), the planning phase is the fundamental process of understanding why an information system should be built and determining how the project team will go about building it. The system at the initiation stage involves cost-benefit analysis in which feasibility analysis that includes technical feasibility to see the capability of building system through looking at the existing computing environment, which can support the development of the proposed system.

Economic feasibility aim at viewing opportunity, worth and value of the system toward business which is also referred to as cost/benefit analysis. It compares the cost to be incurred and benefit which will be obtained to make the decisions on approval of the system or make changes on the proposed system. Organization feasibility looks at the ability of the system to be used in the organization. Issues about organization feasibility analysis were answered during fieldwork which revealed that PSC is able to manage and interact with the WBHRRSMIS. Likewise, most of the Government Institutions are able to interact with the WBHRMIS as they have Local Area Network (LAN) and other necessary equipment.

Current NICTBB has a 7,560 km network finished and is equipped connecting countrywide with broadband communications in the sea corridor on its coast. This indicates that infrastructure in public institutions has begun to be on the right track which favors implementation. The response obtained in this case enabled the researcher to conclude that the WBHRMIS will be usable.

Also, the system is economically feasible because it provides opportunity it is worth and has value toward business. Respondents argued that “the system will bring value because there will be enough time to accomplish submission and preparation of reports, with minimum time, more secure, error free or within the acceptable error range. The system intended to bring value to PSC because it is hosted at PSC servers, which are readily available and accessible at any time within the entire Government network (GOVNET) and ensure PSC with proper control of the system with minimum cost. For the case of technical feasibility all technologies required to develop and run the system are available. They include HTML, JavaScript, Bootstrap, MySQL and PHP.

5.3 System Analysis

The purpose of this part is to construct a logical representation of the future solution. The analysis phase answers the questions of who will use the system, what will the system do, and where and when it will be used (Dennis, 2015). At this stage aim, the

investigated existing system and identified room for improvements to ensure the operational objective is attained. This stage involved the following major steps:

1. An analysis approach was established toward monitor the developer's efforts. The strategy comprises learning of the existing solution and knowing its troubles and projected means to blueprint a new technical solution system which is to be the system. This part has been covered from chapter one up chapter five.
2. Requirements gathering. In gathering must engage tools and techniques like interviews, questionnaires and surveys, focus groups, facilitated workshops, observation and prototype. This step involved collecting and documenting information from various stakeholders using tools and techniques for collecting requirements. The analysis of gathered information drives developers and team in the establishment of an idea for an innovative solution. The technical solution idea provides the foundation to develop an analysis model that shows the way the company will function in a newly developed solution.

5.3.1 Requirements determination

According to Denis, (2015) requirements determination is performed to transform the system requests high-level statement of business requirements into a more detailed, precise list of what the new system must do to provide the needed value to the business. Therefore, to be precise must be supported, confirmed and supported with activities involved in the system analysis stage. A requirement is a provision of the brief description regarding the aim the solution must accomplish as well as the required characteristics.

The process of requirements gathering is categorized into two groups which were functional and nonfunctional requirements. A functional requirement refers to the functionality and process in which the system and/or one of its subsystems have to accomplish such as create institutional report compile reports and print reports. Other

functional requirements in WBHRMIS shown in Table 6.1 But nonfunctional requirements refer to non-related to the functionality of the system and its subsystems. This includes performance, usability, operational, security; cultural and political (Table 6.2). Also in this part of requirement, user characteristics are identified as five types of users that interact with the system. These include system administrators for the Web-based Human Resource Report Submission and Management Information System. Of these, four types of users have different roles so each of will have their own functionality or roles as sum up in Table 6.3.

Table 5. 1: Functional requirements in Web-based Human Resource Reports Submission and Management Information System

Actor	Functional Requirements	Description
Adminis trator	<ul style="list-style-type: none"> • User management • Region management • Section management • Institution type management • Institution management • Reporting area management • Reporting planning management • Reporting year management • Form management • View various list 	<ul style="list-style-type: none"> • The system administrator is the one who monitors all system activities such as to registration of new users, section, region, reporting year, reporting areas, institution type and institutions to the system. • The system administrator is one responsible with updating users profile, sections, region, institution type, reporting year, reporting areas, and institutions • System Administrator perform System setup and configuration • The system administrator has to Create form, reporting plan and activate Delete new year and quarter
PME Offer	<ul style="list-style-type: none"> • Generate report Template • Download report template • Get summary of report submission by Institutions 	<ul style="list-style-type: none"> • PME Officer has to create, compile, update, view status, report request • The PME Officer has to Generate Report Template • The PME Officer has to get summary of institution submitted and not submitted report • PME Officer has to download report request
Section Officer	<ul style="list-style-type: none"> • Compile report • View report status • Preview report • Get summary of report submission by Institutions 	<ul style="list-style-type: none"> • HRO-Section has to compile, update, view status, verify report request. • The Section Officer has to get summary of institution submitted and not submitted report • The section offer has to submit compiled report
Instituti on Officer	<ul style="list-style-type: none"> • Create report • Edit report • Submit 	<ul style="list-style-type: none"> • Institutional officer has to create, update, view status, verify report request for the usage reports from the system whereby the may require to create the report of each quarter.
Approve r	<ul style="list-style-type: none"> • Approve • View report status • Verify report 	<ul style="list-style-type: none"> • Approver has to approve submission of report • Approver has to view report status • Approver has to verify report • Approver has to approve report

Table 5. 2: Non-functional requirements of Web-based Human Resource Reports Submission and Management Information System

Nonfunctional Requirements	Explanations
Operability	<ul style="list-style-type: none"> The system operates in Windows and Linux operating system environment. The system shall interface with SQL database The system is able to connect to printers. The system is able to support any Web browser.
Performance	<ul style="list-style-type: none"> The system is capable to download report template in at least 10 seconds. The system is capable to submit report for at most 30 seconds
Security Requirements	<ul style="list-style-type: none"> Only System administrator is able delete disable other users. Only a registrar’s user can access the system. Each user has unique functionality and privileges The system shall provide access to only registered users.
Cultural and Political Requirements	<ul style="list-style-type: none"> The system shall comply with Government laws, regulation, guidelines and procedures as well as value, mission ad vision of PO-PSC

Table 5. 3: System User Classes and their Characteristics

User Classes	Characteristics
System Administrator	<ul style="list-style-type: none"> User Management Data Management (Set/Define data/ information to be used in the system. Information e.g. Region, sections, Institutions, areas of inspection etc.) Create/Add reporting forms Create/Add reporting plans
Institution Officer	<ul style="list-style-type: none"> Fill in field information in the system using predetermined forms Preview report from the system Submit reports from the system
Approver	<ul style="list-style-type: none"> Preview forms Preview Reports Approve Reports Submit Reports
Section Officer	<ul style="list-style-type: none"> Report management Compile institutions reports Preview report generated from the system
PME officer	<ul style="list-style-type: none"> Manage the annual report Generate and download report templates Compile sectional reports Preview report from the system

5.3.2 Functional Modelling

Functional modeling describes business processes and the interaction of an information system with its environment (Denis, 2009). There are two models in the functionality of the system that may be presented; these use case diagrams and activities diagrams portray the present system and the anticipated technical solution built. In addition, together are logical representations that depict the actions signifying how to accomplish them. In this system, the functional models are elaborated in the next paragraphs.

Use-cases diagrams

The WBHRMIS use-cases diagrams which were drawn after obtaining all requirement. The diagrams encourage users to deliver additional high-level requirements. Established consider on the explanation of the identified crisis, the technical solution created for managing HR reports. Another concern is to the recognition of the main actors and business processes provided by the technical solution. Requirements of functionality illustrate the major actors as institution officer, section officer, PME officer, approver and administrators, whereas the primary business processes are register, user management, region management, institution type management, section management, institution management, reporting year management, reporting year management, reporting area management, form management, report plan management, and reporting management. After identifying actors and major use cases, diagram was draw representing an overview of WBHRMIS (figure 6.1- 6.5).

This section also provides more detailed information on the system requirements that specify all the fundamental actions of the WBHRRSMIS.

Assumptions and Dependencies

Main assumptions undertaken in the requirement documentation is that customer to get right of entry to technical solution authentication was through the login process. The use cases, workflows and descriptions do not include login process as an

assumption that system user has already accessed the system and proceeds with other operations. The final product/Report for the WBHRMIS depends on the Template Report, which has been embedded within the system.

The term User/Administrator used in illustrations, use cases, workflows and description can belong to any group/role in the actual system, groups/roles will be applied by system administrators to create boundaries in using the system

Administrator use case

This use case have features which allows WBHRMIS administrator to deal with ten modules which are user, region, institution type, institution, section, reporting year, reporting area, report plan, form management and view list of users or regions or institutions.

Figure 5. 1: System Administrator Use Case

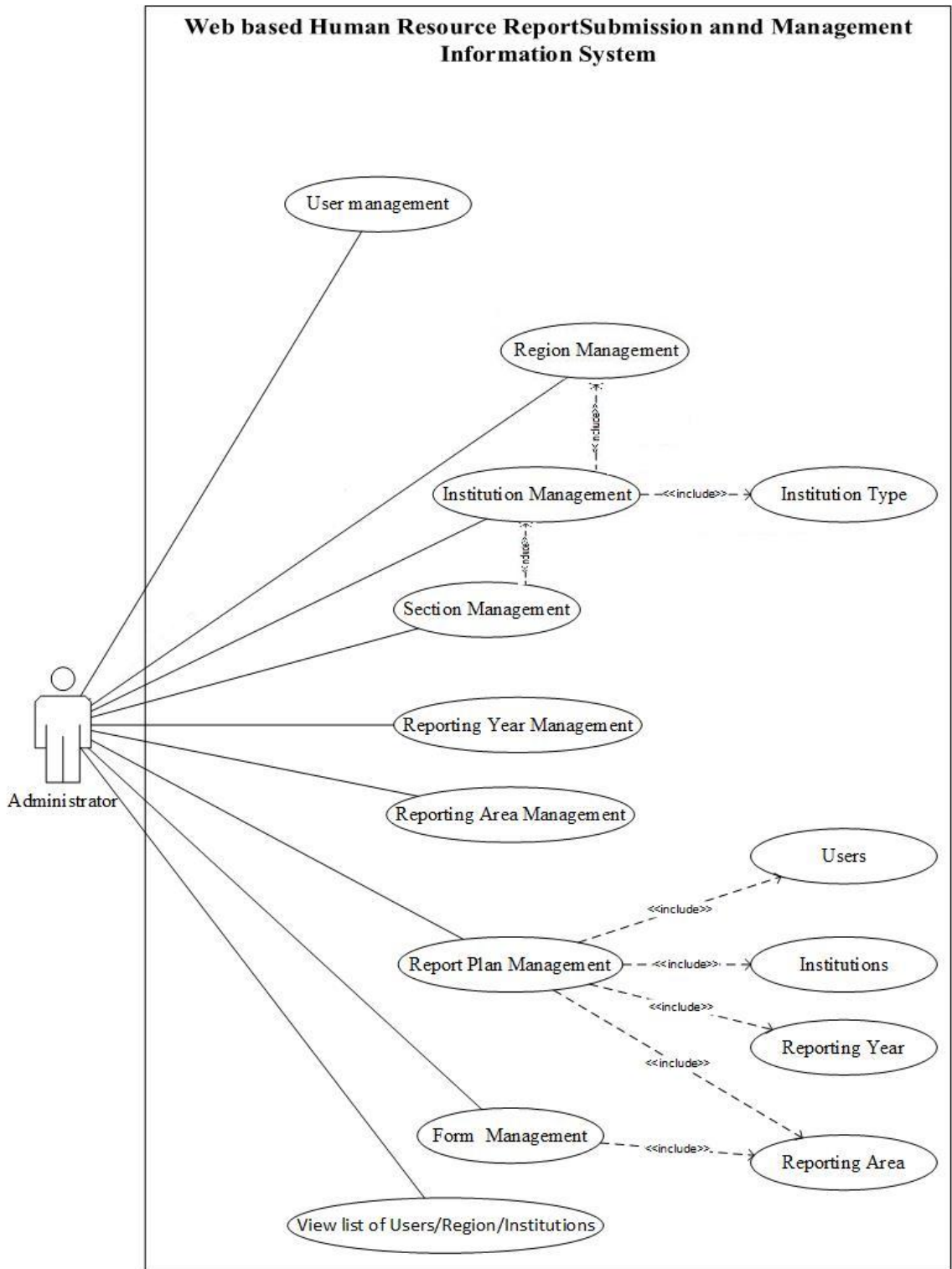


Table 5. 4: System Administrator Description

REPORTING MANAGEMENT		
ID	PRIORITY	DESCRIPTION
ADM 01	M	The System allows administrator to add new users, edit users profile, assign roles/privileges to users and view list of users
ADM 02	M	The System allows administrator to add new region, edit region profile, and view list of region.
ADM 03	M	The System allows administrator to add new institution type, edit institution type profile, and view list of institution type.
ADM 04	M	The System allows administrator to add new institution, edit institution profile, and view list of institution.
ADM 05	M	The system allows administrator to add new section, edit section profile, and view list of section.
ADM 06	M	The system allows administrator to add new reporting year, edit reporting year profile, and view list of reporting year.
ADM 07	M	The system allows administrator to add new reporting area, edit reporting area profile, and view list of reporting area.
ADM 08	M	The system allows administrator to add new reporting plan, edit reporting plan profile, and view list of reporting plan.
ADM 09	M	The system allows administrator to create form year, edit form, and view form.
ADM 10	M	The system allows administrator to view list of users or regions or institutions.

Reporting Management

This feature is available to perform the whole process of reporting within the system. Each user assigned an institution for reporting as in the reporting plan, be able to view a list of assigned institution(s) to perform the task. Each institution must be displayed together with its respective year of reporting. It allows the user to view respective institution and start performing reporting process. The institutional officer fill in HR information from the organization in the system, also can edit and save the information entered, preview the answered form from the system and submit to approver who reviews the records and approve to allow submission of Records to PO-PSC. Section officer receive the records from institution based to nature of institution can be Central Government, Local Government or Public Institution then compile the reports and submit to approver. The approver review the records and approve submission of records to PME officers who are responsible with creation reports then

generates report template and export the report from the system for Management decision. These all process was divided into four modules

Figure 5. 2: Institution Officer

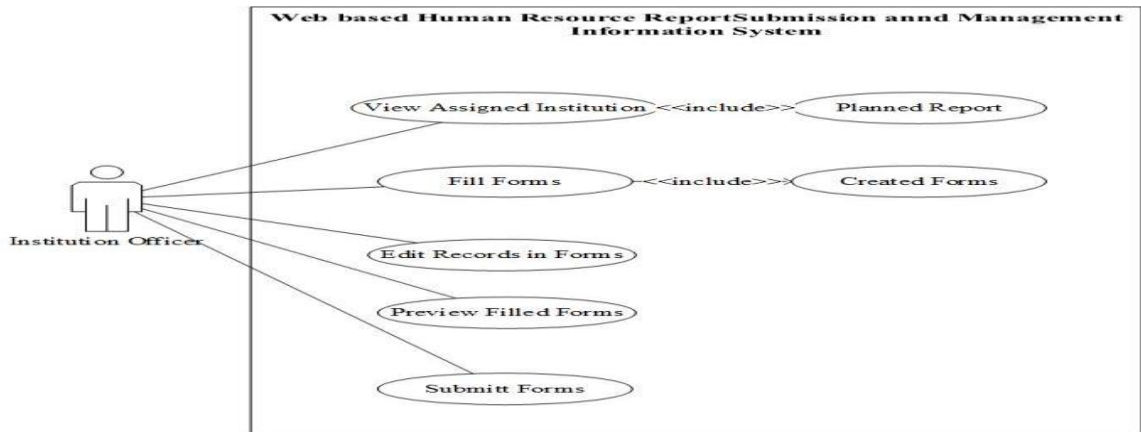


Table 5. 5: Institution Officer Description

REPORTING MANAGEMENT		
ID	PRIORITY	DESCRIPTION
IO01	M	The System display to institution officer list institutions assigned to report in a respective year.
IO02	M	The System allow a user to select a particular institution to perform reporting process
IO03	M	The System allow user to select a particular area of reporting (form of reporting) to perform reporting process
IO04	M	The System allow user to fill records in the respective form
IO05	M	The System allow submit of the filled form
IO06	M	The System allow preview of the records in forms
IO07	M	The System allows previewing of forms.

Figure 5. 3: Approver

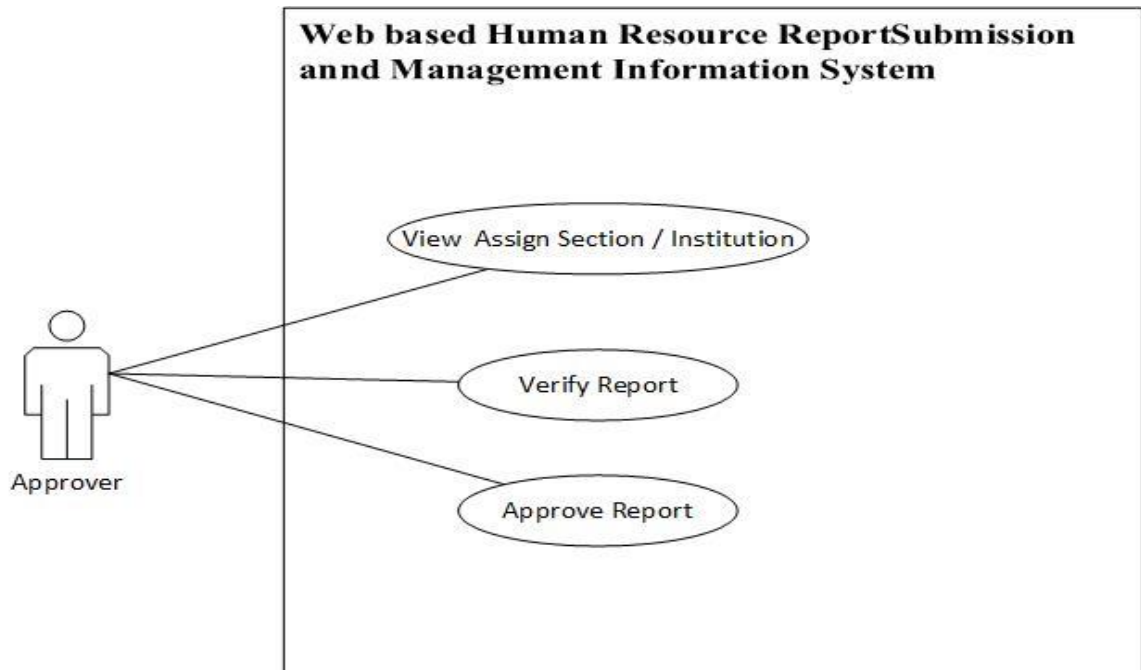


Table 5. 6: Approver Description

REPORTING MANAGEMENT		
ID	PRIORITY	DESCRIPTION
AP01		The System allow view assigned section/institution
AP02	M	The System allow verification of records
AP03	M	The System allow approval of records
AP04	M	The System shall allow exportation of the final report into .doc format

Figure 5. 4: Section Officer

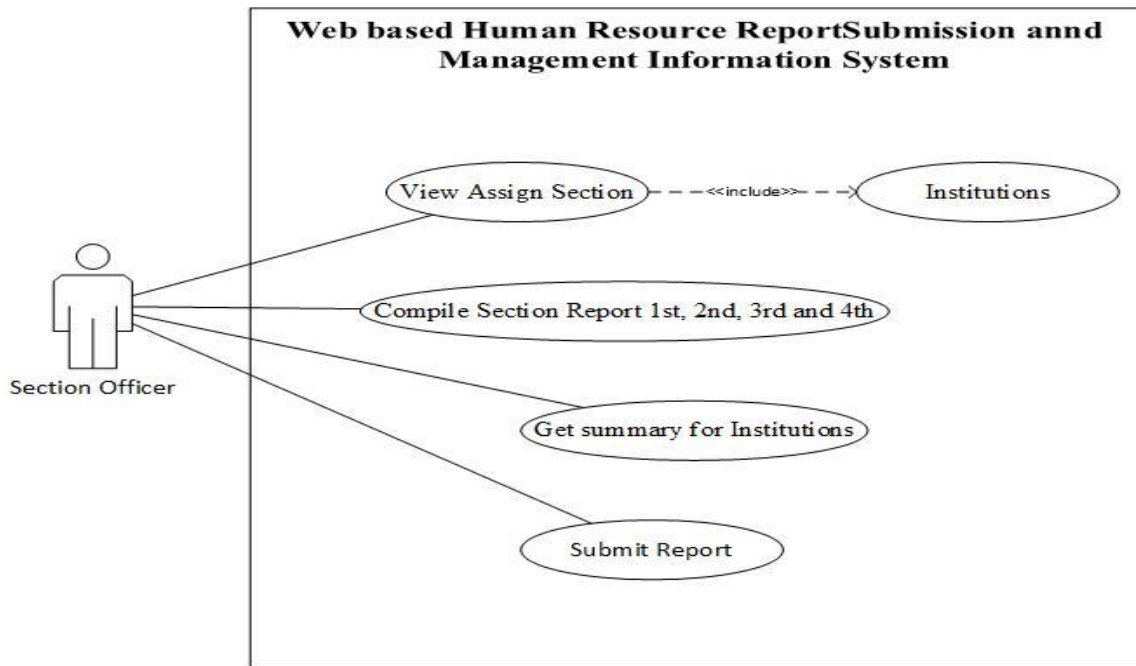


Table 5. 7: Section Officer Description

REPORTING MANAGEMENT		
ID	PRIORITY	DESCRIPTION
SO01	M	The System allow section officer to view assigned section
SO02	M	The System allow Section officer to compile the submitted forms
SO03	M	The System allow section officer get summary of institutions
SO04	M	The System allow section officer to submit the compiled report

Figure 5. 5: PME Officer

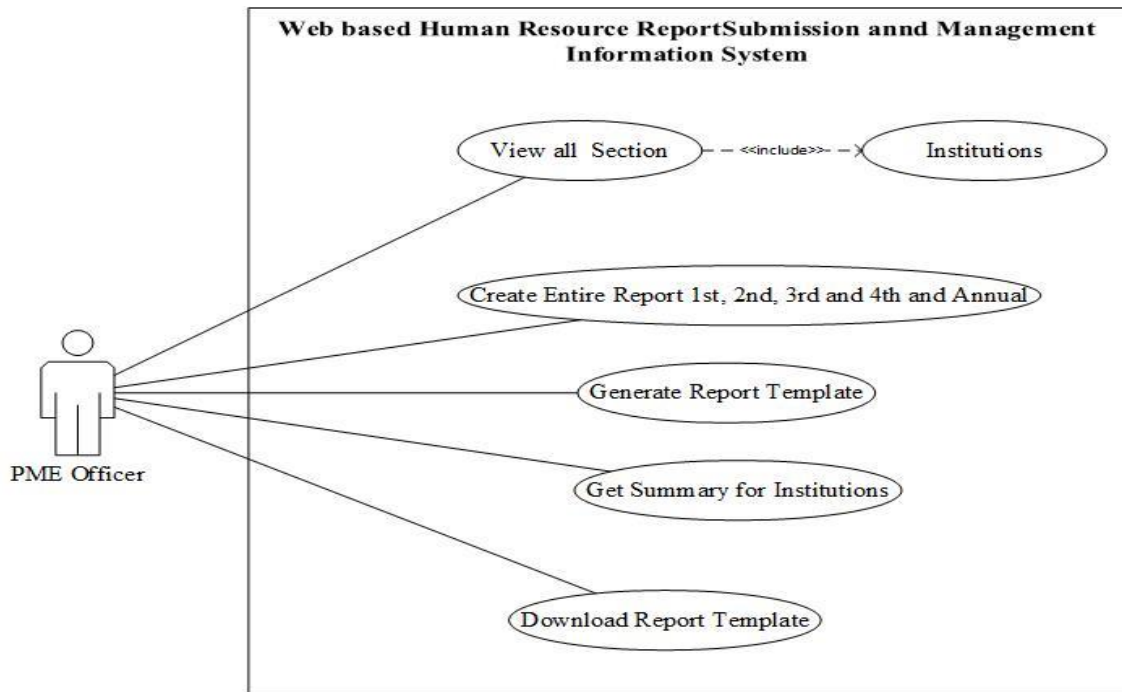


Table 5. 8: PME Officer Description

REPORTING MANAGEMENT		
ID	PRIORITY	DESCRIPTION
PME01	M	The System allow PME officer to view assigned section
PME02	M	The System allow PME officer create report
PME03	M	The System allow PME officer to generate the report template
PME04	M	The System allow PME officer get summary of institutions
PME05	M	The System allow PME officer to the download report

Activity diagrams

The activity diagram describes different activities which support the business process. The activities are in both flows, control and object flow, whereby activities and actions are performed for the exact business objective. Usually, activities are commenced by the initial node and finalized activities by the final node. The activity diagrams for WBHRRSMIS, diagrams are shown below (figures 6.6- 6.13).

Figure 5. 6: Registration of User

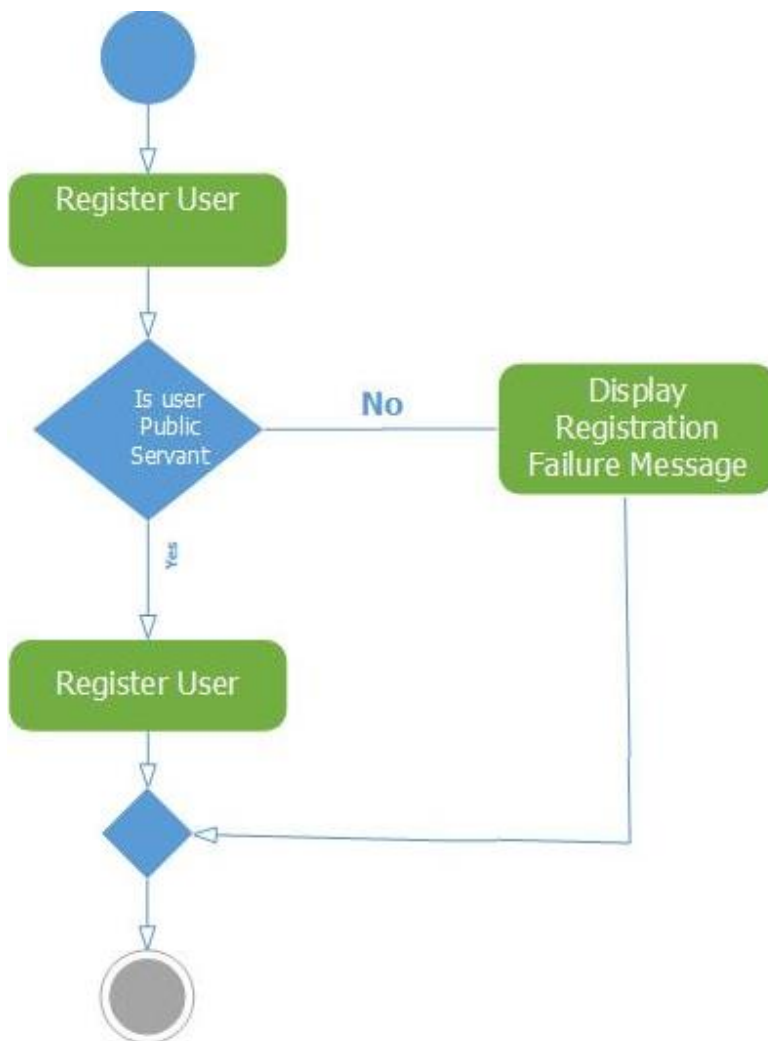


Figure 5. 7: Entering of records

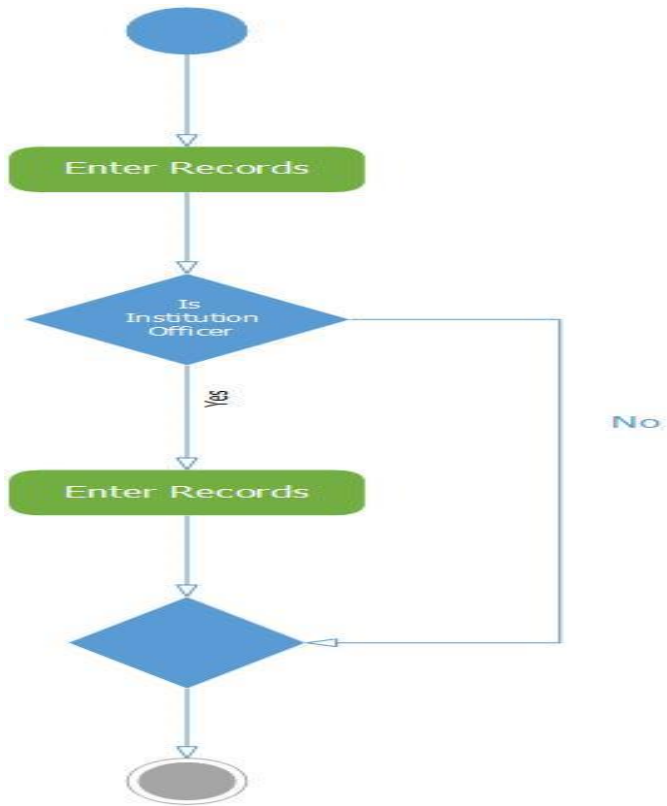


Figure 5. 8: Approving of Report

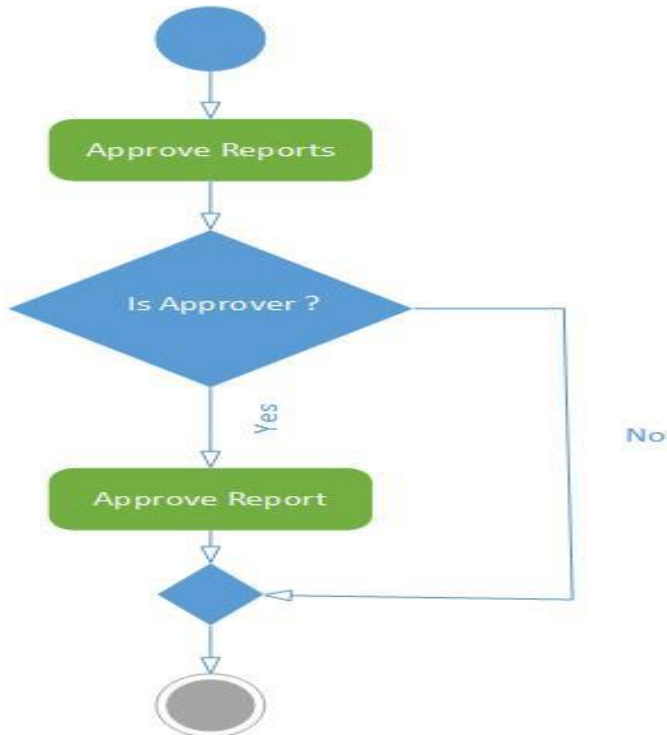


Figure 5. 9: Compiling of Report

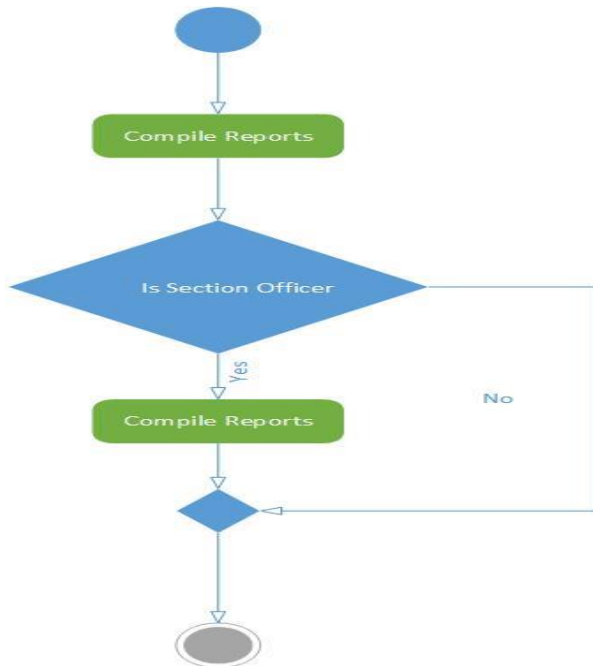


Figure 5. 10: Generating of Report Template

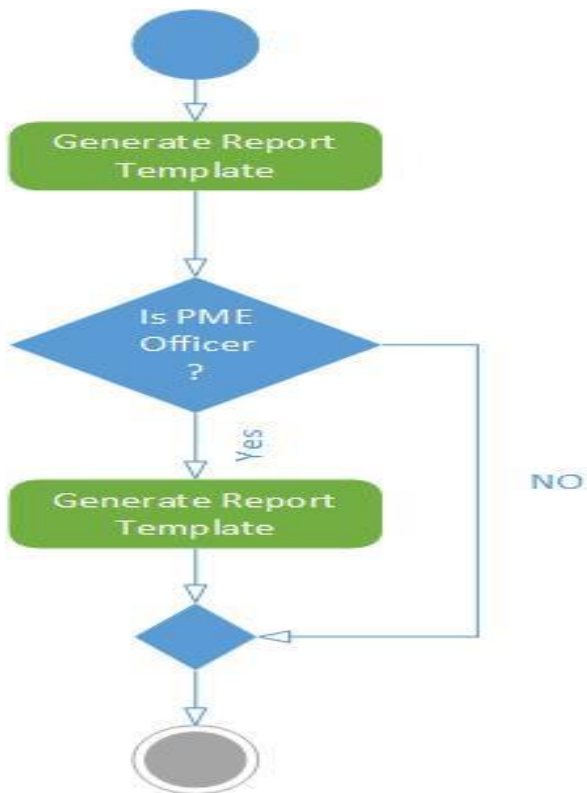


Figure 5. 11: Assigning of Institution

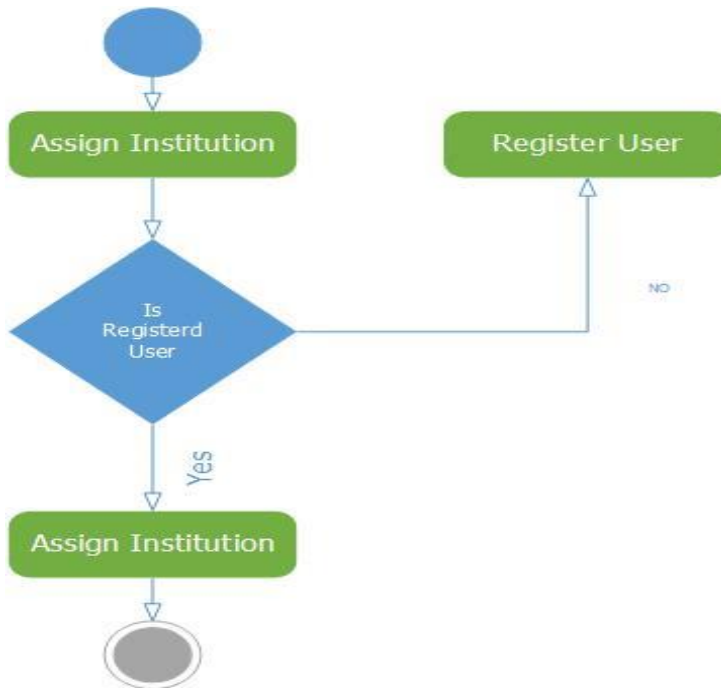


Figure 5. 12: Adding of Institution

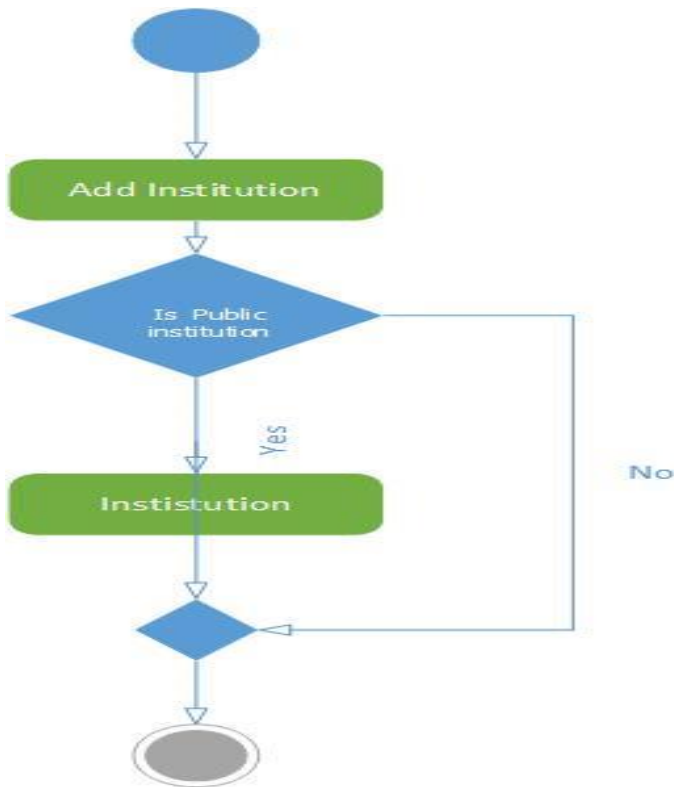
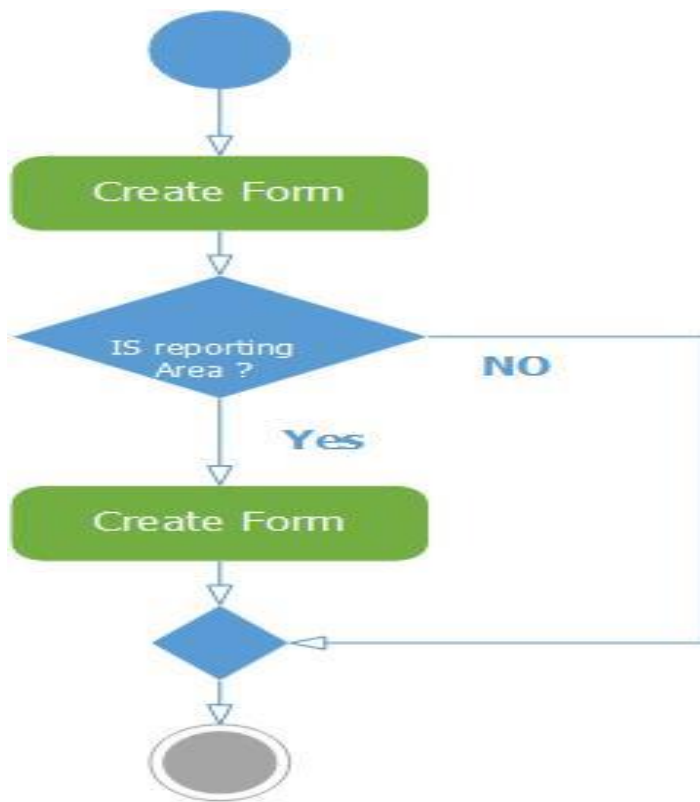


Figure 5. 13: Create Form



5.3.3 Structure Modelling

The model portrays logical illustration of data representing ways the data are formed or maneuvered to enable focus on the production with no intention of being preoccupied with technical particulars. It illustrates the formation of objects that sustain the business procedure in WBHRRSMIS. In WBHRRSMIS, the structural modeling is symbolized using CRC cards, class diagrams and in some cases objects diagrams. The focus of representation is to identify and generate a terminology used in the WBHRRSMIS. It permits illustration of the associations between the stuff and thoughts', therefore forming a structural representation of the domain; an analyst creates terminology to ensure that analysts and users communicate effectively.

CRC Cards

The Class Responsibility Collaboration (CRC) cards used to document responsibilities and collaborations of a class. CRC-cards are simple yet powerful tools for collaborative object-oriented modeling (Dennis, 2015). The set of CRC cards includes all essential information to put together a rational structural representation of the problem under study. CRC card permits the representation of the name, Id, type, associated use cases, description, responsibilities and collaborators. Principally, the name of a class usually is a noun and includes the attributes and relationships. These attributes represent known responsibilities that each instance of the class. (See Tables 6.9 – 6.20) are shows CRC Cards for WBHRRSMIS.

Table 5. 9: Register user CRC

Front:		
Class Name: Register User	ID: C1	Type: Concrete
Description: An individual needed to be registered		Associated Use Cases: Register User
Responsibilities: Institutional Officer, administrator, approver, Section Officer and PME Officer		Collaborators: Register
Back:		
Attributes: UserId (varchar) First_name (varchar) Middle_name (varchar) Last_name (varchar) Institution_Vote (varchar) Institution_Name(vvarchar) Phone_Number (varchar) E-mail address(vvarchar) signature (varchar) status (varchar) password(vvarchar)		
Relationships: Generalization (a-kind-of): Person Aggregation (has-parts): Other Associations: Registration		

Table 5. 10: Assign Institution Officer CRC

Front:		
Class Name: Institution Officer	ID: 2	Type: Concrete
Description: An Officer that is needed to be assigned the role of Institution Officer.		Associated Use Cases: Assign Institution Officer
Responsibilities: Assign Officer to Institution		Collaborators: Assign Institution
Back:		
Attributes: Institution_Vote (varchar) Institution Officer _Id (varchar) Department_Name(vvarchar) Institution_Type (varchar) Region_Id(vvarchar) Report_Area(vvarchar) Reporting_year(Number) Quarter_id (varchar)		
Relationships: Generalization (a-kind-of): Person Aggregation (has-parts): Other Associations: Reporting		

Table 5. 11: Assign Section Officer CRC

Front:		
Class Name: Department Officer	ID: 3	Type: Concrete
Description: An Officer that is needed to be assigned the role of Section Officer.		Associated Use Cases: Assign Section Officer
Responsibilities: Assign Officer to a Section		Collaborators: Assign Section
Back:		
Attributes: Section _Sub_Vote (varchar) Institution_Vote(vvarchar) Section Officer _Id (varchar) Section_Name(vvarchar) Reporting year(Number) Quarter_id (varchar)		
Relationships: Generalization (a-kind-of): Person Aggregation (has-parts): Other Associations: Compile		

Table 5. 12: Assign approver CRC

Front:		
Class Name: Approver	ID: 4	Type: Concrete
Description: Head of Section that is needed to be assigned the role of Approver.		Associated Use Cases: Assign Approver
Responsibilities: Assign Head of Section to an Institution		Collaborators: Assign Institution
Back:		
Attributes: Institution_Vote (varchar) Approver_Id (varchar) Section_Name(vvarchar) Institution_Type (varchar) Region_Id(vvarchar) Report_Area(vvarchar) Reporting year(Number) Quarter_id (varchar)		
Relationships: Generalization (a-kind-of): Person Aggregation (has-parts): Other Associations: Approve		

Table 5. 13: Assign PME Officer CRC

Front:		
Class Name: PME Officer	ID: 5	Type: Concrete
Description: Officer that is needed to be assigned the role of PME Officer.		Associated Use Cases: Assign PME Officer
Responsibilities: Assign officer to Department		Collaborators: Assign Department
Back:		
Attributes: Institution_Type (varchar) Region_Id (varchar) Report_Area(vvarchar) Reporting year (Number) Quarter_id (varchar)		
Relationships: Generalization (a-kind-of): Person Aggregation (has-parts): Other Associations: Create		

Table 5. 14: Enter Records CRC

Front:		
Class Name: Enter Records	ID: 5	Type: Concrete
Description: institutions' records are entered for evaluation.		Associated Use Cases: Enter records
Responsibilities: Enter institutions' records to be evaluated		Collaborators: Enter records
Back:		
Attributes: Institution_Vote (varchar) Institution_Officer_Id (varchar) Approver_Id(vvarchar) Institution_Type (varchar) Region_Id(vvarchar) Report_Area(vvarchar) Reporting year(Number) Quarter_id (varchar) Scores (int)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): evaluation Other Associations:		

Table 5. 15: Generate quarters Template CRC

Front:		
Class Name: Generate quarters Template	ID: 7	Type: Abstract
Description: Generate quarters Template in .doc format		Associated Use Cases: Generate quarters Template.
Responsibilities: Generate quarters Template		Collaborators: Downloading
Back:		
Attributes: Institution_Type (varchar) Region_Id (varchar) Report_Area(vvarchar) Reporting_year (Number) Quarter_id (varchar)) Scores (int)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): evaluation Other Associations:		

Table 5. 16: Generate annual Template CRC

Front:		
Class-Name: Generate annual_Report_Template	ID: 8	Type: Abstract
Description: Generate annual report template in ,doc format		Associated Use Cases: Generate consolidated report template
Responsibilities: Generate report template		Collaborators: Downloading
Back:		
Attributes: Institution_Type (varchar) Region_Id (varchar) Report_Area(varchar) Reporting_year (Number) Quarter_id (varchar) Scores (int)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): evaluation. Other Associations:		

Table 5. 17: Create of Institution Type CRC

Front:		
Class Name: Institution Type Create	ID: 9	Type: Concrete
Description: An institution type needed to be created		Associated Use Cases: Create Institution Type
Responsibilities: Institution		Collaborators: Creator
Back:		
Attributes: Institution_Type_Id(varchar) Institution_Type_Name (varchar) Department (varchar) Vote(varchar)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Creation Other Associations:		

Table 5. 18: Create Institution CRC

Front:		
Class Name: Institution Create	ID: 10	Type: Concrete
Description: An institution needed to be created		Associated Use Cases: Create Institution
Responsibilities Institution	Collaborators: Creator	
Back:		
Attributes: Institution _Id(varchar) Institution _Name (varchar) Vote(varchar) Phone_Number (varchar) E-mail address(varchar)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Creation Other Associations:		

Table 5. 19: Create Section CRC

Front:		
Class Name: Section Create	ID: 11	Type: Concrete
Description: Section to be created		Associated Use Cases: Create Section
Responsibilities Section	Collaborators: Creator	
Back:		
Attributes: Section _Id(varchar) Institution _Name (varchar) Section_Name(varchar) Sub_Vote(varchar) Phone_Number (varchar) E-mail address(varchar)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Creation Other Associations:		

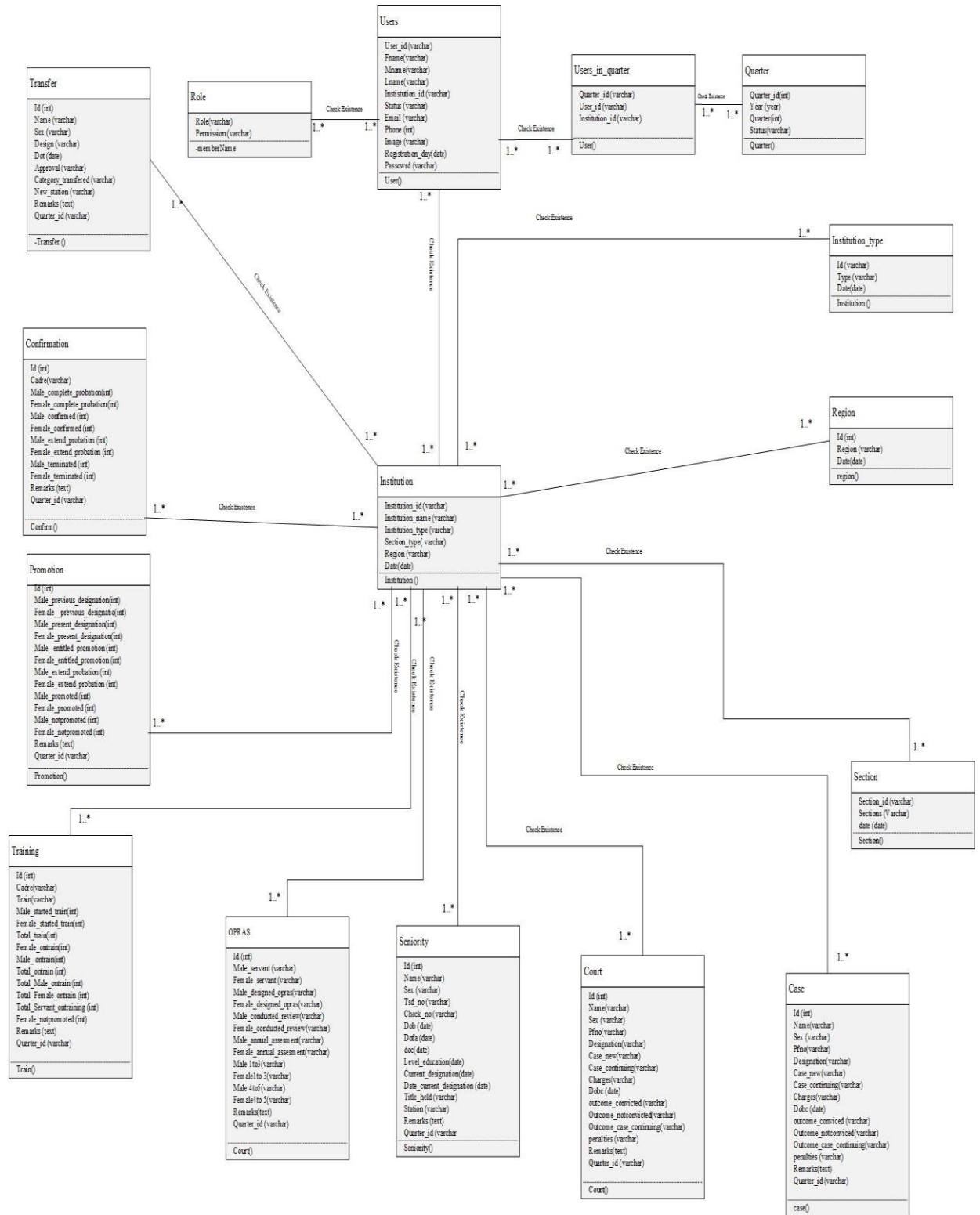
Table 5. 20: Create Region CRC

Front:		
Class Name: Region Create	ID: 12	Type: Concrete
Description: Region to be created		Associated Use Cases: Create Region
Responsibilities Region		Collaborators: Creator
Back:		
Attributes: Region _Id(varchar) Region _Name(varchar) Institution _Name(Varchar)		
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Creation Other Associations:		

Class Diagram

This static representation displays relationships and classes between those classes that stay persistent. Classes are usually are represented by rectangle shapes with mostly three parts. The upper section holds the name, central point section and bottom section contains attributes and methods, respectively. In WBHRRSMIS, classes and their relationship presented in figure 6.14.

Figure 5. 14: Class Diagram for WBHRRSMIS.



5.3.4 Behavioural Modelling

The behavioral model defines the inner moving features of an IS that sustain the production operation. Generally, it expresses the interior judgment of the procedures not specifying ways the processes are to be put into practice. These internal logic processes and its complete design of the functions in the entity were completely identified during the design and implementation phases. Therefore, a sequence diagram used to represent it.

Sequence Diagram

Sequence Diagrams clarify objects that contribute to a use case and the communication that goes by between for solitary use cases. The sequence diagrams consists a genetic of one succession and another succession is an instance where each depicts single scenarios within the use case, on the other hand, the blueprint diagrams are the execution of exact, frequently take in user interface parts as the classes. (Figures 6.15- 6.19)

Figure 5. 15: User registration.

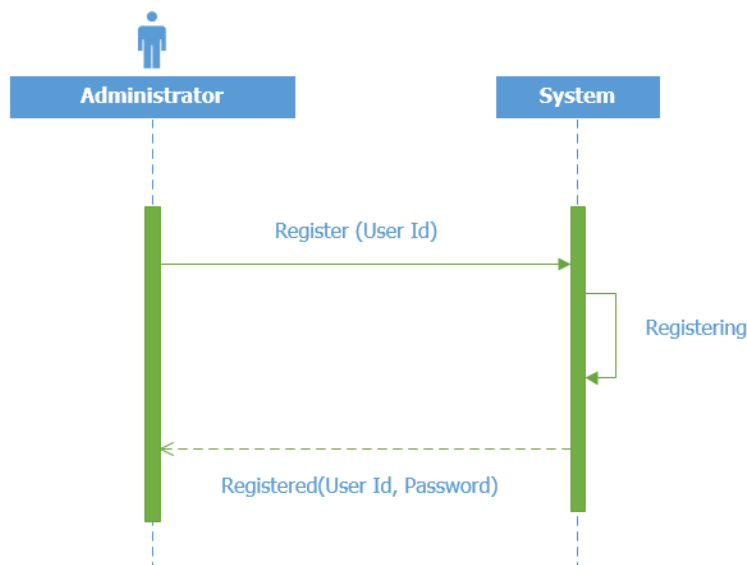


Figure 5. 16; Entering Records.



Figure 5. 17: Approving reports.

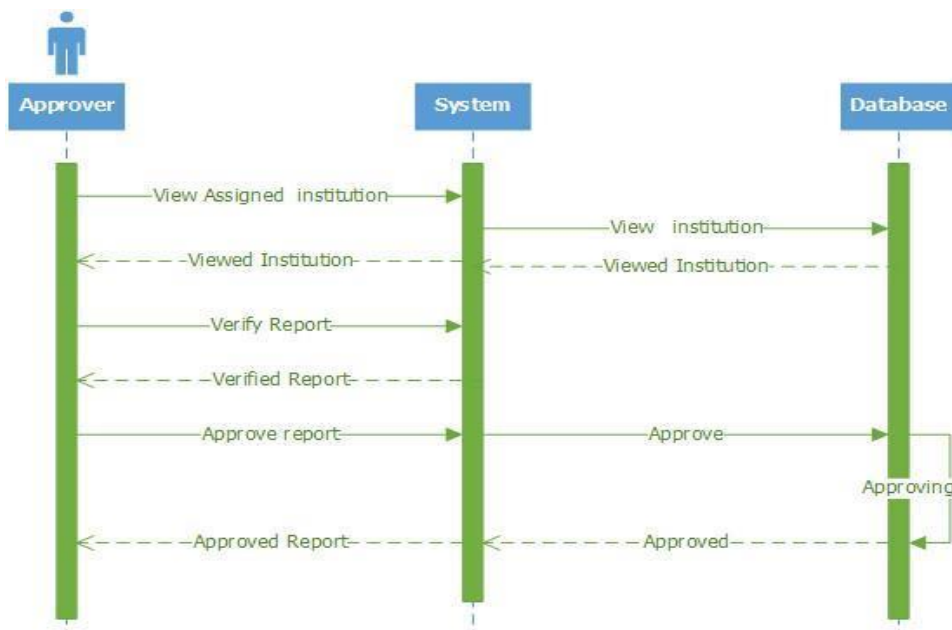


Figure 5. 18: Compiling reports.

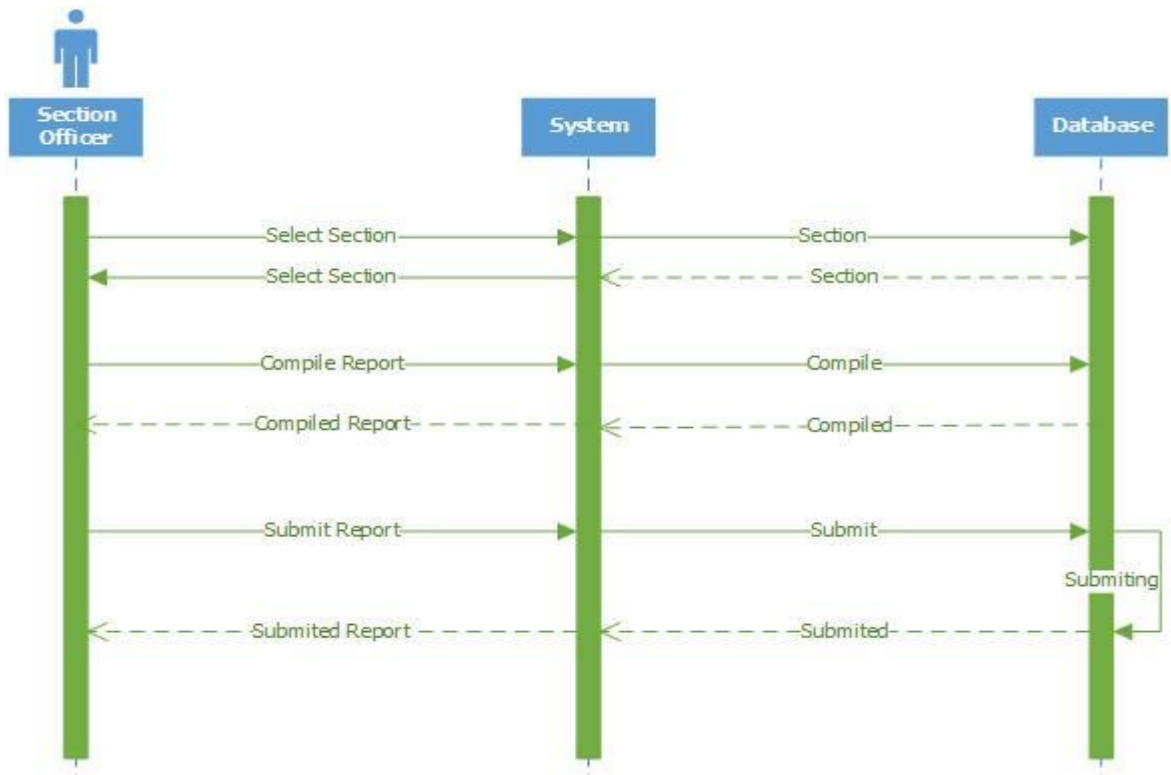


Figure 5. 19: Generate Report Template.



5.4 System Design

The stage makes the decision on the way the technical solution worked. System design phase usually consists of architecture design, user interface design, data storage design, and program design and conceptual system data flow design.

5.4.1 Architecture design

This is among the parts of the system design that gives a general description regarding the hardware, software, and network facility. It provides the layout of the way components spread across several workstation and devices. Also, it highlights the WBHRMIS is operating in both operating systems (i.e. Windows or Linux operating system).

The core part of the architectural components includes software and hardware. The intention of it is to define ways in which the software of the solution working together with hardware devices. WBHRMIS is a breakdown with four major functions.

The software system split into four fundamental functions. That is the initial function is stored as the IS necessitates information to be accumulated and get back. The stored data are HR information from various public service institutions. This will be retrieved from the WBHRMISPDF or doc format document reports. The second function to provide logic access to data of the business processes to the way in data, regularly denotation database queries in Structured Query Language (SQL). Another function is the application logic, which consists of reason write-ups in the use cases and functional specifications. The last function is the demonstration logic that displays facts to the user and the recognition of the user inputs, which is the interface for accessibility.

Client computers, servers and networks are the three crucial hardware constituents of a system; the network ensures communication between client computers and servers. Client computers refer to devices used by users utilize for input and output that range from either desktop or laptop computers for the major use in this system.

To operate efficiently, WBHRMIS opted for a thin client–server structural design that separates the presentation, application and data access logic and design. The WBHRMIS as a thin client where the client stores nothing in devices such as mobile phones and computers. All presentation logic and data logic were hosted in servers and backups via the internet connectivity and submit HR reports. Therefore, to ensure Security, backup and upgrades should be well undertaken.

5.4.2 User Interface design

In any system design, interface usually acts as a bridge between user and system. The user interface provides a portion for users' interaction. It has a display that delivers ways to use the designed solution, user interfaces usually include screens and forms that receive records and shows the reports produced. It points out the sort of the inputs and outputs that received and produced. The interface comprises important

parts. Among them is the navigation tool, which is the mode that provides orders and tells what to accomplish, these are buttons and menus. The other refers to input tool that means the system acquires facts for instance login information via forms like login to the Web-based Human Resource Reports Submission, and Management Information System logging into (figure 6.20) and meet the interface (Figure 6.21). The third is the output tool means of delivers feedback to the PME officer normally is PDF or doc format document reports.

In Web-based Human Resource Reports Submission, and Management Information System, all values for interface design such as outline, pleased, responsiveness, know-how, consistency, and reduce user struggle are taken care.

Figure 5. 20: Interface after login

PO - PSC

Web-based Human Resource Reports Submission and Management Information System

User Name:

Password:

SIGN IN
Forget Password ?

Profile Name	Navigation Menu
Profile Picture	Dashboard Icons
Search Menu	Content
Navigation Menu	

5.4.3 Programs design

This phase involved in designing that accomplishes the technical solution logic. Program design in WBHRMIS adopted the top-down method, via several practices of design. It started from the high-level illustration going down to the several parts of a program, by what means the parts had better be structured and by what method they interconnect. Program design uses the structure graphic representation shows the arrangements and communications of portions of code within the package. This fastens the speed of coding because each piece of code developed separately.

The structure diagram depicts necessary sections of code which should be contained within at a high level, organized in a categorized presentation sequencing the order of components that are raised, assortment of state should a unit be responded and repetition on the frequency a part is recurrent. The structure graphic representation is consisting of units, which are pieces of codes that complete a particular task that working collectively to build a program (figure 6.22) and peace of source code (figure 6.23).

Figure 5. 21: Shows the Structure Diagram

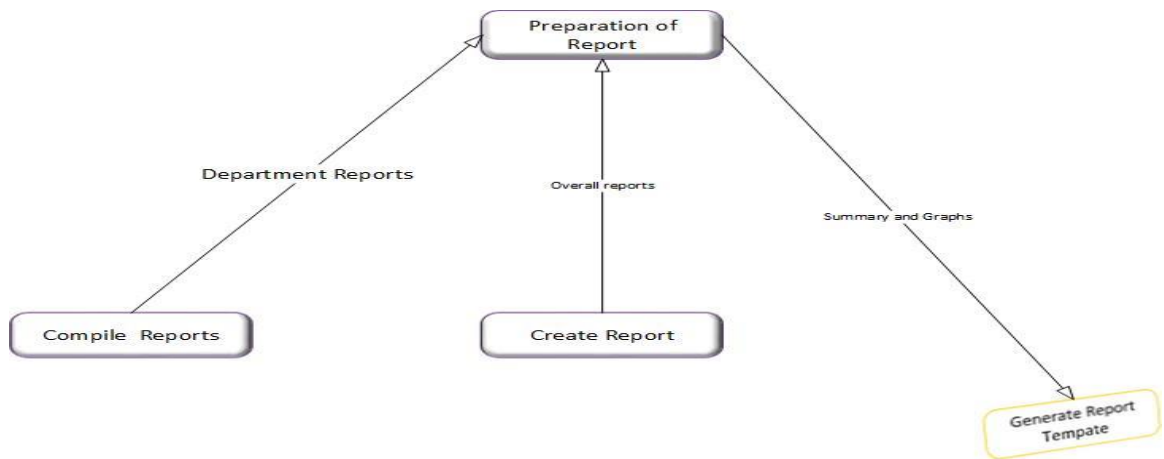
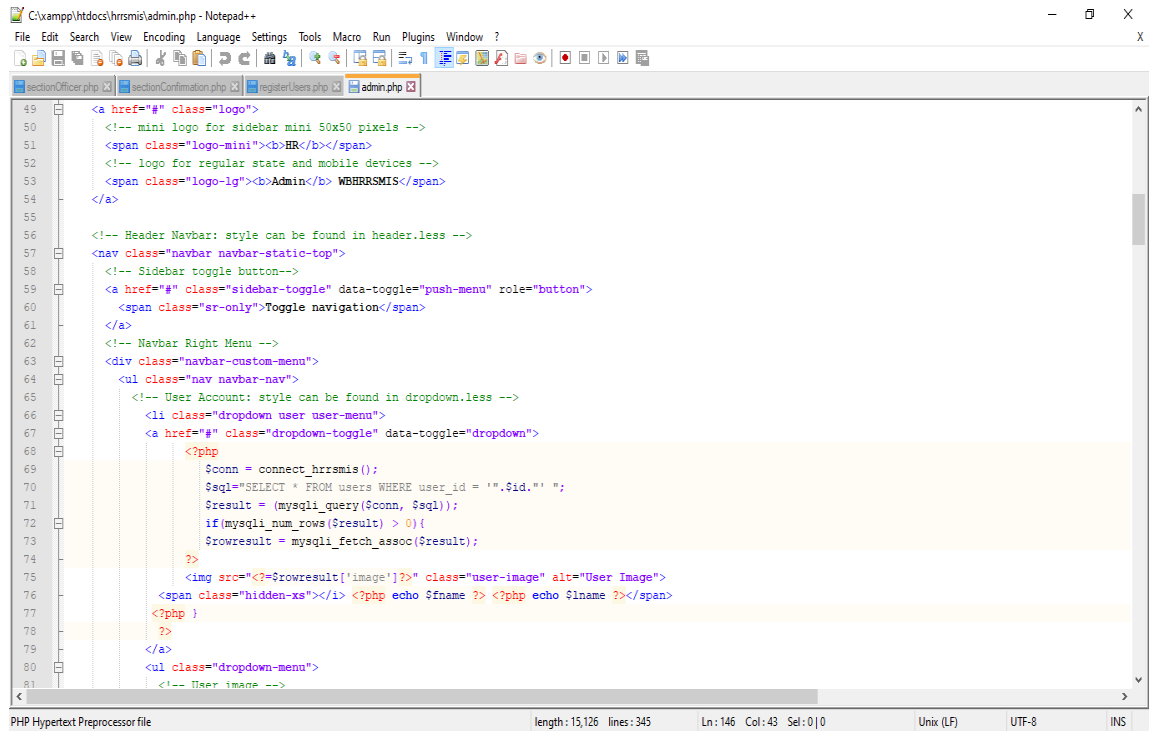


Figure 5. 22: Shows the Source Code

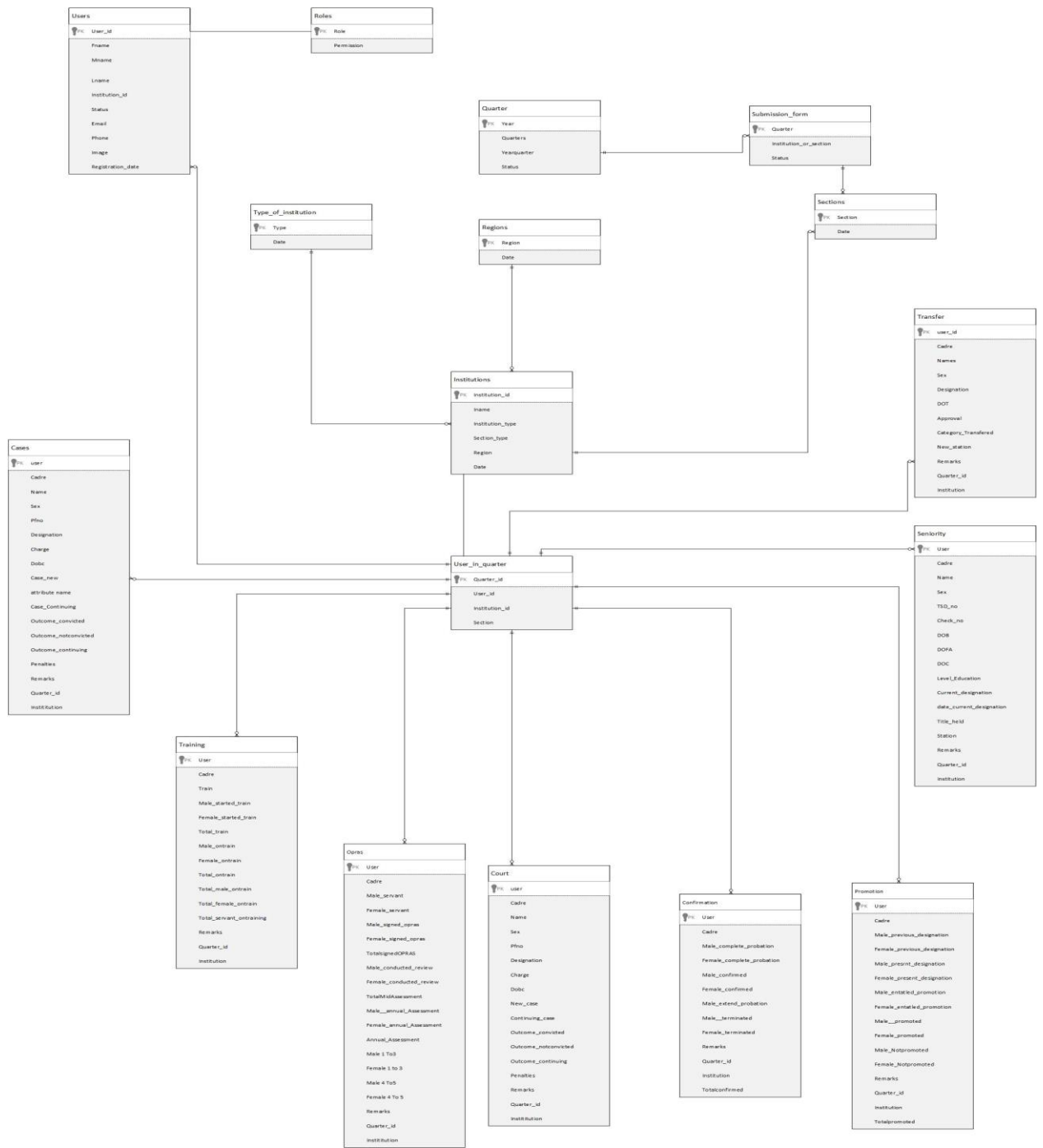


```
49 <a href="#" class="logo">
50 <!-- mini logo for sidebar mini 50x50 pixels -->
51 <span class="logo-mini"><b>HR</b></span>
52 <!-- logo for regular state and mobile devices -->
53 <span class="logo-lg"><b>Admin</b> WBHRRSMIS</span>
54 </a>
55
56 <!-- Header Navbar: style can be found in header.less -->
57 <nav class="navbar navbar-static-top">
58 <!-- Sidebar toggle burton-->
59 <a href="#" class="sidebar-toggle" data-toggle="push-menu" role="button">
60 <span class="sr-only">Toggle navigation</span>
61 </a>
62 <!-- Navbar Right Menu -->
63 <div class="navbar-custom-menu">
64 <ul class="nav navbar-nav">
65 <!-- User Account: style can be found in dropdown.less -->
66 <li class="dropdown user user-menu">
67 <a href="#" class="dropdown-toggle" data-toggle="dropdown">
68 <?php
69 $conn = connect_hrsmis();
70 $sql="SELECT * FROM users WHERE user_id = '". $id. "' ";
71 $result = (mysqli_query($conn, $sql));
72 if (mysqli_num_rows($result) > 0){
73 $rowresult = mysqli_fetch_assoc($result);
74 }
75 
76 <span class="hidden-xs"></i> <?php echo $fname ?> <?php echo $lname ?></span>
77 <?php >
78 <?>
79 </a>
80 <ul class="dropdown-menu">
81 <!-- User image -->
```

5.4.4 Data storage design

It is an additional vital action in this stage. It involved making the data storage section of the system. Describing the events to be accomplished during storage design. Data storage normally comprised of two main types of storage format including file format and database format. Files format are data to be displayed to the users, and for the case of WBHRRSMIS, one of the files is a Word document that HR status Reports issued or compiled on the quarterly and annual report. Database used in the WBHRMIS is My SQL with the following ERDs (figure 6.24).

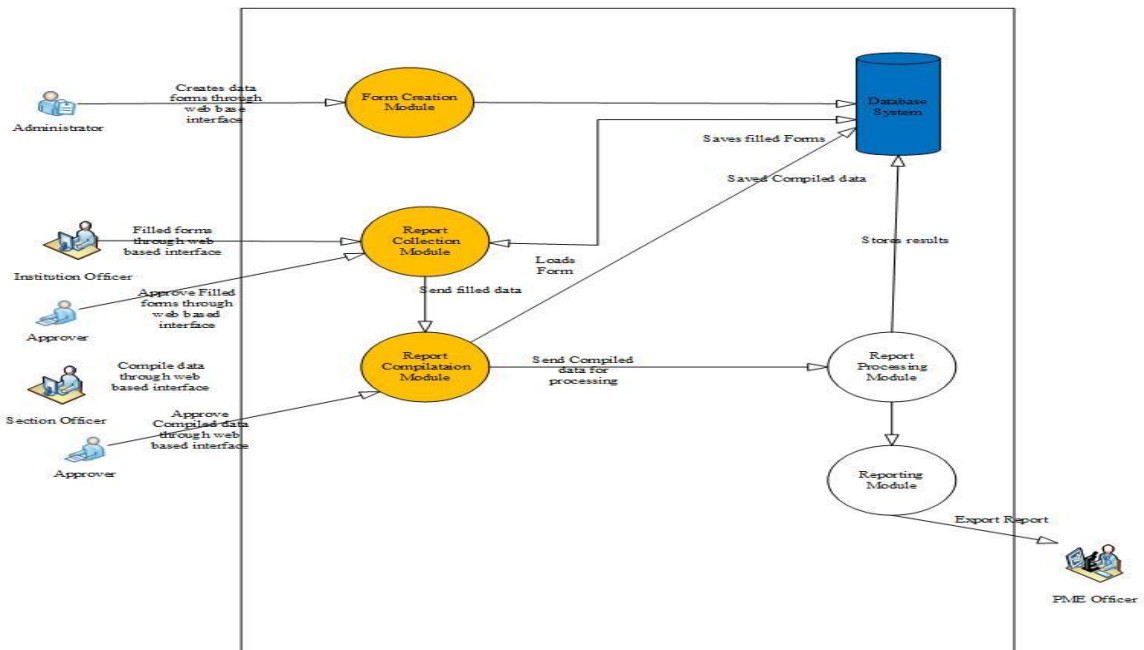
Figure 5. 23: WBHRMIS Entity Relation Diagrams



5.4.5 Conceptual System Data Flow Design

The design of WBHRMIS assists PO-PSC and users during the whole process of report submission by allowing users to manage the reporting process within the system. It starts with the system administrator who creates/edit forms and stores them within the database. Then the Institutional officer fills in the forms into the system based on the information available from the organization and reviewed and approved by the approver. The system stored data submitted by all public institutions and section officers who responsible for compilation. After the compilation, each section approver reviewed and approved sections report compiled from the section. The system processed the compiled reports from sections and calculating the percentage of compliance in a more accurate manner. The PME offer exports the produced reports which will assist PSC and the entire government in making decisions smoothly. (Figure 6.25) is a conceptual system data flow design of WBHRRSMIS

Figure 5. 24: Conceptual system data flow design



5.5 System Implementations

This is the most important part is development of the technical solution phase as most based on the work done from system planning, system analysis and system design to solve the existing problems. This was the longest and expensive phase. This phase contained three steps that are construction, installation and operation.

5.5.1 Constructions

This is the final of building the WBHRRSMIS. In system implementation, most energy and attention vested in system implementation as its focus in meet user demands. It is the most sophisticated phase as most of the work done from system planning, system analysis and system design are actually converted into technical solution needed to solve the existing problems. Systems development normally is the longest and expensive phase. It requires attention and resources including people and material in order to attain the intended goal. This phase contains three steps, which are the first step in the system implementation process. The system is constructed and verified to guarantee that it does the desired functions. As mentioned earlier, the system is a web-based so users of the system will access the system through the internet. The HTML, JavaScript, Bootstrap, PHP, MySQL were used in its construction. The screenshot of Web-based Human Resource Reports Submission and Management Information is displayed in (figures 6.26 and 6.27) during construction, testing played a vital role to avoid the cost of bugs, which can be massive. Testing is one of the most precious steps in system implementation. In that regard during the development of WBHRRSMIS, testing was given the highest priority in writing the programs to ensure that the cost benefit of the development is succeeded.

Figure 5. 25: WBHRMIS Login form

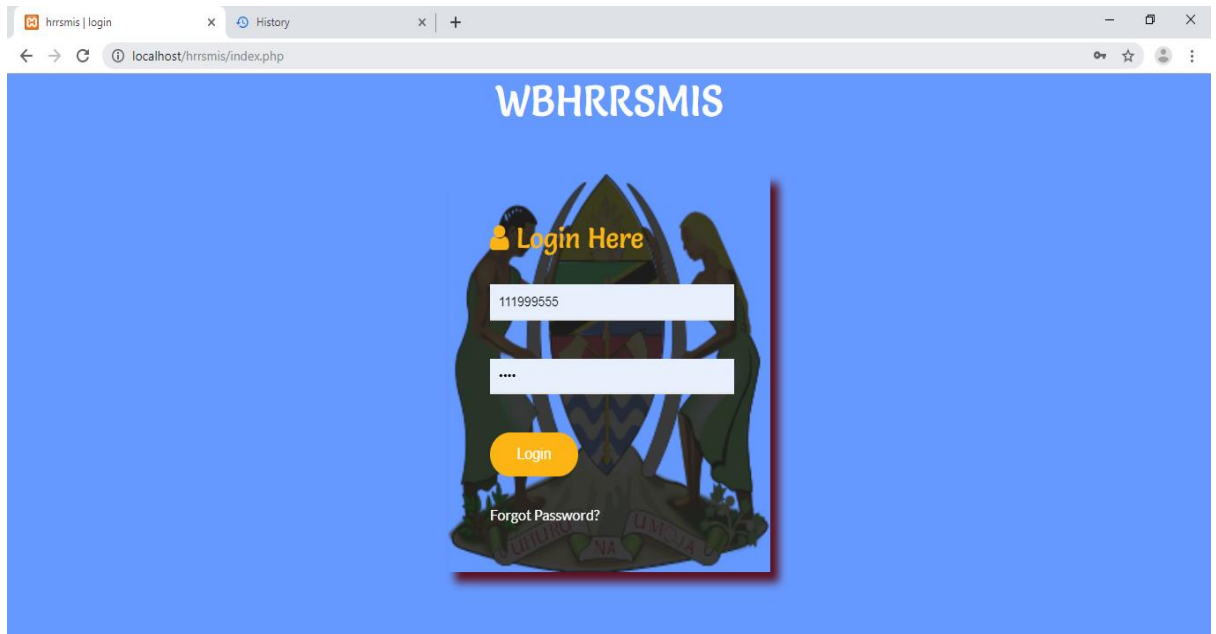
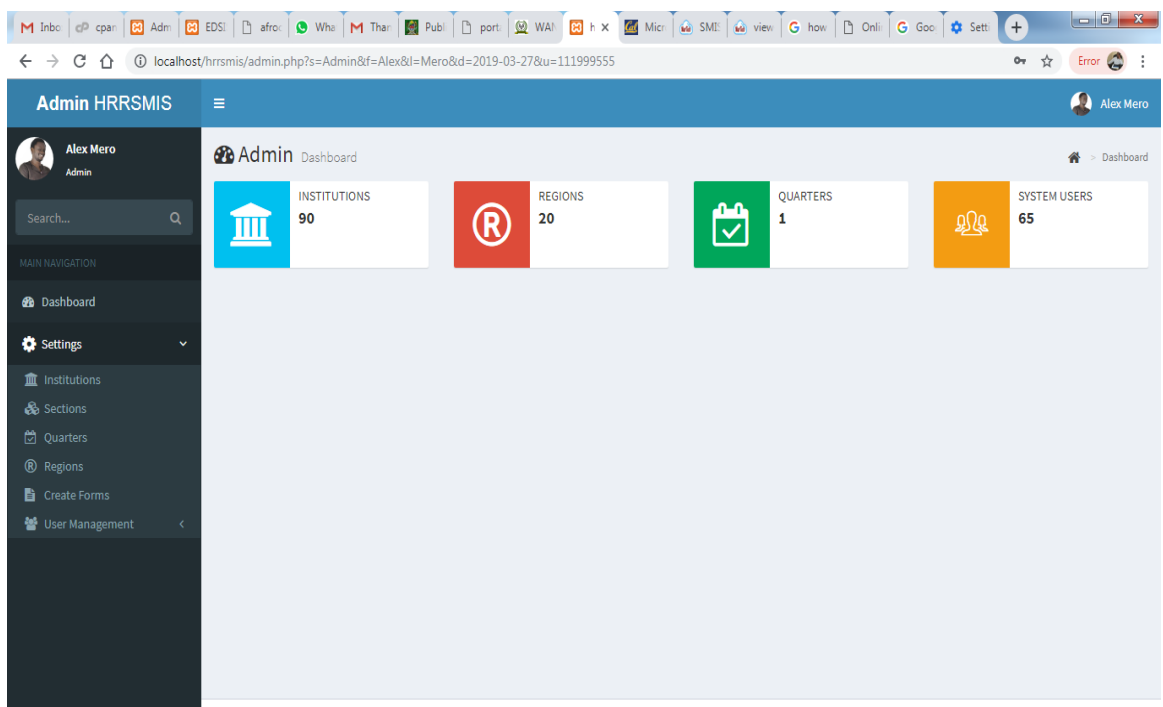


Figure 5. 26: Admin page after login



5.5.2 Testing

All categories of testing from unit, integration, acceptance and system testing were exercised for the Web-based Human Resource Reports Submission and Management Information WHRRSMI. Table 6.21 and table 6.22 list the testing cases for the Web-based Human Resource Reports Submission and Management Information.

5.5.2.1 Login Testing

Login module were tested to know when only authorized users are able to login with valid credentials (see Table 6.21). Table 6.22 shows the testing of login with invalid credentials.

Table 5. 21: Login with valid credential test case

Project Title: WBHRRSMIS	
Test Event	
Test Case ID: TE01	Test Designed by: Alex A. Mero Test Designed date: 18 th May, 2019 Test Executed by: PME Officer Test Execution date: 21 st May, 2019
Test Priority (Low/Medium/High): Medium	
Module Name: WBHRMISlogin screen	
Test Title: Verify login with valid username and password	
Description: Test the WBHRMISlogin page	
Pre-conditions: User has valid username and password	

Table 5. 22: Steps and Outcome

Step	Steps	Data	Predictable Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to login page	http://localhost/hrrsmis	User should be able to see login interface	Successful seen	Pass	Done
2	Provide valid username and Password	Username:11199955 Password: 1234	User should be able to see login credentials	Successful seen	Pass	Done
3	Click on Login button	Click	User should be able to login	Successful login	Pass	Done
Post-conditions: User is authenticated with database and positively login to account. The account session User is authenticated with database and positively login to account.						

Table 5. 23; Login with invalid credential test case

Project Title: WBHRRSM	
Test Event	
Test Case ID: TE02	Test Designed by: Alex A. Mero Test Designed date: 18th May, 2019 Test Executed by: PME Officer Test Execution date: 21st May, 2019
Test Priority (Low/Medium/High): Medium	
Module Name: WBHRMISlogin screen	
Test Title: Verify login with invalid username and password	
Description: Test the WBHRMISlogin page	
Pre-conditions: User has invalid username and password	

Table 5. 24: Steps and Outcome

Step	Steps	Data	Predictable Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to login page	http://localhost/hrrsmis	User should be able see to login interface	Successful seen	Pass	Done
2	Provide invalid username or /and Password	Username:111999555 Password: 12345	User should be able see to login credentials	Successful seen	Pass	Done
3	Click on Login button	Click	User should not be able to login	Successful login	Pass	Done
Post-conditions: User is authenticated with database and could not login to account. The account session User is cancelled with database and fails to login to account.						

5.5.2.1 Register User Testing

User registration modules were tested to know when the system is able to register users with no error (see Table 6.23).

Table 5. 25: Register User test case

Project Title: WBHRSMIS	
Test Event	
Test Case ID: TE03	Test Designed by: Alex A. Mero Test Designed date: 18 th May, 2019 Test Executed by: PME Officer Test Execution date: 21 st May, 2019
Test Priority (Low/Medium/High): High	
Module Name: WBHRMISUser registration	
Test Title: Register User Testing	
Description: Test the WBHRMISRegister user page	
Pre-conditions: User has valid id	

Table 5. 26: Steps and Outcome

Step	Steps	Data	Predictable Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to register page	http://localhost/hrrsmis	Register user page	Successful displayed	Pass	Done
2	Provide valid user details	User Names, status, Username, phone no	System should be able to register user	Successful seen	Pass	Done
3	Click on Register button	Click	User should be able to registered	Successful registered	Pass	Done
Post-conditions: User is registered successfully with no error						

5.5.3 Installation and Operations

The WBHRMIS will be installed on a web-based platform. Installation is the progression of moving current system to the new Dixit, (2007). Installation can be done in various strategies such as parallel, pilot, phasing and cutover strategies.

In the parallel approach, the corporate continues to function in the existing system alongside the new one until the new operates satisfactorily. The pilot strategy is applicable when the new system is likely to host the new system in only one portion of the corporation. The phased conversion is the best option for a large and complex system, in which the new system introduced in phase within the organization. For example in student academic and registration information system, first convert student registration and simply enter student information and print out information. Then followed by conversion student results and finally, link it with the registration and provide a print out of transcripts documents, and update the student's records automatically.

In the cutover approach, the corporation completely walks out on the existing system and takes the innovative one. The strategy is a very risk for the business, as it completely abandons the existing system.

Installation of WBHRMIS will adopt a parallel method whereby the existing and current executed systems operate simultaneously. Training is a very important part of the installation and operation of the new system. Therefore, the training strategy will be established to clarify in what way to interact with the executed systems and assistance accomplish the fluctuations triggered by the executed systems. The training plan on how to use WBHRMIS will be carried out to users ranging from system administrators, institutional officers, section officer, approvers and PME officers.

WHRRSMIS is an independent system, which does not need a specific operating system to operate. It will be executed through several operating systems such as Windows and Linux and browsers like Firefox, chrome, safari and internet explorer. In addition, security was considered when running WBHRRSMIS. Authentications such as username and password used to identify user authority are required. Secure Sockets Layer (SSL) is cryptographic protocols for avoiding hackers to penetrate into the system. Parameterized queries prevent SQL injection that can be used by hackers. It also prevents displayed error messages because hackers can use them to penetrate into the system.

5.5.4 Information archiving

A system that stores all statistical information based on HR status for the entire public service must have the methods of archiving records so that information that exist for at least 5 years old must be archived in some repository fairly than it exists for the life of the system or removed from the system altogether. This is due might take system space unnecessarily or some event may force the information to be restored for details which are required for future reference.

5.5.5 Learning Experience

This project aided improvement on practical experience and apply the knowledge acquired from the various courses carried out. Putting the knowledge gained earlier and applying different techniques from past courses was interesting and certain concepts, tools and techniques only made sense after seeing their application in a real world scenario. It was extremely challenging at times but it has been a great and worthwhile learning experience.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter offers a summary of the study comprising the general objective of the study, specific objectives, methodologies used during data collection and the findings obtained from each objective. The conclusion and recommendations follows which offers an indication on what has been obtained concerning the WBHRRSMIS.

6.1 Summary

The study was conducted at the PO-PSC located at Ilala Municipal in Dar es Salaam, Tanzania. The general objective of this study was addressing the challenges facing the current human resource reports management system for PSC. Participants used were Human resources officers working with the Commission. Purposive sampling technique was used in selecting respondents who participated in the study. Data were collected based on three methods which were interview, focus group and documentary review, however analysis of data was done using qualitative analysis. The study was guided by two specific objectives which were; to identify challenges facing current HRRSMS for PSC and to develop a Human Resource Reports Web-based Submission and Management Information System at PSC.

Through studying trend of report submission at PO-PCS the findings showed that the low number reports which were submitted with some of Institutions at PSC changes from time to time. The trends shows that the reports tend to decrease every year. It suggests that the current report submission and management program at PSC faced challenges. Furthermore, the findings revealed that the common challenge faced by the current reporting and management system at PSC includes staff shortages, time consuming, lack of data security, mistakes that occur during long calculations and proper report generation, management commitment, fund, difficult in monitoring the submission and limited hours of operations.

In the second objective of the study, the findings revealed ways to develop a Human Resource Reports Web-based Submission and Management Information System at

PSC includes which includes technology used which is web based As a web-based information system that is hosted on a computer server which primarily includes a database and application. The database is placed on PO-PSC Local Area Network (LAN) and will be dedicated to Human Resource Reports Web-based Submission and Management Information System for data storage and retrieval.

The Application Server hosted Human Resource Reports Web-based Submission and Management Information System software applications and files to enable online access by network clients over a LAN and Wide Area Network (WAN). The architecture in WBHRMIS is built was the thin client/server. The WBHRMIS is a thin client where the client stores nothing in the device. All presentation logic and data logic will host in PSC servers and backup at e-government Agency (eGA).

Clients from all Public Institutions will access the system via the internet to submit HR reports. For the case of the system developed using various technologies that are Hypertext Markup Language (HTML), Bootstrap, Hypertext Pre-processor (PHP) and My SQL: HTML is the finest for a web application like mobile platforms.HTML is calm to add various data type, justify bounds, ensure uniform performance across different screen sizes and work seamlessly across browsers.

The system was developed using prototyping methodology. A prototyping methodology flow based on analysis, design, and implementation phases concurrently until the system is complete. Lastly the Users of the includes institution officers Human Resources Officer (HRO) from public Institutions, section officer, approver, Planning Monitoring and Evaluation (PME) officer and administrator from PSC staff. The system offers exceptional functionality to each user.

6.2 Conclusions

The challenges on reports submission and management are common issue in most of Government Institutions in the country including the Public Service Commission. Existence of the challenges has been affecting trend of reports submitted by stakeholders to the Commission. Among duties of PO- PSC is to supervise and

monitor compliance on Rules and Regulations governing Public Service in order to ensure that Public Servants in all Public Organization are equally managed. This services have not been fully provided due these challenges which facing the commission which are shortage of staff, time-consuming, lack of data security, mistakes occurring during long calculation and proper generation of the report, management commitment, fund, difficult in monitoring the submission and limited hours of operations. Most of the time, the challenges resulted in institution failing to deliver the accurate quarterly and annual HR status reports for public service and its compliance.

6.3 Recommendations

The study discovered that there is existence of challenges which were facing current report submission and management system at PSC. These research results provide the general representation on challenges which facing current report submission and management system at PSC. The research identified eight challenges facing current report submission and management system which includes shortage of staff, time-consuming, lack of data security, mistakes occurring during long calculation and proper generation of the report, management commitment, fund, difficult in monitoring the submission and limited hours of operations. These challenges affected provision of services offered by the Commission leading to failure to produce the accurate and reliable HR status report on time. Hence, the following measures should be taken to control the problem:-

Firstly, the automation of report submission and management system which provides a cure to challenges facing reports submission and management at PSC. As the challenges like lack of sufficient employees can be cured by the system since only few staff will be required to run the system in processing report. For the lack of data security framework, confidentiality, honesty and authenticity have been enforced by automation because everything will be accessed only with specific permissions with authenticated users. On other hand on mistakes occurring during long calculations and proper generation of report with single click pulled everything and analyzing.

Moreover, on difficult in monitoring the submission everything done the system based on the reporting timeline. Limited hours of operation the system will be available 24*7. Fund will only be a challenge during initial investment but since the system will allow paperless applications then less financials will be required. The management commitment can be solved by reducing the chain and everything done in the system therefore can be easier to supervise. The poor trends of HR reports submission at PSC will be eradicated by the introduction of the system as there will be responsible individuals from each government institution to submit the required reports via the system.

It is worth noting that for smooth constructed and adopted WBHRMIS for Optimal performance and utilization of the system, PO-PSC needs to do the following:

Stakeholder's involvement

Public service should involve stakeholders in the adoption of web-based report submission and management information systems from users, ministerial level and all public institutions.

A committed change management

The adoption of WBHRMIS has an excessive effect in what manner individual's effort and essential mental and expressive sustenance all over the adoption procedure. There should be a change plan for the user to be aware of the stages to avoid resistance.

Integration of the system before implementation

Adoption WBHRMIS comprises a number of solutions such as interface, storage and processing. The system should be integrated, to avoid some of the business processes to continue without being incorporated.

Recovery plan

Disasters Recovery Plan is necessary to be available at the commencement to ensure availability of services 24*7, hence this should not wait until the disaster strike in.

The formal post implementation review involves the identification of major and minor changes be used and update versions that would produce the future system. The System provides PO-PSC with the Submission and management of records for entire Public Service HR status in simplicity, cheaper, easy and effective, more efficiently because it just clicks and typing.

6.4 Further Research

This research did not cover other related institutions. Studies could be done even in private organisations to make comparison on the challenges they are facing. Studying various types of organisations will allow different conclusions to be drawn.

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APPENDICES

Appendix i: Interview Guide for the PSC Staff

Dear Valued Respondent,

I am pursuing a Master's of Science Information Technology and System at the Mzumbe University. I am conducting a research whose theme is "To addressing the challenges facing the current Human Resources Report Submission Management System at Presidents' Office Public Service Commission. The data collected will be used for writing my dissertation. For this cause, I should be most grateful if you respond to these interview questions. The information gathered will be used for Academic work only nothing else.

1. What are users' perceptions and attitudes towards Report submission and management system at President's Office Public Service Commission?
2. What challenges do you encounter in current Report submission and management system at President's Office Public Service Commission?
3. Are you satisfied with the current system used in Report submission and management system at President's Office Public Service Commission?
4. What challenges do you encounter in managing reports at President's Office Public Service Commission?
5. How does organization doing to solve those challenges?
6. Information system has some convenience features such as, any time anywhere via online, and how are these important to users? Please explain
7. Does President's Office Public Service Commission have sufficient resource to support Report submission and management system? Which recently technology is available?
8. Do you think there is a need of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
9. In your opinion, what do you think that the Web Based Human Resource Reports Submission Management Information System at President's Office Public

Service Commission could do to encourage Staff to improve efficiency? Please explain.

10. In your opinion, do you think that the PO-PSC will benefit from adopting Web-based HRRSMS? If yes, how? If no, why not please explain?
11. Do you consider the Internet usage cost as a barrier to the adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
12. What is the political and law support regard the Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
13. What are the most significant factors affecting the adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
14. Do you think that the Public service servants consider the barriers of adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission positively or negatively?
15. What can be the benefits of using Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?

We have now come to the end of the interview questions. Thank you very much for your time to attempt these questions and please be assured that this information will be treated as private. May I repeat that the information you have given will used for academic purposes.

Appendix ii: Focus group Guide for PME staff and Human Resources Officers

Dear Valued Respondent,

I am pursuing a Master's of Science Information Technology and System at the Mzumbe University. I am conducting a research whose theme is "To addressing the challenges facing the current Human Resource Reports Submission Management System at President's Office at Public Service Commission". The data collected will be used for writing my dissertation. For this cause, I should be most grateful if you respond to these questions. The information gathered will be used for Academic work only nothing else.

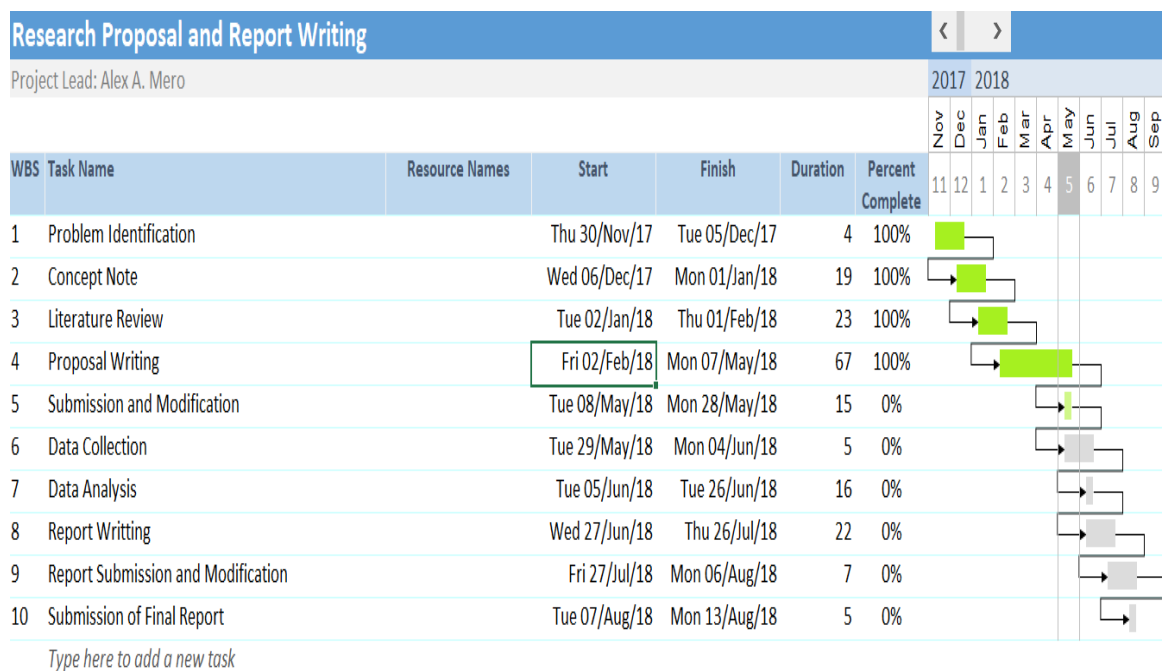
1. Do you have your own computer? If yes, how do you use it?
2. How do you manage and submit Human Resource Reports at President's Office Public Service Commission?
3. Have you ever used a system? If yes, how? If no, do you know web-based technology?
4. What do you think President's Office Public Service Commission can do better to manage Human Resource Reports?
5. What challenges do you encounter in current Report submission and management system at President's Office Public Service Commission?
6. Are you satisfied with the current system used in Report submission and management system at President's Office Public Service Commission?
7. Does President's Office Public Service Commission have sufficient resource to support Report submission and management system? Which recently technology available?
8. What challenges do you encounter in managing reports at President's Office Public Service Commission?
9. How does organization do to solve those challenges?
10. Information system has some convenience features such as, any time anywhere via online, and how are these important to users? Please explain

11. Do you think there is a need of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
12. In your opinion, what do you think that the Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission could do to encourage Staff to improve efficiency? Please explain.
13. In your opinion, do you think that the President's Office Public Service Commission will benefit from adopting Web Based Human Resource Reports Submission Management Information System? If yes, how? If no, why not please explain?
14. Do you consider the Internet usage cost as a barrier to the adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
15. What is the political and law support regard Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
16. What are the most significant factors affecting the adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?
17. Do you think that the Public service servants consider the barriers of adoption of Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission positively or negatively?
18. What can be the benefits of using Web Based Human Resource Reports Submission Management Information System at President's Office Public Service Commission?

We have now come to the end of the interview questions. Thank you very much for your time to attempt these questions and please be assured that this information will be treated as private. May I repeat that the information you have given will be used for academic purposes.

Appendix iii: Time Frame

Time is important in assuring accomplishment of the research. The time is distributed from November, 2017 to August, 2018 as shown in Gantt charts See figure 2 below.



Appendix IV: Budget

The budget for the research is a key for achieving the research goals because this is a fund actually going to be used by researcher in collecting data, analyzing them and disseminating to beneficial. The budget to be used in this research is tabulated below, see table 2. Source of this fund is private.

Resources	Quantity	Amount
A4 paper	2 Ream @ 20,000	40,000
Travel cost	20 Trip @ 20,000	400,000
Binding	6 Copies @30,000	180,000
Printing Colored Cover	6 @ 10,000	60,000
Printing A4 paper	Reports	100,000
Subsistence allowance	90 days @ 10000	900,000
System Hosting	1year @ 600,000	120,000
Miscellaneous		400,000
Total		2,200,000

**Appendix V: President's Office Public Service Commission HR Status Report
Template**

JAMHURI YA MUUNGANO WA TANZANIA

OFISI YA RAIS



TUME YA UTUMISHI WA UMMA

**TAARIFA YA UTEKELEZAJI WA MAJUKUMU YA TUME YA
UTUMISHI WA UMMA KWA ROBO YA KWANZA
(JULAI - SEPTEMBER, 2017) YA MWAKA 2017/18**

Imetayarishwa na:-

Katibu,
Ofisi ya Rais,
Tume ya Utumishi wa Umma,
S.L.P. 9143,
DAR ES SALAAM.

Utumishi wa Umma

Kwa mujibu wa kifungu cha 10 (2) cha Sheria ya Utumishi wa Umma na marekebisho yake, Tume imepewa Mamlaka ya kuwataka Waajiri, Mamlaka za Ajira na Nidhamu kuwasilisha Taarifa Tume kila robo ya mwaka inapokamilika.

Taarifa zinazowasilishwa kwa mujibu wa Mwongozo wa kuwasilisha Taarifa, ndizo zinazoiwezesha Tume kutekeleza majukumu yake ikiwa ni pamoja na kufahamu masuala ya kiutumishi yaliyotekelezwa na Mamlaka mbalimbali katika Utumishi wa

Umma kwa kipindi husika. Mchanganuo wa Taasisi zilizowasilisha taarifa Tume ni kama inavyooneshwa kwenye *Jedwali Na.4* na *Viambatisho Na.2a, 2b na 2c*.

Jedwali Na.4: Mamlaka za Ajira na Nidhamu zilizowasilisha na ambazo hazikuwasilisha Taarifa Tume

Na.	Taasisi	Idadi ya Taasisi	Idadi ya Mamlaka zilizo-wasilisha Taarifa	Idadi ya Mamlaka ambazo haziku-wasilisha Taarifa	Wastani/asilimia ya Mamlaka zilizo-wasilisha
1.	Wizara	19	11	8	58
2.	Sekretarieti za Mikoa	26	15	11	57.7
3.	Wakala za Serikali	37	23	14	62.2
4.	Idara Zinazojitegemea	21	13	8	61.9
5.	Taasisi za Umma	143	3	140	2.09
6.	Mamlaka za Serikali za Mitaa	185	40	145	21.62
	JUMLA	431	105	326	24.36

Jedwali Na.1 linaonesha wastani wa asilimia ya uwasilishaji wa taarifa kwa kila Taasisi ambapo Wizara **11** kati ya **19** zimewasilisha sawa na asilimia **58**, Sekretarieti za Mikoa **15** kati ya **26** sawa na asilimia **57.7**, Wakala za Serikali **23** kati ya **37** sawa na asilimia **62.2**. Taasisi nyingine zilizowasilisha ni Idara Zinazojitegemea **13** kati ya **21** ambapo ni sawa na asilimia **61.9**, Taasisi za Umma **3** kati ya **143** sawa na asilimia **2.09** na Mamlaka za Serikali za Mitaa zilizowasilisha taarifa **40** kati ya **185** sawa na asilimia **21.62**. Hii inadhahirisha kuwa uwasilishaji wa taarifa kwa kila Taasisi hauridhishi, kwani kati ya Taasisi **431** zinazotakiwa kuwasilisha taarifa ni Taasisi **105** tu ndizo zilizowasilisha sawa na asilimia **24.36**. Taasisi ambazo hazijawasilisha taarifa ni **326** sawa na asilimia **75.64** ya Taasisi zote.

1.1.1 Utekelezaji wa masuala ya Ajira

Takwimu zilizowasilishwa na Waajiri kuhusu masuala ya ajira katika kipindi hiki zinaonesha kuwa nafasi mpya za ajira **67** zilijazwa na hakuna upandishwaji vyeo ulifanyika kwa watumishi kutokana na agizo la Serikali la kusitisha upandishwaji vyeo; watumishi **156** walithibitishwa kazini; watumishi **41,837** walijaza fomu za Upimaji wa Utendaji Kazi wa Wazi (OPRAS) na **2,444** walipatiwa mafunzo mbalimbali.

Mchanganuo wa maeneo hayo kwa kila kundi la Utumishi ni kama inavyooneshwa kwenye *Jedwali Na.5* na *Kiambatisho Na.3*.

Jedwali Na.2: Masuala ya ajira kwa mujibu wa Mwongozo wa kuwasilisha Taarifa Tume

Na.	Kundi la Utumishi	Mamlaka za Ajira na Waajiri	Idadi ya Taasisi zilizoleta taarifa	Ajira Mpya	Kuthi-bitishwa kazini	Kupa-ndishwa vyeo	Waliojaz a fomu za OPRAS	Mafunzo mbalimbali
1.	Utumishi Serikalini	Wizara	11	0	0	0	1,973	154
		Idara Zinazojitegemea	13	0	1	0	911	536
		Sekretarieti za Mikoa	16	0	27	0	1,959	285
		Wakala za Serikali	24	67	6	0	4,666	467
		Taasisi za Umma	3	0	0	0	192	49
		Jumla ndogo			67	34	0	9,701
2.	Utumishi wa Taasisi za Umma	Wakala za Serikali	1	0	0	0	1,937	185
		Taasisi za Umma	8	0	41	0	4,331	343
		Jumla ndogo			0	41	0	6,268
3.	Utumishi wa Serikali za Mitaa	Mamlaka za Serikali za Mitaa	29	0	81	0	25,868	425
		Jumla ndogo			0	81	0	25,868
		JUMLA KUU		67	156	0	41,837	2,444

1.1.2 Utekelezaji wa masuala ya Nidhamu

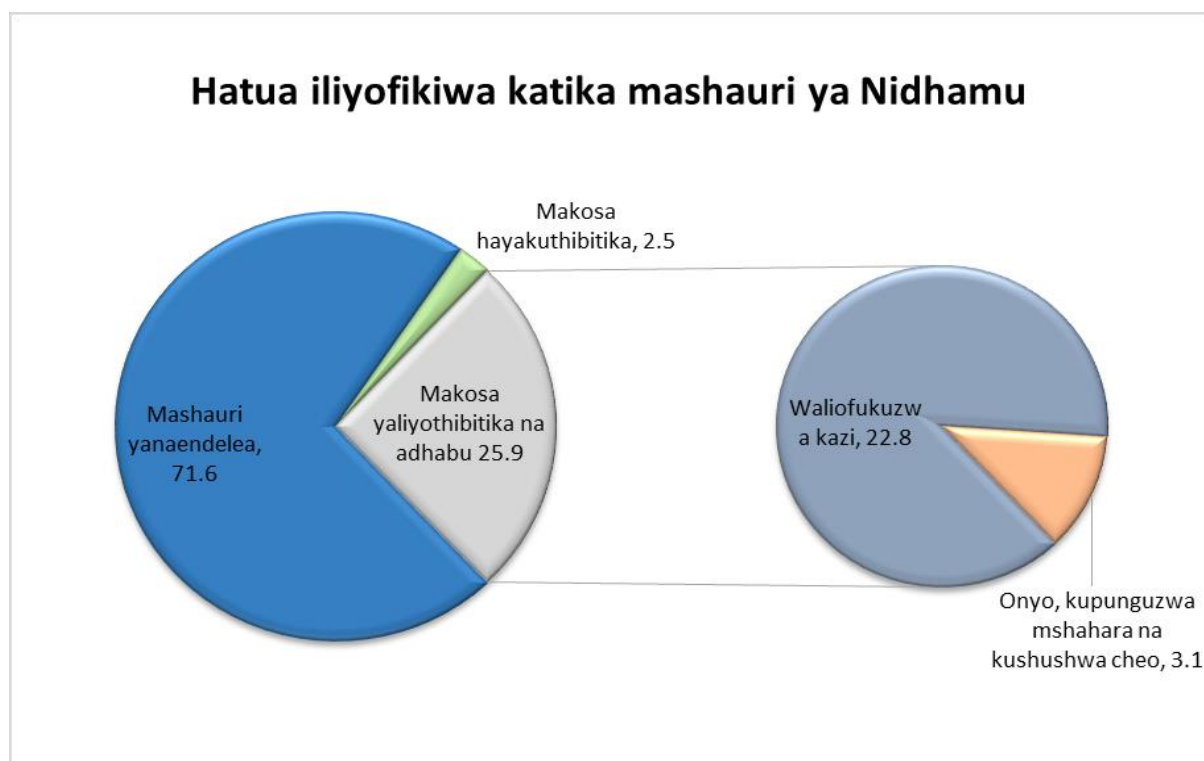
Takwimu zilizowasilishwa na Mamlaka za Nidhamu katika kipindi hiki zinaonesha jumla ya watumishi **162** walichukuliwa hatua za nidhamu na mamlaka zao. Kati ya hayo mashauri **48** yamehitimishwa ambapo watumishi **37** wamefukuzwa kazi na tisa (**9**) walirudishwa kazini. Kati ya hao tisa (**9**) waliorudishwa kazini; wanne (**4**) hawana hatia, watatu (**3**) walipewa onyo na wawili (**2**) walishushwa vyeo. Aidha, mashauri **116** bado yanaendelea kushughulikiwa.

Hatua za nidhamu zilizochukuliwa katika kushughulikia mashauri ya nidhamu ni kama inavyooneshwa kwenye *Jedwali Na.6* na *Kiambatisho Na.4*.

Jedwali Na.3: Watumishi waliochukuliwa hatua za nidhamu na hatua iliyofikiwa

Na .	Mamlaka ya Nidhamu	Idadi ya Taasisi	Jumla ya Watumishi	Hatua iliyofikiwa			
				Makosa yaliyothibitika na adhabu		Makosa hayakuthibitika	Mashtaka yanayoendelea
				Waliofu-kuzwa kazi	Onyo, kupunguzwa mshahara na kushushwa cheo		
1.	Wizara	3	16	14	1	0	1
2.	Wakala za Serikali	9	27	9	1	0	17
3.	Sekretarieti za Mikoa	3	13	4	0	0	9
4.	Mamlaka za Serikali za Mitaa	15	95	2	2	4	87
5	Idara Zinazojitegemea	5	11	8	1	0	2
	JUMLA		162	37	5	4	116

Chati Na. 1: Hatua iliyofikiwa katika mchakato wa mashauri ya nidhamu



Chati Na. 1 inaonesha kuwa asilimia **25.9** ya watumishi waliochukuliwa hatua za nidhamu makosa yao yalithibitika, asilimia **2.5** makosa hayakuthibitika na asilimia **71.9** mashauri yanaendelea. Kwa upande wa makosa yaliyothibitika, asilimia **22.8** walifukuzwa kazi na asilimia **3.1** walipewa adhabu za onyo, kupunguzwa mshahara na kushushwa cheo.

(i) Mchanganuo wa makosa ya nidhamu kwa makundi ya Utumishi

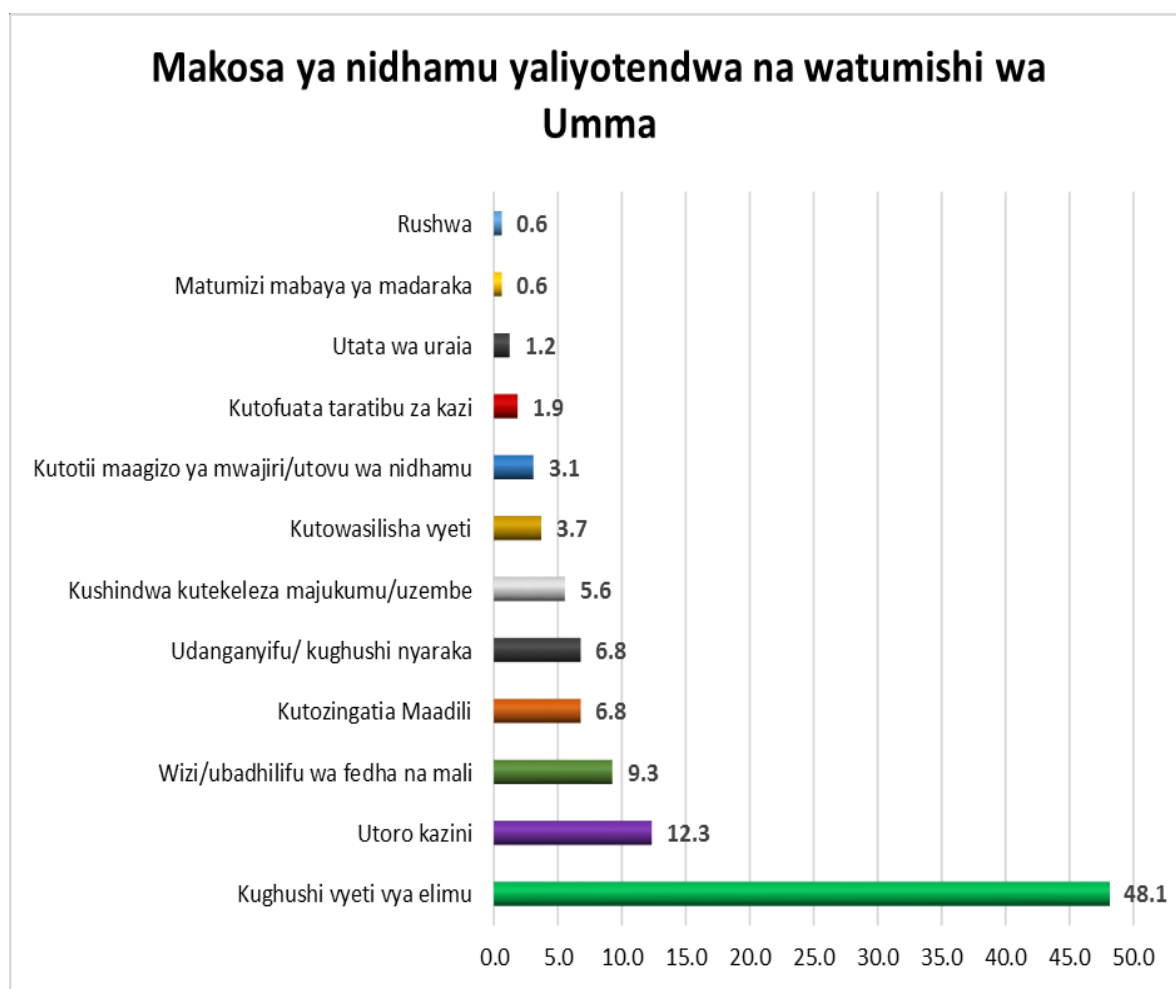
Mchanganuo wa makosa yaliyotendwa na watumishi **162** waliochukuliwa hatua za nidhamu na Mamlaka zao za Nidhamu kwa kuangalia makundi ya Utumishi ni kama inavyoonekana kwenye **Jedwali Na. 6**.

Jedwali Na. 4: Makosa ya nidhamu kwa makundi ya Utumishi

Na.	Aina ya kosa	Kundi la Utumishi			Jumla
		Utumishi Serikalini	Utumishi wa Serikali za Mitaa	Utumishi wa Taasisi za Umma	
1.	Kughushi vyeti vya elimu	27	0	51	78
2.	Utoro kazini	6	13	1	20
3.	Wizi/ubadhilifu wa fedha na mali	1	4	10	15
4.	Kutozingatia Maadili	8	2	1	11
5.	Udanganyifu/ kughushi nyaraka	2	9	0	11
6.	Kushindwa kutekeleza majukumu/uzembe	2	5	2	9
7.	Kutowasilisha vyeti	6	0	0	6
8.	Kutotii maagizo ya mwajiri/utovu wa nidhamu	5	0	0	5
9.	Kutofuata taratibu za kazi	0	3	0	3
10.	Utata wa uraia	2	0	0	2
11.	Matumizi mabaya ya madaraka	0	1	0	1
12.	Rushwa	0	1	0	1
	JUMLA	59	38	65	162

Jedwali Na.6 linaonesha makosa ya nidhamu ya watumishi **162** waliochukuliwa hatua za nidhamu kwa makundi ya utumishi ambapo kosa la kughushi vyeti vya elimu lilitendwa na watumishi **78**. Kosa hilo liliongoza kutendwa katika makundi yote ya Utumishi. Kosa lililofuatiwa kutendwa na watumishi wengi ni utoro kazini ambalo limetendwa na watumishi **20**, likifuatiwa na kosa Wizi/ubadhilifu wa fedha na mali watumishi **15**, kutozingatia maadili watumishi **11**, Udanganyifu/kughushi nyaraka watumishi **11**. Tathmini yake ni kama inavyooneshwa kwenye **Chati Na.2**

Chati Na. 2: Makosa ya Nidhamu yaliyotendwa na Watumishi wa Umma



Chati Na.2 inaonesha kuwa kosa la kughushi vyeti vya elimu ndilo lililoongoza kwa kutendwa na asilimia **48.1** ya Watumishi wa Umma waliokuwa na makosa ya nidhamu kipindi hiki. Kosa lililofuatia ni utoro kazini asilimia **12.3**, wizi/ubadhilifu wa fedha na mali asilimia **9.3**, kutozingatia maadili asilimia **6.8**, udanganyifu/kughushi nyaraka asilimia **6.8** kushindwa kutekeleza majukumu/uzembe asilimia **5.6**, kutowasilisha vyeti asilimia **3.7**, likifuatiwa na kosa la kutotii maagizo ya mwajiri/utovu wa nidhamu asilimia **3.1**. Makosa mengine ni kutofuata taratibu za kazi asilimia **1.9**, Utata wa uraia asilimia **1.2**, matumizi mabaya ya madaraka/fedha asilimia **0.6** na rushwa asilimia **0.6**.

1.1.3 Watumishi wenye kesi Mahakamani

Katika kipindi hiki watumishi **36** walikuwa na kesi Mahakamani. Kati ya hao, **24** wapo katika Utumishi Serikalini, **11** Utumishi wa Serikali za Mitaa na Utumishi wa Taasisi za Umma mtumishi mmoja (**1**). Mchanganuo wa hatua zilizofikiwa katika kesi hizo ni kama inavyooneshwa kwenye *Jedwali Na.7* na *Kiambatisho Na.5*.

Jedwali Na 5: Watumishi wenye kesi Mahakamani

N a.	Kundi la Utumishi	Taasisi	Idadi ya Taasisi	Jumla ya watumishi	Hatua iliyofikiwa		
					Wamepatikana hatia	Wameachiwahuru	Kesi zinazoendelea
1.	Utumishi Serikalini	Wizara	3	8	0	1	7
		Sekretarieti za Mikoa	4	6	1	0	5
		Wakala za Serikali	3	10	0	0	10
		Jumla ndogo	10	24	1	1	22
2.	Utumishi wa Serikali za Mitaa	Mamlaka ya Serikali za Mitaa	6	11	0	0	11
		Jumla ndogo	6	11	0	0	11
3.	Utumishi wa Taasisi za Umma	Mamlaka ya Serikali za Mitaa	1	1	0	0	1
		Jumla ndogo	1	1	0	0	1
		UMLA	36	1	1	1	34

Jedwali Na.7 linaonesha watumishi **36** wenye kesi Mahakamani kesi zao bado zinaendelea, mtumishi mmoja (**1**) ameachiwa huru na mtumishi mmoja (**1**) amepatikana na hatia.

(i) Mchanganuo wa makosa yaliyosababisha watumishi kuwa na kesi Mahakamani

Mchanganuo wa makosa kwa watumishi **36** wenye kesi Mahakamani katika kipindi hiki ni kama inavyooneshwa kwenye *Jedwali Na.8*.

Jedwali Na.6: Makosa ya Watumishi wenye Kesi Mahakamani

Na .	AINA YA KOSA	Utumishi Serikali ni	Utumishi wa Serikali za Mitaa	Utumishi wa Taasisi za Umma	JUMLA	ASILIMI A
1.	Wizi /ubadhirifu wa fedha na mali za Serikali	10	1	0	11	30.6
2.	Kughushi/Udanganyifu	3	2	1	6	16.7
3.	Matumizi mabaya ya madaraka	3	3	0	6	16.7
4.	Uhujumu uchumi	3	3	0	6	16.7
5.	Rushwa	2	2	0	4	11.1
6.	Kukaidi maagizo ya mwajiri	2	0	0	2	5.6
7.	Kulawiti	1	0	0	1	2.7
	JUMLA	24	11	1	36	

Jedwali Na.6 Figure 5.27 The Structure Diagram

linaonesha aina ya makosa saba (7) yaliyosababisha watumishi **36** kufikishwa Mahakamani. Kosa lililoongoza kutendwa na watumishi wengi ni wizi/ubadhirifu wa fedha na mali za Serikali watumishi **11** sawa na asilimia **30.6**. Makosa ya kughushi/udanganyifu, Matumizi mabaya ya madaraka na Uhujumu uchumi kila moja lilitendwa na watumishi sita (**6**) sawa na asilimia **16.7**, rushwa watumishi wanne (**4**) sawa na asilimia **11.1**, kukaidi maagizo ya mwajiri watumishi wawili (**2**) sawa na asilimia **5.6** na kulawiti lilitenda na mtumishi mmoja (**1**) sawa na asilimia **2.7**.

HITIMISHO

Tume itaendelea kutekeleza majukumu yake msingi hasa jukumu la ukaguzi wa Rasilimali Watu, kushughulikia Rufaa na Malalamiko ya watumishi yanayowasilishwa Tume, kuelimisha Wadau na Kuandaa taarifa za utekelezaji kwa wakati ili kukidhi mahitaji ya wadau na Serikali kwa ujumla.