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## Human Resource Information Systems and Employee Performance at Teacher's Service Commission in Nairobi City County, Kenya

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### ABSTRACT

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*The implementation of a Human Resource Information System (HRIS) at the Teacher's Services Commission was anticipated to enhance operational efficiency and therefore decrease the volume of communication and client visits to the commission at any given moment. The main aim of this study was to examine the relationship between human resource information systems and employee performance within the context of TSC. The study holds significance for the administration of TSC, the staff of TSC, public organizations, users of HRIS, and other researchers. The study is based on Ability-Motivation-Opportunity Theory, Social Systems Theory, Technology Acceptance Theory, Wage Fund Theory, and Resource Flow Theory. The research employed a descriptive research design. Target staff for this research constituted 144 staff at TSC secretariat. The study used purposive sampling to determine the specific TSC Secretariat that primarily focuses on use of HR systems for staff management. Consequently, the sample size remains 144 participants. The utilization of both structured and unstructured questionnaires was towards collection of primary data. The study instrument's validity was assessed using content validity, face validity, construct validity, and consultation with the supervisor and expert opinions. The reliability tests utilized Cronbach's Alpha Coefficient, with a threshold of 0.7. Descriptive statistics, such as the standard deviation and mean, was applied. The application of inferential statistics, specifically multiple linear regressions, was facilitated by the use of SPSS software. Analysis was conducted at a significance level of 0.5. The data that was evaluated was presented using tables in order to enhance the clarity of the findings. Presenting qualitative data involved the narrative presentation of narration derived from content analysis. According to the findings, the HRIS payroll interface in e-payroll is capable of calculating salaries and providing a variety of supporting jobs when it is coupled with payroll administration. It was emphasized that online recruiting makes available a number of methods for screening persons. These methods include pre-employment screening, personality evaluations, and testing, and they make it possible to choose suitable applicants who are a reflection of an organization's beliefs. Although e-appraisal systems influence human resource information systems and employee performance at Teacher's Service Commission performance when combined with other research variables, the management is not making the best possible use of the HRIS data supply in order to make appraisal decisions. These aspects of e-payroll were not investigated in this study. Therefore, in order for TSC to properly administer their e-payrolls, they need to identify the various components of e-payroll and incorporate those components into their information systems for managing human resources.*

**Key Words:** Human Resource Information Systems, Employee Performance, Teacher's Service Commission

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## **1.0 Introduction**

### **1.1 Background**

Performance of employees constitutes the outcome of actions performed by employee which are influenced with the skills and expertise. Within the realm of organization contexts, the performance of employee can be understood as the collective outcome resulting from the amalgamation of skills, exertions, and capabilities exhibited by all individuals who have made an active contribution to the productivity of the organizations and the achievement of its objectives (Bates & Holton, 2019). Enhanced organizational performance is indicative of efforts towards goal attainment, while improved employee performance necessitates additional efforts (Horgan & Muhlau, 2020). Increases in both organizational and individual performance are evidence of work toward a common objective (Horgan & Muhlau, 2020). Employee performance is crucial to a company's success, as evidenced by studies by Holman, Clegg, and Sparrow (2018). Management standards for performance evaluation provide a picture of present performance in relation to norms and can also be used to improve employee performance. Using these standards, deviations in results can be corrected (Mackay, 2018).

The United Nations (UN) is an international organization including multiple nations that operates a functional Human Resource Information System (HRIS) regarding a global level. A basic obligation in the organization is to maintain peace and foster international harmony. Consequently, the United Nations (UN) employs a substantial number of specialists who are strategically located throughout various regions globally. The United Nations (UN) administers the Human Resources Information System (HRIS) module, commonly referred to as UN Careers, with the objective of attracting highly skilled personnel. The portal serves as a visual representation of the wide range of individuals comprising the United Nations workforce, offering comprehensive professional profiles of numerous personnel stationed across different countries. Furthermore, the aforementioned example showcases the wide range of skill sets inside the business. The aforementioned positions encompass persons who occupy roles such as Police Advisor, Transport Asset Manager, Staff Development Officer, and Associate Database Analyst. It is noteworthy that these professionals are deployed in different geographical locations, namely Mali, the United States, Switzerland, and the United Kingdom (Gilles, 2020).

Chima, Mieh, and Asiedu (2018), authors of a study on performance management systems in PSEs, analyzed the views of Electricity Company of Ghana workers in a case study. According to the findings, executive authorities are required by law to implement a system for monitoring and improving staff performance within their own department. Department of Public Service and Administration (DPSA) provides guidance on the implementation of Human Resources (HR) operating system through the use of the EPMS manual and instructional workshops. One of the sister departments, the former Ghana African Management and Development Institute (GAMDI), which is now the School of Governance, was tasked with training public servants on performance



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improvement strategies so they could comprehend the purpose and implications of the new performance management systems.

The first generation of computerized human resource information systems, according to McAdams (2021), involved the switch from manual to electronic information record-keeping. Professionals in human resources were known as "personnel staff" at the time and were mostly in charge of maintaining basic records with little involvement in crucial company processes. Human resource (HR) management activities at the executive, manager, and employee levels have been transformed by the widespread adoption of technology, argues Kavanagh, Gueutal, and Tannenbaum (2020). Human Resource Information System has gained popularity since the 1960s. Incorporated into the primary company purpose during the 1960s and 1980s, human resource reporting requirements for employees significantly increased during this time. According to Anitha and Aruna (2018), the Human Resource Department surpassed other functional areas in terms of computer access and became one of the pricey computing systems' most major consumers. Despite becoming computerized and greatly expanding in size and breadth during this time, HRIS systems remained straightforward record-keeping mechanisms.

### **1.1.1 Employee Performance**

Employee performance refers to the method in which an individual employee fulfills their job responsibilities and successfully accomplishes the activities that are needed of them. The efficacy, caliber, and efficiency of their product are all considered aspects of its performance. The evaluation of an employee's value to a business is also influenced by their performance (Ndou, 2021). Employee performance refers to an employee's capacity to proficiently accomplish assigned tasks, contingent upon their possession of a current job description and a comprehensive understanding of their corresponding obligations (Waterson & Heywood, 2018).

According to Ahuja (2020), efficiency refers to the ability to achieve desired objectives while minimizing resource utilization. The efficacy of human resource information systems (HRIS) in enhancing productivity has been empirically demonstrated through their ability to streamline processes and expedite outcomes compared to traditional manual methods. Human resource information systems (HRIS) have the potential to be utilized in diverse scenarios. Human resource planning and strategic planning are also addressed, as are issues such as attendance reporting and analysis, attrition rates, and training costs.

There are a number of indications that may be used to gauge how effective human resource information systems (HRIS) are, including better recruitment tactics, stronger internal communications, increased employee engagement, and improved HR manager competencies. The effectiveness of Human Resource Management (HRM) has been boosted by the implementation of various information technologies. A linkage between human capital strategies and the most pertinent technology solutions is an imperative task for human resource management departments. As part of the proposed initiative, an eHR organization that places a premium on individual integration with business strategy was set up to better accommodate the needs of both individuals and businesses as they change over time. The aforementioned requirements promote the adoption of electronic health records (eHR). According to Julia (2021), the implementation of Human Resource Information Systems (HRIS) has been found to contribute to the acceleration of decision-making processes, support the creation of development strategies, and improve the management of human resources.



Human resource information systems (HRIS) can be regarded as a tool utilized by organizations, regardless of their scale, to effectively handle various operations, including recruitment, training, and payroll, by using software solutions (Sadiq, Khan, Ikhtlaq & Mujitaba, 2021). Facilitating rewards management, including enrollment, status modifications, and updates to personal information are all part of what make an HRIS efficient (Kovach & Cathcart, 2018). An HRIS can also be used to analyze and assess staff data, keep company-related documents like employee handbooks, disaster evacuation protocols, and security guidelines up-to-date.

According to a study by Otieno (2020), the HRIS can improve enterprises' cost efficiency and customer-focused solutions. Otieno further explains that HRIS has the capacity to streamline organizational activities, which paves the way for improved decision-making, superior customer service, and minimized time and resource waste. These characteristics assist the attainment of a competitive edge inside markets by businesses. states that HRIS facilitates human resource professionals' achievements. The HRIS monitors personnel qualifications, demographics, performance evaluation, training, and development.

### **1.1.2 The Teachers Service Commission**

The 1950s saw the beginning of the Teachers Service Commission (TSC), a time when teachers, supported by outgoing the then President Daniel Moi, vigorously pushed for the development of a unified teacher organization. The TSC was not formally established until 1967, though. Since the Kenya National Union of Teachers (KNUT) was established in 1957, there has been a consistent need for the establishment of a national organization to handle the business and issues of all teachers. Educators were needed at all levels of government, from the federal to the municipal, and even the missionary community. As a result, there were significant disparities in their economic status and other working conditions.

With a focus on guaranteeing high standards of instruction, the TSC's main goal is to establish itself as a powerful teaching service that makes significant, beneficial changes in the field of education. To assure the delivery of high-quality education and advance general development, the Teaching Service Commission (TSC)'s main goal is to increase the professionalism of the teaching profession. All TSC personnel are expected to uphold the established norms of professional behavior, which is where the basic values of TSC are most heavily weighted. It is envisaged that staff members will respond to customer needs with a higher level of responsiveness. Employees who conduct themselves in a way that demonstrates principles of honesty, elevated moral and ethical standards, and a consistent adherence to their professional responsibilities are said to have integrity. Both the goals outlined in Chapter 6 of the Constitution and the Code of Conduct and Ethics for Teachers are in line with this (TSC Portal, 2022).

The TSC HRIS includes the Human Resource Management Information System (HRMIS) as a primary point of entry. One can see how the web tool may be used to assess the efficiency of the secretariat staff at the TSC County and Sub County offices in action on the demo page. The primary responsibility of each TSC Sub County Director is to oversee and evaluate the work of the secretariat staff members assigned to their area. It also streamlines the process for handling teachers' absences. The aforementioned leaves encompass medical, parental, educational, and compassionate reasons for taking time off. According to the TSC Portal (2022), all employees have the right to request leaves of absence, provided that the necessary paperwork is submitted.



The portal also provides a way for TSC staff to update their personal information. Options include updating details like a new contact person, and requesting replacement or additional health insurance cards. Payment gateway could be used to describe TPAY. The information provided gives a general overview of the compensation package, which includes the basic income, supplementary allowances, and other financial benefits that an educator within a particular occupational classification receives. The web application is an essential part of the payroll system, as it is responsible for creating a digital pay stub for each TSC worker. Therefore, both the gross and net remuneration are specified in great detail. Financial companies, like TPAY, can more easily handle employee financial obligations including loans and salary advances. TPAY allows for efficient administration of employee compensation data (TSC Portal, 2022).

## **1.2 Statement of the Problem**

Performance can be defined as the outcomes of an individual's actions within an organizational context, which are contingent upon the individual's knowledge and skill level. The performance of employees within organizational settings is a culmination of the collective talents, endeavors, and capabilities exhibited by all individuals involved (Delorme & Arcand, 2021). Contemporary organizations encounter several risks and unforeseen circumstances that impact their operational dynamics. Several factors contribute to the dynamics of contemporary organizations, including globalization, continuous technical advancements, shifts in roles within and between firms, and the influence of trade unions on performance (Forster, 2019).

Warui, Mukulu, and Karanja (2019) assert that the Teacher Service Commission (TSC) has experienced substantial growth since its establishment through the enactment of the Parliament Act Cap 212 in 1967, both in terms of the number of teachers it caters to and the size of its secretariat personnel. The secretariat was officially established as a constitutional office by means of parliamentary legislation, namely Act 237(1) of 2012. Consequently, it was anticipated that there would be an enhancement in service delivery to clients and an improvement in overall performance. As the largest employer in Eastern and Central Africa, this organization is responsible for overseeing a substantial payroll. Human Resource Information System (HRIS) deployment was supposed to boost productivity, reducing the need for constant customer communication and office visits. It is noteworthy to mention that the commission implemented an ICT department in 2003; yet, the administrative physical documentation remains extensive.

According to a report conducted by the Salaries and Remuneration Commission (2019), the utilization of manual systems for payroll management in Kenyan National Government Ministries remains prevalent, despite the availability of an integrated human resource management information system (HRMIS). This practice, which is discouraged in order to enhance performance outputs, has been identified as a noteworthy observation. The findings of the Capacity Assessment and Rationalization of Public Service (CARPS) revealed that the existing workforce in the Ministries lacks an effective evaluation system to inform decisions regarding employee recruitment. Consequently, this has led to the prevalence of malpractice within National Government Ministries, such as the Ministry of Education, and has subsequently impacted performance at the Teachers Service Commission (TSC).

From the studies highlighted, some of the studies focused on foreign nation depicting contextual gaps as shown by Arbi and Moussa (2020) whose study was based in Tunisian companies: While Nyakoe (2021) focused in large manufacturing firms whereas the current study was based at TSC hence, their findings would not be applicable to TSC. Other studies were based in manufacturing

sector and banking sector which were considered absolutely different from the current study. Other studies did not adopt all the variables that had been incorporated in the current study resulting in research gaps considering that this study focused on e-payroll management systems, e-recruitment systems, e-performance appraisal systems and e-training systems and their influence on employee performance at TSC. Therefore, this study sought to fill the contextual, empirical and conceptual gaps by conducting a study on HRIS on employee performance.

### **1.3 Objective of the Study**

To determine the relationship between Human resource information systems and employee performance at the Teachers Service Commission in Nairobi City County, Kenya.

## **2.0 Literature Review**

### **2.1 Theoretical Review**

#### **2.1.1 Ability-Motivation-Opportunity Theory**

The AMO framework was first introduced by Bailey (1993), wherein it was posited that the attainment of an employee's discretionary effort necessitated three essential elements: the possession of requisite abilities by workers, the presence of suitable motivation, and the provision of opportunities for employee participation by employers. The foundational elements that underpin the contributions of workers to the workplace and their own well-being are ability, motivation, and opportunity. If one of the variables assumes a value of zero, the following equation will likewise evaluate to zero. According to Gupta (2018), the efficacy of personnel, notwithstanding their proficiency and enthusiasm, is contingent upon their opportunity to make meaningful contributions to the organization. Without such opportunities, their potential for growth and development may be hindered.

The theory of AMO posits that job performance is contingent upon a confluence of factors, namely talent, motivation, and fortunate conditions. Hatch and Cunliffe (2015) provide a more comprehensive analysis of the employee's capacity, motivation, and willingness to contribute. In the context of job performance, it is imperative to acknowledge the significance of all three factors. The employment of individuals, who exhibit high scores in the dimensions of Agreeableness, Conscientiousness, and Openness, yet display self-centered behavior and a lack of collaboration inside an organization, has detrimental effects on both employee morale and overall productivity. Consequently, the inclusion of well-being was incorporated into the equation, which can be expressed as follows: The concept of well-being can be represented by the multiplication of variables A, M, and O. In the event that the value of a component is 0, the resulting sum will likewise be zero.

The theory is relevant in this study in the manner that it provides the understanding of specific human resource packages, namely those that enhance abilities, motivation, and opportunities, have an impact on employee performance. This theory lends credence to the present study on employee performance. Leaders within a business might employ this particular method as a means to enhance the productivity of their staff members. A business that assigns equal importance to all three variables is more likely to achieve success compared to a business that neglects one or two of these factors. The achievement of a corporation is contingent upon the endeavors of its staff. By prioritizing these three domains, firms can enhance employee performance and achieve their objectives more efficiently. The assessment of an employee's productivity can be conducted by



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human resources specialists through the consideration of factors such as aptitude, motivation, and opportunities.

### **2.1.2 Social Systems Theory**

Ludwig von Bertalanffy (1956) states that social systems theory is a subset of systems thinking or as the intended result of systems engineering and science. The primary focus of systems theory is on generalizations that can be applied to a wide variety of system types. One illustrative instance involves the incorporation of Ludwig's theory of social systems as the fundamental basis for human resource management (HRM). The fundamental basis of the social systems theory lies in the deterministic perspective of systems being akin to machines. This viewpoint is expounded upon following an examination of the benefits associated with employing a comprehensive (social) theory as the first foundation for constructing one's theoretical framework.

There are two types of systems, according to Bretz, Milkovich, and Read (2015): open and closed. Instead of keeping all of their information, energy, and resources to themselves, open systems share them with others. Because no social system can be wholly enclosed or open, systems are typically categorized as either generally closed or open. The degree to which a system can adapt to new information is what distinguishes a closed system from an open one. While open systems show reactivity to changes in the environment, closed systems show a lack of sensitivity to environmental variations.

Theory's proponent, according to Fox, Bizman and Garti (2012), believe that modern HRIS makes HR outsourcing possible by automating and delegating routine administrative and compliance functions that were previously handled in-house by corporations. The functions encompassed within this category consist of payroll management, benefits administration, and regulatory reporting. Consequently, the utilization of Human Resource Information Systems (HRIS) not only facilitates substantial cost reduction in HR operations for organizations, but it also allows them to evaluate the necessity of maintaining internal HR skills. Conversely, the utilization of Human Resource Information Systems (HRIS) affords human resources professionals the chance to actively engage in the comprehensive strategy development process of the organization.

Systems theory, when applied to e-performance appraisal, can help managers see their employees not as an expense but rather as an integral part of the company's overall functioning. This can inform the managers' approach to HR initiatives. Consequently, it promotes the prioritization of social processes over individual conduct and proposes a novel position for the individual inside the internal milieu of the organization. Furthermore, it delineates a novel function for the individual inside the framework of the organization.

### **2.1.3 Technology Acceptance Theory**

The Technology Acceptance Model (TAM) was developed by Davis (1989) with the purpose of investigating the various elements that influence the adoption and utilization of information technology (IT), specifically in the context of recruiting and selection procedures. The primary objective of the Taking All Users into Account (TAM) framework was to establish a comprehensive and substantiated theory of computer acceptance. This theory was designed to effectively elucidate user behavior across diverse end user groups and across various computing platforms. The Technology Acceptance Model (TAM) can be seen as a modification of the well-recognized Fishbein and Ajzen's Theory of Reasoned Action. Its purpose is to elucidate the use of individual systems within the professional setting, specifically focusing on enhancing service



delivery. An example of this is the application of TAM to elucidate the processes involved in the recruitment and selection of personnel inside organizations.

The use of the technology acceptance theory is relevant in this study as it assists in addressing the topic of e-recruitment. The theory facilitates comprehension and identification of the requisite acceptance conditions for the effective installation of Human Resource Information System (HRIS) software for employee recruitment inside a company. This study illuminates the perspectives of HR specialists who utilize HRIS, as well as the level of acceptance they have towards the system. Furthermore, the theory presents a framework for identifying probable factors that influence the acceptability of technology, offering prospective remedies for issues related to system inactivity.

#### **2.1.4 Wage Fund Theory**

The Wage Fund Theory was formulated by John Stuart Mill. The Wage-Fund Doctrine, a topic of significant scholarly interest, is thoroughly examined in John Stuart Mill's renowned work, *Principles of Political Economy*, which was released in the year 1848. In his theory he stated that employers keep a fund out of the total capital secured to pay the wages. The aforementioned phenomenon is contingent upon the interplay between labor supply and demand, commonly referred to as the population-to-capital ratio. In this context, the phrases "population" and "capital" pertain specifically to the monetary value that is in active circulation within the economy. The wage rate can be determined by dividing the wage fund by the labor force. The ability to raise the wage rate is contingent upon either an augmentation of the wage fund or a reduction in the workforce. According to Tarfadar and Ragu (2018), there exists a direct association between wage rate and wages fund, while an inverse relationship is observed between wage rate and labor force.

Within the context of this investigation, the theory is of utmost significance since it contributes to the accomplishment of the goal that is associated with electronic payroll. This implies that it is advisable for online payroll systems to offer a centralized and authoritative database, necessitating the input of employee information just once. The probability of encountering data input errors is significantly diminished, especially when the task involves entering information for each pay period related to wages and salaries. The utilization of online payroll systems mitigates the likelihood of errors due to the decreased occurrence of manual data entry, hence minimizing the potential for erroneous information to be inputted. Online payroll solutions offer various benefits, and one such advantage is the facilitation of direct deposit payroll tax payments. Regrettably, internal payroll systems often fail to meet this criterion of reliability. Failing to meet a designated timeframe can incur significant costs and perhaps lead to the imposition of punitive measures.

#### **2.1.5 Resource Flow Theory**

Richard Hopeman (1969) developed a theory of industrial dynamics that was grounded in the concept of resource flows. According to Forrester, his theory elucidated the manner in which the success of a corporation is contingent upon the interplay among many organizational elements, such as information, materials, money, personnel, and capital equipment (Koontz, 2012). In the context of this scenario, individuals employed within an organization adhere to a predetermined trajectory spanning from their first recruitment to their eventual departure. The phenomenon under consideration is commonly referred to as human resource flow, and its evaluation holds significant importance for businesses and human resource managers, as it can effectively contribute to enhancing employee development through the implementation of training programs.





The study incorporates the information flow theory to highlight the potential of e-training systems in facilitating sustainable returns for firms with superior resources, such as highly skilled personnel. The development of human resource flow is facilitated by the transformation of workforce values, the engagement with external institutions, and the promotion of external institutional training. The management of human resource flow is intricately connected to the development of both organizations and individuals. The strategic consideration of the organizational perspective has traditionally been overlooked inside organizations. However, there is currently a growing recognition of the significance of managing human resource flow policies as critical considerations.

## **2.2 Empirical Review**

Walichio, Amuhaya, and Muchelule (2021) conducted research to learn how the payroll management system in Vihiga County, Kenya, affects worker productivity. The study was of a descriptive nature. The total number of people who were supposed to take part in the study was 1689, but only 313 of them ended up really doing so. Both quantitative and qualitative information were gathered by means of questionnaires. In the analysis, stratified sampling was used. The study used both descriptive and inferential statistics to examine the data. Research revealed that a business can facilitate round-the-clock availability of funds to its employees through the implementation of a comprehensive payroll pay card system. The HRIS payroll interface, when integrated with payroll management, has the capability to execute several supplementary functions such as generating pay stubs and producing payroll reports. The present study aims to investigate the collective aspects of HRIS (Human Resource Information Systems) and employed a simple purposive sampling method. This is in contrast to the study titled "Influence of Payroll Management on Performance of Non-Governmental Health Organizations," which focused primarily on the payroll system and utilized a stratified random sampling design.

The study conducted by Mosonik, Sang, and Rop (2022) investigated the relationship between electronic recruitment (e-recruitment) and organizational performance in a sample of selected commercial banks located in Nakuru City, Kenya. 105 individuals working at the selected banks with e-HRM implementations made up the study population. A census was taken of the entire population, and comparative analysis was used to draw conclusions. There was use of the survey. We used both descriptive and inferential statistics to examine the data. The research concluded that businesses might save up to 90% of their hiring costs by adopting an efficient electronic recruiting (e-recruitment) strategy within their Human Resource Information System (HRIS). Human resource (HR) managers have been able to devote more time and energy to strategic planning and research because to technological advancements that free them from administrative burdens. As a result, HR strategies can be more effectively coordinated with the company's overarching goals. The purpose of this research is to analyze the effectiveness of electronic training, recruitment, payroll, and evaluation systems at the Teachers Service Commission in Nairobi, Kenya. Still, the research seeks to electronic recruitment, and organizational performance are connected at a subset of commercial banks in Nakuru, Kenya.

The study carried out by Kihera and Gulati (2021) examined the impact of the human resource information system implemented by CISCO Systems Ltd. on the process of HR planning. The study employed a descriptive research design. The intended audience consisted of 250 employees at the management level. The research utilized a sample size consisting of 70 individuals who were employed as employees. The participants were selected through a rigorous and systematic random



sampling method. The data was analyzed using SPSS. The utilization of HRIS-based processes has been found to be associated with increased levels of staff commitment and enhanced service offerings to clients, as evidenced by the study. The use of a Human Resource Information System (HRIS) as a means of conducting assessments remains a costly endeavor that requires continual organizational restructuring and resource allocation, including staff training. In contrast to the present investigation, which seeks to exclusively involve people who engage with HRIS, the author focused on individuals at the management level, in addition to the study's population.

Wanyama and Mutsotso's (2019) research attempted to analyze how commercial banks in Kenya reacted to staff productivity and capacity building programs. The study used a survey approach with a sample size of 46 banks and 2,738 employees. A representative sample of 349 workers was chosen using a stratified random sampling technique. Interviews and self-administered questionnaires were used to compile information for the study. Performing the data analysis required the use of the computer program SPSS. The use of e-learning and the success of commercial banks was found to have a strong relationship. Managers can utilize an automated skills inventory to identify employees who possess essential competencies. The prior study employed purposive sampling and focused just on one organization, whereas the current study utilized stratified random sampling and conducted a survey across multiple banks.

The research conducted by Birungi and Katumba (2021) aimed to assess the effectiveness of human resource information systems (HRIS) in augmenting employee performance within the context of Stanbic Bank Kenya. Research has shown that the Human Resource Information System (HRIS) is assuming a growing significance in the strategic decision-making procedures of the Human Resources (HR) department. Consequently, this development has a substantial and advantageous influence on the overall performance of the organization. Another study, conducted by Sadiq et al. (2012), reveals that businesses exhibit reluctance in using an HRIS unless they are fully convinced of the benefits offered by this system. In contrast, Sadiq et al. (2012) highlights several prominent benefits of HRIS, such as enhanced precision, expedited and efficient information retrieval, and financial savings.

### **3.0 Research Methods**

The present research study employed a descriptive research design. It is centered on acquisition of factual information through the systematic inquiry by the questionnaires. The primary objective was to show the provided set of circumstances in their original form, with minimal alteration of data. Descriptive research is characterized by the absence of researcher control over variables within the study, with its primary objective being the provision of a comprehensive report on observed phenomena (Trochim, 2008). The population of study consisted of 1, 500 employees from the TSC Secretariat. However, the study purposively selected 144 employees who directly interact with the human resource information systems. Purposive sampling, as described by Orodho and Kombo (2019), involves the deliberate selection of units for investigation, such as individuals, cases/organizations, or pieces of data, based on the researcher's assessment. In general, the sample size tends to be quite limited, especially when compared to probability sampling methods.

This research utilized both structured and unstructured questionnaires as a means of gathering primary data. Questionnaires are relatively easy to administer when surveying a large population since they save on time as well as cost (Gujarati, 2021). For structured questionnaires, the data was categorized into two sections with the first focusing on the study's demographic makeup while



the second section collected data about the e-payroll management, systems, e-recruitment systems, e-performance appraisal systems and e-training systems. For unstructured questions, they provided more granular interpretation of the respondent's opinion as stated by Cohen (2019).

To facilitate data collection, the researcher obtained an introductory letter from Kenyatta University and a research license from the National Commission for Science, Technology, and Innovation (NACOSTI). The letters served as an introduction to the institution where data was collected from. The researcher engaged the contact individual facilitating the research logistics for the study at the site which is the TSC Secretariat. This was in order to access the best channel for questionnaire delivery to the respondents as well as receive the necessary approvals to clear protocols within the secretariat. Once approval was issued, the questionnaires were delivered to the respondents and the intended objective for the study was communicated to the respondents as well.

Prior to statistical analysis, collected data was checked to confirm that the coding of responses is accurate. After data had been coded, it was cleaned to remove survey errors in preparation for first data capture coding and editing (Haier, 2020). The application of inferential statistics was utilized in order to evaluate and interpret the data that was gathered. The study utilized descriptive statistics, specifically the mean as a measure of central tendency and the standard deviation as a measure of data dispersion. In this study, inferential statistics was utilized to examine the collected data and quantify the causal linkages that exist between the variables. The use of multiple regression analysis as well as correlation analysis was employed in order to accomplish this goal. The Statistical Package for the Social Sciences (SPSS), more precisely Version 26, was utilized in order to do an analysis on the data. For qualitative data, it involved the systematic examination and interpretation of non-numeric, textual, or conceptual information to uncover pattern's themes and insights. In order to arrive at conclusions, content analysis focused on locating and classifying particular words, phrases, or ideas within the data. This was done in order to draw conclusions. The results obtained from the process of content analysis were presented in a narrative format. Changes on dependent variable, namely human resource information systems, have an impact on the independent variable, which is employee performance. The purpose of this investigation was to make an attempt at forecasting employee performance by making use of several types of explanatory variables, including electronic payroll management systems, electronic recruitment systems, electronic performance appraisal systems, and electronic training systems.

The Pearson correlation coefficient was utilized to ascertain the nature of the relationship between the independent variable, namely employee performance, and the explanatory factors, which include e-payroll management systems, e-recruitment systems, e-performance appraisal systems, and e-training systems. These elements elucidate the determinants of employee performance. The study examined the strength and direction of the linear relations between each set of data. Furthermore, a correlation analysis was conducted to ascertain the presence of statistical evidence for a linear association between the variables under investigation in this study. Adherence to ethical standards is critical for preserving the integrity of research and ensuring that it is conducted responsibly and ethically. The researcher ensured that confidentiality is maintained throughout the period of this study. The researcher methodically constructed a questionnaire with the purpose of avoiding any deliberate or unintentional distress or injury to the participants included in this study. The research-maintained objectivity by prioritizing academic objectives and employing non-commercial interactions to collect data from participants. Lastly, the researcher sought to use an



introduction letter from the school which prompted an informed consent from respondents during actual data collection.

## 4.0 Results

### 4.1 Descriptive Analysis

#### 4.1.1 E-Payroll Management Systems and Employee Performance

**Table 1: E-Payroll Management Systems**

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
E - payroll increases speed of paycheck calculation	128	3.007	1.439
The information generated from the e- payroll helps the organization in determining performance rewards	128	2.953	1.525
E-payroll facilitates prompt processing of salary data for involuntary deductions and analysis.	128	3.609	1.475
When it comes to managing both monetary and in-kind benefits, electronic payroll is invaluable for keeping track of employees' absences.	128	2.593	1.599
E – payroll ensures ease of use of the payroll instructions	128	3.109	1.651
E – payroll provides for more flexibility in payroll management	128	3.703	1.300
<b>Average Mean &amp; SD</b>		<b>3.16</b>	<b>1.49</b>

**Source: Survey Data, (2024)**

From the analysis, the highest mean in the presentation revealed that E – payroll provides for more flexibility in payroll management as shown by (mean=3.703; SD=1.30). Although the least mean showed that the information generated from the e- payroll helps TSC in determining performance rewards as depicted by (mean=2.953; SD=1.439). The overall responses from the analysis revealed that e-payroll systems had effect on employee performance at Teacher’s Service Commission, with an overall (Mean=3.16; SD=1.49.). According to the findings, the use of technology to manage payroll was the first major use of technology to an HR-related problem. Simultaneously, it was discovered that such payroll systems frequently held a useful store of employee information, such as data regarding staff payments, absenteeism level, and other personnel personal data. When combined with payroll administration, an HRIS payroll interface may calculate salaries and provide a variety of supporting activities such as pay-slip generation and payroll report generation. Walichio, Amuhaya, and Muchelule (2021) investigated the effect of payroll management system on employee performance in Vihiga County Government, Kenya, and discovered that with a comprehensive payroll pay card, an organization can offer its employees 24/7 access to funds and on-time pay no matter what, and that When combined with payroll administration, an HRIS payroll interface may calculate salaries and provide a variety of supporting activities such as pay-slip generation and payroll report generation. A human resource information system (HRI) may be



closely related to, or possibly a component of, an integrated financial management system (IFMIS).

#### 4.1.2 E-Recruitment System and Employee Performance at Teacher’s Service Commission

**Table 2: E-Recruitment System**

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
E-recruitment allows for in-depth evaluations of recruitment trends and patterns, which can then be used to inform marketing strategies.	128	3.929	1.130
E-recruitment gives companies access to a complete database for monitoring applicants.	128	3.476	1.414
E-recruitment through timely access to information assures cost reduction in the recruitment process.	128	2.382	1.573
E-recruitment facilitates speedy recruitment process.	128	2.718	1.285
E-recruitment allows the organization to develop a profile of their staff’s roles and responsibilities.	128	4.125	.955
E-Recruitment reveals labor turnover trends for effective applicant tracking.	128	3.390	1.305
<b>Average</b>		<b>3.33</b>	<b>1.27</b>

From the highest mean obtained, it was noted that e-recruitment allows the organization to develop a profile of their staff’s roles and responsibilities. This is shown by (M=4.125; SD=0.955). While the lowest mean revealed that e-recruitment through timely access to information assures cost reduction in the recruitment process which was an indication that there were no cost reduction. This was provided by (M=2.382; SD=1.573).

Overall, the investigation revealed that e-recruitment methods had an effect on employee performance at Teacher’s Service Commission in Nairobi, with an overall mean (M=3.33; SD=1.27). According to the findings, e-recruitment was positively and significantly associated to performance. This indicates that internet recruiting provides a number of methods for screening individuals, such as pre-employment screening, personality evaluations, and testing, allowing one to pick suitable candidates who match an organization's values and culture with minimal human interaction. The model's ratings thus retained automation of the recruitment and selection operation. The findings also revealed that this research variable plays one of the most important functions in the HR department. Mwangi and Mghanga (2019) explored the effects of e-recruitment and e-learning on human resource performance: a case study of Telkom Kenya and found similar results. They established that firms can convey changes in human resource policies and processes more simply through the intranet or web portal. Managers have access to personnel



records, while employees have access to personal information about their employment status and rights.

#### 4.1.3 E-Appraisal System and Employee Performance at Teacher’s Service Commission in Nairobi City County.

**Table 3: E-Appraisal System**

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
E–performance appraisal enhances production of up-to-date HR-score card information for performance management	128	3.921	1.434
E-performance evaluations streamline HR scorecard automation for better performance monitoring in your organization.	128	3.257	1.514
E–performance appraisal enhances accessibility to information for labor planning and management	128	3.578	1.2
Performance based appraisals systems allows employees to submit requests which are automatically escalated to their line manager for feedback purposes	128	2.601	1.518
Collaboration and communication may take place in real time between managers and HR specialists due to connectivity.	128	3.64	1.361
use of performance-based appraised feedback results in high employee commitments	128	2.531	1.248
<b>Average Mean &amp; SD</b>		<b>3.25</b>	<b>1.37</b>

The analysis revealed based on the highest mean depicted that E–performance appraisal enhances production of up-to-date HR-score card information for performance management. This is evidenced by (M=3.921; SD=1.434). However, the least mean revealed that the use of performance-based appraised feedback results in high employee commitments as shown by (M=2.531; SD=1.248).

The findings revealed that e-Appraisal Systems had a considerable effect on staff performance at Teacher’s Service Commission in Nairobi, with an average (M=3.25; SD=1.37). The findings demonstrated that management is not making optimal use of the HRIS data supply to make appraisal judgments, although e-appraisal systems influence TSC performance when combined with other study variables in this study. Given some of the positive scores related to real-time communication, quick access to performance information, monitoring and evaluation tools, and the role of HR in appraisal, the human resources play a very important role in aiding the appraisal of staff at TSC and also whether it concerns employee hiring and firing or employee motivation. The findings were positively correlated with those of Ondari and Ondiba (2019), who investigated the effect of appraisal systems on employee performance at public universities in Kenya and discovered that the performance management process necessitates the connection of employees,



managers, and HR professionals for real-time collaboration and communication. Throughout the performance management process, performance management enables HR departments to be more proactive, timely, and responsive.

#### 4.1.4 E-Learning and Employee Performance at Teacher’s Service Commission in Nairobi City County.

**Table 4: E-Learning**

Statement	N	Mean	Std. Deviation
E- Learning helps in monitoring skills and competencies	128	3.687	1.326
E- Learning ensures availability of well updated pool of skillful staff.	128	2.351	1.482
E-learning enhances effectiveness of generation of data on employees’ training needs	128	3.539	1.309
E-learning can support training needs analysis for decisions on career management and succession planning	128	3.851	1.261
E-learning enhances user friendly instructions for learning and development process	128	2.484	1.402
E-learning provides for accuracy in evaluation and feedback of training data	128	2.554	1.362
<b>Average</b>		<b>3.07</b>	<b>1.37</b>

#### Source: Research Data (2024)

Table 11: provided analyzed data about the influence of e-learning and employee performance at TSC. From the responses provided, the study depicted that from the highest mean response, it was noted that e-learning can support training needs analysis for decisions on career management and succession planning and this was represented by (M=3.851; SD=1.261). From the other analysis, the results also provided least mean showing that e- learning ensures availability of well updated pool of skillful staff which majority of respondents were in disagreement as evidenced by (M=2.351; SD=1.482).

The findings revealed that e-learning system had a significant effect on employee performance at Teacher’s Service Commission, with an average (M=3.07; SD=1.37). According to the study, ICT-based learning programs highlight specific success elements such as flexibility in managing learning periods, active participation of educators, and the establishment of control mechanisms that ensure training efficacy. The goal is usually to provide training that engages individuals, stimulates them to embrace change, and drives development. The goal of employee training is to assist employees in determining their professional development alternatives and goals. As a result, it makes a significant contribution to retention management opportunities, which improves organizational performance in the long run. These findings were consistent with those provided by Wanyama and Mutsotso (2019), who investigated the relationship between capacity building systems through training and employee productivity on performance of commercial banks in Kenya and discovered that the e-learning module included a web-based skill inventory that was



designed to assist in the development of a list of specific skill sets as employees completed their own online individual assessment.

#### 4.1.5 Employee Performance at Teacher’s Service Commission.

**Table 5: Employee Performance at Teacher’s Service Commission in Nairobi City County.**

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
HRIS enhances the efficiency of service delivery	128	3.679	1.303
HRIS improves effectiveness of database provision of employee reports	128	3.625	1.397
HRIS enhances service quality to meet customer satisfaction	128	2.226	1.538
Application of HRIS enhances use of HR score card to enhance job satisfaction	128	3.132	1.294
HRIS allows for rapid and efficient access to information for decision making.	128	3.828	1.286
HRIS enhances HR planning	128	4.039	1.41
<b>Average Mean &amp; SD</b>		<b>3.42</b>	<b>1.37</b>

According to the findings, human resource information systems enhances database provision of employee turnover reports which helps in enhancing HR planning as depicted by a mean of (M=4.039; SD=1.41). Still, from same responses, the least response was shown by the statement indicating that HRIS enhances service quality to meet customer satisfaction. However, majority of respondents were in disagreement in the manner that there are still cases of complaints about employees mode of management where staff still experience unsatisfactory services.

The data revealed that HRIS had a substantial influence in determining the state of employee performance at Teacher’s Service Commission in Nairobi, with an average mean (M=3.12; SD=1.37). The study established that there is a transformation of the human resource role in that HR capabilities enable TSC decision makers to effectively manage their organization, for example, ways HRIS allows for efficient management of teacher data, including personal information, qualifications, training records, performance evaluations, and attendance. This streamlines administrative tasks such as payroll processing, leave management, and performance reviews, allowing the TSC to allocate resources more effectively. While implementing and maintaining an HRIS requires an initial investment, it can lead to long-term cost savings for the TSC. By reducing manual paperwork, streamlining processes, and improving efficiency, HRIS can help the TSC save time and resources, ultimately leading to cost savings over time. The findings were closely related to those of Kagehi (2021), who investigated the challenges of implementing Human Resource Information Systems in Kenya's information technology industry; a survey of selected IT firms revealed that HRIS contribute positively to organizational efficiency and thus to employee performance.



## 4.2 Inferential Statistics

### 4.2.1 Correlation Analysis

**Table 6: Correlation Analysis**

		Employee Performance	E-Payroll Management System	E-Recruitment System	E-Appraisal Systems	E-Learning System
Employee Performance	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	128				
E-Payroll Management System	Pearson Correlation	.883**	1			
	Sig. (2-tailed)	.000				
	N	128	128			
E-Recruitment System	Pearson Correlation	.914**	.775**	1		
	Sig. (2-tailed)	.000	.000			
	N	128	128	128		
E-Appraisal Systems	Pearson Correlation	.942**	.859**	.851**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	128	128	128	128	
E-Learning System	Pearson Correlation	.957**	.921**	.878**	.935**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	128	128	128	128	128

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The presentation on table 6: was meant to demonstrate how the correlation analysis was performed. The purpose of the research was to establish significance of each variable against employee performance at Teacher’s Service Commission. As a result, the correlation between e-payroll management systems and the employee performance at Teacher’s Service Commission was calculated to be ( $r=0.883$ ,  $P=0.00$ ). Due to the fact that the p-value of 0.000 was lower than the specified level of significance of 0.05, the relationship was considered to be statistically significant.

From the additional analysis, it was discovered that there is a positive association between e-recruitment systems and the employee performance at Teacher’s Service Commission, with a correlation coefficient of ( $r=0.914$ ,  $P=0.000$ ). As a result of the fact that the p-value of 0.000 was lower than the level of significance that was stated, which was 0.05, the association was regarded as being statistically significant. Still, the analysis revealed that there was a significant positive association between the characteristics of the e-Appraisal Systems and the employee performance at Teacher’s Service Commission, with a correlation value of ( $r= 0.942$ ,  $P=0.000$ ). Since the p-value of 0.000 was less than the declared significance criterion of 0.05, the relationship was considered statistically significant. Lastly, from the study findings, it was established that there is a positive association between e-learning System and the employee performance at Teacher’s Service Commission, with a correlation coefficient of ( $r=0.957$ ,  $P=0.000$ ). The observed relationship was considered to be statistically significant based on the p-value of 0.000, which was below the predetermined significance threshold of 0.05.



#### 4.2.2 Multiple Regression Analysis

**Table 7: Linear Regression Analysis Model**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 <sup>a</sup>	.875	.871	.55266

a. Predictors: (Constant), e-payroll management systems, e-recruitment systems, e-appraisal systems and e-learning systems

According to the findings of the model summary, 0.875% (87.5%) of the changes in the employee performance at Teacher’s Service Commission could be explained by the change of e-payroll management systems, of e-recruitment systems, e-Appraisal Systems and e-learning System. As a result, the proportion that is still unexplained could be accounted for by other factors that are not included in the model, which contributed 12.5% of the total.

**Table 8: Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	262.862	4	65.715	215.158	.000 <sup>b</sup>
	Residual	37.568	123	.305		
	Total	300.430	127			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), e-payroll management systems, of e-recruitment systems, e-Appraisal Systems and e-learning System

In the study represented on table 8: it was determined through an analysis that each of the following variables had a significant effect on employee performance: the e-payroll management systems, of e-recruitment systems, e-appraisal systems and e-learning system. Therefore, as a result of the analysis, it was found that the regression model had indicated a significance level of 0.000%, which demonstrates that the data used in this study was suitable for drawing conclusions about the population parameters because the level of significance was found to be less than 0.05, which is the threshold at which conclusions can be considered valid. The value of F (215.158), which does not change, is calculated by dividing the mean of the regression by the mean of the residue. The significance value shown by this value, 0.000, is considered to be lower than the approximated value of 0.05, being a realization that the data was significant for making conclusion that is, the predictor variables, which are e-payroll management systems, of e-recruitment systems, e-appraisal systems and e-learning system shows the variation in the dependent variable, which is employee performance at Teacher’s Service Commission.

**Table 9: Regression Coefficient Test Results**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.123	.158		.774	.440



Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
E-payroll management system	1.227	.091	1.148		13.460	.000
E-recruitment	-.928	.104	-.865		-8.908	.000
E-appraisal	.186	.146	.160		1.278	.204
E-learning	.393	.114	.362		3.445	.001

a. Dependent Variable: Employee Performance

The analyzed data revealed that there was positive and significant association between e-payroll management systems and employee performance at Teacher’s Service Commission at TSC ( $\beta$  1.227,  $t=13.460$ ,  $p$  value  $<0.05$ ). The analysis implied that a unit change in e-payroll management systems improved employee performance at Teacher’s Service Commission by 1.227 units when holding other factors constant. The findings revealed that there was a negative and statistically significant relationship between e-recruitment systems and employee performance at Teacher’s Service Commission, ( $\beta$ ) -0.928,  $t=-8.908$ ,  $p$  value  $<0.05$ ). The analysis implied that a unit change in e-recruitment systems affected level of employee performance at Teacher’s Service Commission by -0.928 units when holding other factors constant. It was established that there was a positive and significant relationship between e-Appraisal Systems and employee performance at Teacher’s Service Commission, ( $\beta$ ) 0.186  $t=1.278$ ,  $p$  value  $<0.05$ ). The analysis implied that a unit change in e-appraisal systems improved level of employee performance at Teacher’s Service Commission by 0.186 units when holding other factors constant. Further analysis proved that there was a positive and significant relationship between e-learning system and employee performance at Teacher’s Service Commission, ( $\beta$ ) 0.393,  $t=3.445$ ,  $p$  value  $<0.05$ ). The analysis implied that a unit change in e-learning System affected level of employee performance at Teacher’s Service Commission by 0.393 units when holding other factors constant.

## 5.0 Conclusions and Recommendations

### 5.1 Conclusions

In conclusion, based on e-payroll, HR professionals were tasked with delegating tasks to third-party contractors with expertise in specific HR processes or sets of related tasks. Human resource professionals will be able to contribute to organizational decision making in a more productive and efficient manner as a result, while also saving the organization time and money through a decrease in the number of staff hours spent on transactional tasks made possible by improved reporting and analysis. The research shows that e-recruitment has a major impact on productivity. This shows that this organization would do better if they hired more qualified and skilled staff. Therefore, it is reasonable to assume that information gathered from HR databases can be put to use in the identification of possibly competent internal applicants at the operational level.

The study concluded that management may not be making optimal use of the HRIS data supply when deciding on performance, despite the fact that e-performance management only influenced performance when combined with other study variables. It was discovered that this was the reason why effective assessments lacked a strong linear relationship. It can be deduced that the e-learning



capacity allows for the formulation of core competency requirements against roles, at all levels of the organization, and is measured against the competencies of the roles in the context of e-learning. Also, it provides opportunities for workers to advance in their skill sets via training and professional development.

## 5.2 Recommendations

The findings of the research postulated that there are indicators of e-payroll TSC application; however, the study also emphasized that there are some characteristics of e-payroll that may influence Teacher's Service Commission performance that were not evaluated in this study. These characteristics could have an effect on Teacher's Service Commission's performance. Therefore, the study recommends that in order for TSC to properly administer their e-payrolls, they need to identify the various components of e-payroll and incorporate those components into their information systems for managing human resources. The TSC will be able to undertake calculations that have an effect on the TSC as a whole, such as cost reductions in HR operations, with the assistance of further payroll management, which will result in an improvement overall performance.

The results of the study findings suggest that TSC performance is affected by e-recruitment. The findings of the study revealed that a number of respondents did not agree with the assertion that e-performance appraisal management enables users to communicate with one another in real time. As a result of this, it is strongly recommended that the management of Teacher's Service Commission look into the reasons why their e-performance management system does not improve real-time communication. This can be made better by supplying users with the required communication equipment, which may assist them in monitoring their levels of performance.

According to the findings of the study, the process of e-learning has an impact on performance various roles with Teacher's Service Commission. The study recommends that the management of Teacher's Service Commission should look into other factors besides e-learning and development processes as components of human resource information systems. These factors have the potential to have a significant impact on performance and the management should find a place for these factors within the systems so that performance can be improved. Training employees will also provide employees with the information and abilities necessary to carry out activities in an effective and efficient manner, which will increase performance over the long term.

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