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Electronic- Recruitment Practice (E-Rp) and Service Quality Delivery in Public Universities In Kenya: The Interaction Role of Organizational Factors

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Abstract: Automating recruitment tasks and practices is transforming the traditional paper-and-pencil, labor-intensive HR tasks, into efficient, fast-response activities that enable organizations to anticipate and break even from environmental shifts to create a much needed competitive advantage. Even though the e-recruitment concept is widely used today, there is a missing link between the e-recruitment practices and service quality delivery in public universities in Western Region of Kenya. It is on this basis that the study undertook to: assess the influence of electronic recruitment on service quality delivery and to investigate the moderating role of organizational factors on the relationship between e-recruitment practices and service quality delivery. The study used mixed methods research design which included exploratory, correlational and survey research designs. The target population of this study comprised of 5,467 staff and student leaders drawn from the six (6) public universities in the Western Region of Kenya. Accessible population comprised of 360 respondents drawn from teaching and administrative staffs. Purposive sampling method was used for sampling Human Resource Officers and student leaders while stratified random sampling was used for sampling teaching and administrative staff. The study used structured questionnaire for data collection from the teaching and administrative staff; interview schedules for collecting data from HROs, while nominal group discussions were used on student leaders. Descriptive and inferential techniques were used to analyze quatitative data while themes were identified from qualitative data. The results indicated that electronic recruitment had a significant positive influence on service quality delivery (ß = 0.0467; $p < 0.05$). On moderation, the results indicated that organizational factors had a negative significant effect on the relationship between electronic recruitment and service quality delivery (ß = -0.077; $p < 0.05$). The study recommends that management of public universities in Kenya upgrade their commitment towards supporting implementation of e-recruitment practices; review policies so as to align them with the changing technological environment to realize better quality service delivery and also create supportive organizational environment to enhance use of e-recruitment. The study also recommends that further studies be carried out on e-HRM practices in production industry and other institutions in Kenya.

Keywords: E-Human resource management, e-training management, service quality delivery.

1.0 BACKGROUND

Electronic human resource management concept has attracted discourse both in practice and academia. Organizations have recognized the importance of integrating information technology in their functions and operations. The term Electronic Human Resource Management (e-HRM) was coined in the 1990s and refers to conducting HRM activities with the use of the internet or the intranet (Lengnick-Hall & Moritz, 2003). Strohmeier (2007) defined e-HRM as the application of information technology for networking and supporting at least two individual or collective actors in performing HRM activities. Since the mid-1990s, organizations have increasingly embraced electronic human resource management under different names, for instance, electronic Human Resource Management (e-HRM), Digital Human Resource Management (D-HRM), Green Human Resource Management (e-HRM), or Web based Human Resource Management.

Online recruitment systems enable organizations to share important details about the positions available and also provide more specific information such as job descriptions, organization's culture or brand identity and job incentives (Stone and Lukaszewsky, 2013). The most common practices used for online recruitment involve adding recruitment pages to existing organization websites; Using specialized recruitment websites such as job portals, online job boards; developing interactive tools for processing applications; and using screening techniques (Galanaki, 2002).

Parry and Wilson, (2009) categorized e-recruitment into two: corporate web site for recruitment and commercial jobs boards (such as monster.com) for posting job advertisements. For corporate websites a company develops its own website with a link for job posting/career options where candidates can log into for current openings. For commercial job boards for recruitment, a company advertises its vacant positions on other website that specialize in recruitment. Institutions generally adopt a recruitment method that suits their size and budget for recruitment. Further, the size and nature of the fraction that applies for an organization's vacancies will be affected by how (and to whom) the organization communicates its vacancies.

Clarke, (2006) argued that while recruiting and hiring efforts are already a major component of the standard HR department's responsibilities, this area is naturally a great choice for wide-sweeping "Electronincing." Here, HR departments do hiring and recruiting more of a workforce that is aware of, and personally more committed to electroninc matters than the typical job candidate. By hiring those who are already aligned with e-friendly environment living in their own lives, the workforce is then populated by an easier group to work with toward the greater goals of departmental or even organization-wide Electronincing (Clarke, 2006).

E- Recruitment allows storing great amounts of CVs online, which makes the process unconstrained by geographical locations. Online job advertising allows companies to open all the information regarding job to the applicants since the first contact (Ravindra and Pallavi, 2011). Electroninc selection happens when during the process of selection to fill job vacancies, companies consider candidates "IT concern and interest" as selection criteria. Another strategy for electroninc selection is when interviewing candidates or evaluating them for selection, IT information management related questions are asked by those companies selecting applicants who have been engaging in electronincing as consumers under their private life domain is yet another form of electroninc selction (Opatha, 2013).

After shortlisting candidates based on application documents and CVs, HR officers can ensure that the next steps of the selection process will evaluate the candidates' aptitude to have electroninc behaviors. An ordinary question about use of IT in handling operations during an interview or a group dynamic that mixes a business case with sustainability issues are two easy ways to understand someone's degree of IT awareness. In the end, electroninc score can also be given to each candidate and added to the overall spreadsheet of scores that will ultimately rank the top candidates (Renwick *et al*., 2008).

According to Jackson *et al*., (2011), technology allows companies to become paperless and for HR this can well start with newcomers. Online portals and folders can be used to archive employees' documentation such as offer-letters, credentials, CVs or recommendation letters. Not to mention that nowadays CVs are mostly sent throughout the internet, with no need of being print. It can as well be used with current employees' health insurance or car contracts, salary or information on other benefits.

1.1 Electronic Human Resurce Management in Public Universities in the Western Region of Kenya

A survey of university websites and web content content analysis in Kenya indicates that all universities have established websites on which they display corporate information. The websites provide a platform on which advertising of vacant positions and giving information about positions in the establishment of the respective universities is uploaded for purposes of reaching out to the public, both local and international. Besides the websites, information gathered from the HROs of respective universities covered under this study indicates that the universities have adopted and engaged the Enterprise Resource Planning (ERP) software system to help them in managing some financial and administrative operations.

Universities have embraced online teaching of students, virtual training of staff, and circulation of training materials is done online. Other online platforms that have been used to enhance e-HRM practices include use of emails, WhatsApp, facebook, twitter, Linkedin as for instance use of email for official communication, WhatsApp, twitter, Linkedin for communication and sharing e-resources. Virtual meeting platforms such as Google meet; Zoom, Webex, and Kenet have been adopted by universities to carry out online meetings and trainings.

1.2 Concept of Service Quality Delivery

The term 'Service Quality' is an association of two different words; 'service' and 'quality'. Service means "any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Gefen (2002) defined service quality as the subjective comparison that customers make between the quality of service that they receive and the one they get. In another definition, Kalidas (2007) defined service quality as the ability of a service provider to satisfy a customer in an efficient manner through which he can better the performance of business.

Service quality delivery has widely been discussed since 20th century and its idea is still relevant to help today organizations in creating differentiation and gaining competitive advantage in an era of borderless world and globalization (Ismail, *et al*.,. (2016). In a quality management literature, quality service delivery is often seen as a multi-dimensional construct as illustrated in the following research studies:

The seminal work on service quality by Parasuraman *et al.*, (1985), identified ten dimensions of service quality from 97 items which were considered important in assessing customer's expectations and perceptions on delivered service. The ten dimensions were; tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding, knowing, customers, and access. Later in 1991, Parasuraman and his associtaes through an empirical test developed five dimensions of service quality based on the ten dimensions he developed in 1985. Factor analysis on a data set of 22 attributes revealed five dimensions which include tangibles, reliability, responsiveness, assurance and empathy. Tangibles include aspects such as the physical facilities, equipment, and appearance of personnel. Reliability is the ability to perform the desired service dependably, accurately, and consistently while responsiveness is the willingness to provide prompt service and help customers. Assurance concerns employees' knowledge, courtesy, and ability to convey trust and confidence to the customers while empathy entails the provision of caring, individualized attention to customers (Parasuraman *et al.,* 1991).

Gronroos (1990), and Lehtinen and Lehtinen (1991) conceptualized three similar classification of service quality. Gronroos (1990), classified quality dimensions as technical quality, functional quality and corporate image while Lehtinen and Lehtinen (1991) conceptualized service quality as physical quality, interactive quality and corporate quality. The technical and functional dimensions by Gronroos and Lehtinen are consistent with Nordic school of thought which holds the view that, effective quality service delivery should have two important dimensions, namely technical and functional quality. Technical quality is what customers receive from services provided by an organization and functional quality is about how an organization delivers its services to customers (Brady & Cronin, 2001). Later, the quality service delivery construct has been modified and simplified by US school of thought where it proposes that effective quality service delivery should have five specific dimensions, namely tangible (physical facilities, equipment, and appearance of workers), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customer and provide prompt service), assurance (knowledge and courtesy of workers and their abilities to inspire trust and confidence), and empathy (caring, individualized attention the organization provides its customers) (Ismail and Yunan, 2016).

Owlia and Aspinwall (1996) conducted a factor analysis of 30 items on service quality and extracted 7 dimensions of academic resources, support services, competence, attitude, delivery, content and reliability. The researchers later regrouped the seven dimensions into four dimensions after conducting three validity tests. The four dimensions are of academic resources, competence, attitude and content. The three constructs of support services, delivery and reliability were not valid and were dropped from the service quality measurement framework.

Carney (1994) proposed nineteen attributes of measuring service quality in a college. These attributes are student academic qualification, student personal qualities, interaction between faculty and students, quality of instruction, availability of varied courses, academic reputation, class size, career preparation, athletic programs, student social life activities, service renderd to community, facilities and equipment, location, physical appearance of the campus, on campus residence, friendly, caring atmosphere, religious atmosphere, safety on campus and financial costs and aid availabe. Researchers have acknowledged that most of these variables are highly relevant to the measurement of service quality in university context. Some of these attributes by Carney are similar with Athiyaman (1997), who adopted eight aattributes to examine university education services namely; availability of library services, computing facilities, recreational facilities, teaching the students well by faculty, level and difficulty of subject content, workload given to students and student numbers in each class and availability of university staff to be consulted by students.

Hadikoemoro (2002) in a research study that focused on public and private universities captured thirty five items of service quality after conducting two focus group interviews and after factor analysis seven items were dropped and 28 items remained and five dimension of service quality were extracted as follows academic services, readiness and attentiveness, fairness and impartiality, tangibility and attitudes. Academic services concern the ability of the university to perform services dependably and accurately, and also the completeness of academic-support facilities. Readiness and attentiveness dimension is about the university willingness and attentiveness to help students, and provide prompt service at all times. Fairness and impartiality on the other hand concerns the ability of the university to implement democratic campus regulations and apply discipline to all members. Tangibility is about the appearance of the university based on complete and modern equipment, physical facilities and neatness of employees. General attitudes cover fairness of grading and courteous handling of student issues.

Yusof, Rahman, & Ghouri, (2012) in their study on Educational Service Quality at Public Higher Educational Institutions targeting research universities and non-research universities in Malasyia concluded lack of significant difference in the importance educational service quality dimensions between research universities and non research universities. From the student perspective they identified ten dimension of educational service quality namely; reliability, assurance, empathy, responsiveness, tangibles, communication, expertise, secondary services, social responsibility and self-development.

A research study by Owino, (2014), guided by a positivist paradigm and a cross sectional sample survey design, collected data from 750 students who were randomly selected from public and private universities in Kenya. The study through factor analysis extracted four constructs of service quality conceptualized as human elements reliability dimension (α value = 0.912), human elements responsiveness dimension (α value = 0.898), non-human elements /physical evidence (α value = 0.899) and service blueprint (α value = 0.833). Service blueprint demension was considered by the study as new and unique dimension to the Kenyan context. This study demonstrated that service quality theorist can discover more service dimensions specific to a different service context due contextual variations.

It is evident from the discussed literature that the main concern in developing the dimension of service quality is about the customers targeted customer preferences and context where the study is being conducted. It is also evident that, most studies on service quality conducted in universities target students both at undergraduate and post graduate level as the respondents. Very limited studies have explored the perspective of faculty and administrative staff in universities. There is even more scanty evidence on studies that target to generate data from multiple perspectives of both internal and external customers of universities. Different dimensions of service quality have been ued used for different industries. However, there are some similarities on some adopted dimensions (Lagrosen, 2004). Extant literature reveals that many authors have developed service quality dimensions according to their customers, customers' preferences and the context of the study and the most utilized dimensions of service quality are those developed Parasuraman and his colleagues. Kang and James, (2004) observe a concurrence in thought that the service quality model developed by Parasuraman and his asociates is widely acceptable in the measurement of service quality in different contexts (Parasuraman, Berry, and Zeithaml, 1985). Based on the conceptual gaps identified in literature, the study sought to explore the link between e-HRM and service quality from faculty, administrative staff and student perspectives in public university context.

This study therefore covered five specific dimensions of service quality namely; tangibles which included physical facilities and equipment, reliability which involved consistency and dependability in service provision, responsiveness which involved willingness by the service provider to help customers and provide prompt service, assurance which involved ability to convey trust and confidence, and empathy which involve showing care and individualized attention by the service provider.

customer experience which considered aspects like time taken, resolution of complaints, costs involved, behavior of service givers; tangible factors for instance physical facilities, equipment, and appearance of workers), reliability which involves ability of staff to perform the promised service dependably and accurately; responsiveness which involves willingness to help customer and provide prompt service; assurance which involves knowledge and courtesy of workers and their abilities to inspire trust and confidence in the customers; and empathy which involves caring, individualized attention the organization provides its customers. It also covered the aspects of service culture and employee engagement as measures of quality service delivery.

1.3 Concept of Organization Factors

Stone, *et al*., (2006) observed that every organization has its own culture which affects its ability to compete and respond successfully to changes in the external environment. The changes in the external environment in turn determine if the organization will succeed or fail. On the other hand, Sole (2009) observed that there are two basic factors which influence performance management systems in public organization. These are internal and external factors. Internal factors include leadership and internal management commitment, internal resources, performance-oriented culture, employee engagement, and maturity of PMS. Leadership is important in designing relevant policies and documenting work procedures that would help in providing guidance and ensuring consistency in decision making. Sole (2009) observed that culture can be thought of as the sum total of beliefs, ideologies, behaviors and values prevalent in organizations, which can influence organization power relationship and their response to change. It could have a great impact on its success if the employees are involved and motivated during the development of the performance measurement and management system. Experience in performance management and measurement systems will affect the system implementation and also its end results.

1.4 Statement of the Problem

Universities are regarded as service organizations. There have been widespread concerns that rapid expansion of higher education has led to a degradation of quality, particularly in the lower-income countries of Africa,

Asia and Latin America as manifested variously in poor physical infrastructure, overcrowded classrooms, curricula that do not respond to market needs, academic staff without the required qualifications, or moonlighting in multiple institutions (Tilak, 2013; Altbach *et al.*,. 2009; Tetty & PHEA 2009). Mulili, (2014), observed that constrained service delivery contributes to increased customer complaints which are an indicator of customer dissatisfaction. Widespread dissatisfaction of both interal and external customers affects the reputation of universities and its ability to attract and retain customers leading to poor perfomance (Agarwal 2009; Oketch 2016; Pitan & Adedeji 2012; McCowan *et al.*,. 2017). Literature reveals that e-recruitment has the potential to improve service quality and as a result improve employee satisfaction and commitment (Bondarouk e al, 2017; Ruel *et al.*, 2007; Kovach *et al.*, 2002).

A survey through documented literature reveals that public universities have adopted electronic recruitment practice (e-RP), however, there is limited documentation on the link between e-RP and quality service delivery. Evidence suggest contextual variations on service quality between public and private universities with no significant difference between research and non-research universities from student perspectives (Yusof *et al.*, 2017; Owino 2014). However, studies focusing on service quality from multiple perspectives are scanty and therefore this study explored e-HRM and service quality from teaching staff, administrative staff and student perspectives.

Research on e-RP continue to report mixed results, with some studies reporting positive and significant results (Bondarouk e al, 2017), while other studies report non significant results (Ruel *et al.*, 2007). Chapman & Webster (2003) argue that e-RP has been found to achieve less than expected. Rather than e-RP freeing up time for human resource practitioners, it just shifted the same duties to online platforms (Gardner, Lepak, and Bartol 2003). In brief, e-RP did not improve HRM services.This view is consistent with Reddington & Hyde, (2008) who noted that e-RP results are not always as positive as commonly assumed. Other studies show that human resource professionals have been unsuccessful in using technology to initiate and support strategic decisions (Dery & Wailes, 2005), and therefore e-HRM technology is primarily used to simply support routine administrative human resource tasks and that, line managers reported contradictory results when using e-HRM (Haines & Lafleur, 2008; Hussain, Wallace, & Cornelius, 2007; Ball, 2001).

Conceptual review revealed conceptual gaps in e-RP and service quality constructs that calls for more research. The concept of e-RP lacks convergence on definition, categorization and conceptualization (Ball, 2001; Bondarouk, Harms, & Lepak, 2015; Bondarouk & Ruël, 2009; Haines & Lafleur, 2008; Ngai & Wat, 2006; Ruta, 2009; Strohmeier, 2009). Scholars agree that service quality is a multi-dimentional construct; however, divergence is evident on the number of dimensions and measures (Yusof *et al.*, 2017; Owino, 2014; Ramaiyah, & Ahmad, 2007).

Even though the e-RP concept is gaining acceptance today, there is still a missing link between the e-RP practices and quality service delivery in public universities and therefore this study sought to contribute in filling the identified gaps.

1.5 Purpose

The purpose of this study was to assess the influence of e-RP on service quality delivery in public universities in the Western Region of Kenya.

1.6 Specific Objectives

The specific objectives of this study were:

1. To assess the influence of electronic recruitment on service quality delivery.
2. To evaluate the moderating role of organization factors on the relationship between e-HRM practices and service quality delivery.

1,7 Research Hypotheses

Research hypotheses for this study were:

H_{01}: Electronic recruitment has no significant influence on service quality delivery

$H_{1a:}$ Organization factors have no moderating effect on the relationship between electronic recruitment and sevice quality delivery.

1.8 Significance of the Study

The study generated findings that would be beneficial to the universities' management, policy makers and the Government of Kenya. The findings provide an empirical backing to support the universities' management and Ministry of Education in policy making and coming up with intervention measures aimed at addressing the effect of e-RP on quality service delivery in public universities in Kenya. Additionally, the findings create awareness to universities' management and policy makers about the influence of e-RP on quality service delivery. This would enable policy makers and implementers in designing more meaningful intervention measures that would inspire public universities and other Higher Education Institutions to maintain good relations between them and their customers. Finally the findings of this

study provide documentation on e-RP and quality service delivery in universities in the Western Region of Kenya and act as a basis for further research. The findings will also be benefitial to scholars and students in human resource discipline.

1.9 Justification for the Study

Limited research has been carried out to generate findings that would provide empirical documented information on the influence of e-RP on quality service delivery so as to help the universities' Management and policy makers in Kenya. Additionally, there was limited awareness about the influence of e-RP on quality service delivery in public universities in Kenya. This made it hard for policy makers and implementers to design more meaningful intervention measures that would inspire the universities and other Higher Education Institutions to maintain good relations between them as service providers and their customers. This study will be carried out to address these gaps and improve on universities' and policy makers' understanding of the influence of e-RP on quality service delivery.

1.10 Scope of the Study

The study assessed the effect of e-RP on quality service delivery in public universities in the Western Region of Kenya; and was conducted in six public universities namely; Masinde Muliro University of Science and Technology (MUUST), Kibabii University (KIBU), Maseno University, Kisii University, Jaramogi Oginga Odinga University of Science and Technology (JOOUST) and Rongo University. The study adopted the mixed method research design. The target population of the study comprised of HROs, teaching and administrative staff and student leaders from the Students Governing Councils (SGC).The data was collected between the months of May and June, 2019 using questionnaires for teaching and administrative staff, interview schedules for HROs and nominal discussion groups for student leaders. For purposes of this study, the Western Region of Kenya covers 10 counties namely; Bungoma, Busia, Kakamega, Vihiga, Siaya, Kisumu, Migori, Kisii, Nyamira and Homa Bay.

1.11 Limitations/Delimitations

The first limitation of this study was that data collection was limited to six public universities in the Western Region of Kenya. Census method of sampling was used to sample all the six universities as representative of all the public universities and random sampling was used to sample teaching and administrative staff. Secondly, constructs of e-RP and quality service delivery were measured through survey tools developed by the researcher. To minimize the error, the tools were moderated by experts and piloting was done to detect any outliers for exclusion from the tools. Factor analyis was also carried and all items that were retained had acceptable factor loadings treshold. Cronbach's Alpha Coefficient was used to test internal reliability of the instrument and all the coefficients of the study constructs were above 0.8 way beyond the minimum threshold of 0.7. The study targeted teaching, administrative staff and students leaders in public universities in the Western Region of Kenya. Random sampling method was used to come up with a representative sample that was used to generalize the results of the study.

1.12 Assumptions of the Study

In this study, it was assumed that during data collection, the respondents would give genuine responses to the items covered in the questionnaire and interview schedule.

1.13 Operational Definition of Terms

Operational definition of terms for this study was as presented in Table 1.

Table 1: Operational Definition of Terms

Term	Operational Definition
Electronic recruitment management practice	The use of the website of the company and other electronic platforms as recruiting tool for attracting candidates and receiving e-applications (Swaroop, 2012).
Organization Factors	Factors that influence the way things are done within any given national organization, the rules and regulations that are enforced, normal or expected patterns of behavior, and even the structure of the organization (Baumont, *et al.*, (2000).
Service quality delivery	A comparison of perceived expectations (E) of a service with perceived performance (P), giving rise to the equation QS=P-E. (Lewis and Blooms, 1983); (Burbock, 2014).

2.0 RESEARCH METHODOLOGY

2.1 Introduction

This chapter presents the methodology that was used in the study. It covered; research philosophy, research design, area of study, target population, sampling procedure and sample size, data collection instruments, piloting of the

instruments, validity and reliability of the research instruments, data collection procedures, data analysis procedure and ethical considerations.

2.2 Research Paradigm

This study was guided by the realists' philosophical approach. Hall (2014) observed that realists' philosophical approach is quantitative and that it is dominated by the process of hypotheses testing with the purpose of confirming or not confirming the hypotheses. This approach is based on objectivity, neutrality, measurement and validity of the result thus allowing for operationalization of hypothetical concepts as well as generalization of the results (Hall, 2014). This approach has been considered because it reflects this study's procedures and methods, objectives, hypotheses formulation, operationalization and measurement of variables quantitatively and qualitatively.

There are three possible positions mixed methods researchers can take to adopting a paradigm to underpin their research. These are the a-paradigmatic stance, the multiple paradigm stance and the single paradigm stance (The original six stances of Teddlie & Tashakkori, 2003) have been reduced to three by grouping several under the multiple paradigm stance). Three approaches to paradigm choice have been identified here, namely the a-paradigmatic approach, the multiple paradigm approach and the single paradigm. Of these it has been argued that the single paradigm stance is the only defensible approach. However, existing single paradigms do not provide a satisfactory basis for all mixed methods research. Pragmatism fails to give a coherent rationale for mixed methods due to its lack of a clear definition of 'what works'. The transformative-emancipatory paradigm is limited to a small subset of all social research and for this reason cannot be considered as a paradigm for mixed methods (Hall, 2014). A realist approach has been suggested as an alternative single paradigm. This approach has been applied widely in the field of program evaluation as well as in other areas of social research. It does not suffer from the limitations of the pragmatism and transformative paradigms discussed above, and support the use of mixed methods. It has the potential with further development to provide a much-needed paradigm for mixed methods research (Hall, 2014).

2.3 Area of Study

In this study, research was carried out in the following six public universities in the Western Region of Kenya: Masinde Muliro University of Science and Technology (MMUST), Kibabii University (KIBU), Maseno University, Kisii University, Jaramogi Oginga Odinga University of Science and Technology (JOOUST) and Rongo University. From the literature reviewed, limited research has been carried out on electronic HRM practices in public universities in this region. Despite the fact that most public universities in this region were established in the information technology era (from the 1980s), no study has been carried out in the area of Electronic HRM, thus there is limited or scanty documented information. The public universities in the Western region of Kenya were selected for this study because they operate in a unique environment that favor operationalization of E-HRM practices.

2.4 Research Design

This study adopted a mixed methods research approach where explanatory, correlational and survey designs were adopted. Mixed methods research approach presents more than one approach to examining a research problem. Tashakkori and Creswell (2007) observed that mixed method is characterized by focus on research problems that require an examination of real-life contextual understandings, multi-level perspectives, and cultural influences. It also entails an intentional application of rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of the constructs. Mixed methods research draws on the strengths of quantitative and qualitative data gathering techniques to formulate a holistic interpretive framework for generating possible solutions or new understandings of the problem (Cresswell and Plano, 2007). This study focused on real life contextual situations in public universities in the Western Region of Kenya, particularly on diverse aspects of electronic human resource management and service quality delivery. It handled both quantitative and qualitative data in assessing the influence of e-HRM practices on service quality delivery which were considered to require the mixed method research approach.

2.5 Target Population

The target population of this study was 5,467 teaching and administrative staff, 6 human resource officers, and 42 student leaders from the Students Governing Council (SGC) from the six universities in Western Region. Teaching staff and administrative staff comprised of 1,343 and 4,124 employees respectively. In the study, admintrative and teaching staff were considered as the main target population for the reason that in as much as they are the primary service providers to both internal and external customers, they are the main consumers of the e-RMP services and not the students. For instance, all practices on human resourcing, compensation and benefits, training and development staff relations, staff discipline affect the staff directly more than they do affect students.

2.6 Sample Size and Sampling Procedures

2.6.1 Sample Size

Sample size for teaching and administrative saff was determined using the formula below:

Equation 1: Formula for Determination of Sample Size

$$n_o = \frac{Z^{2*} p*q}{e^2}$$

Where

Z = the standard normal deviate at the required confidence level (1.96 for 95% confidence level)
P = the proportion of the target population estimated to be having the characteristic being measured (0.5)
q = 1 – p (0.5)
e^2 = desired level of statistical significance (0.05)

Sample size calculation when the population is finite

$$n_o = \frac{Z^{2*} p*q}{e^2} = \frac{1.96^2 \times 0.5 \times (1-0.5}{} = 385$$

For correction of finite population, the adjusted sample size was calculated using Equation 2 as follows:

Equation 2: Formula for Correction of Finite Population

$$n = \frac{n_o}{1 + \frac{n_o}{N}}$$

Where:

n = the new sample size
N = the target population of the study
n_o = 385.

$$n = \frac{385}{1 + \frac{385}{} - 1} = = 360$$

(Muge

The sample size and distribution of the respondents for this study was as indicated in Table 2.

Table 2: Sample Size and Distribution of Respondents per University

Name of University	Strata	Target Population	Sample Size Calculation $n = \frac{n_o}{1 + \frac{n_o}{N}}$	Sample Size

Masinde Muliro University of Science and Technology	TS	317	317 x 360/5,467	21
	AS	695	695 x 360/5,467	46
Kibabii University	TS	126	126 x 360/5,467	8
	AS	284	284 x 360/5,467	19
Maseno University	TS	300	300 x 360/5,467	20
	AS	1186	1186 x 360/5,467	78
Jaramogi Oginga Odinga University of Science and Technology	TS	158	158 x 360/5,467	10
	AS	695	695 x 360/5,467	46
Kisii University	TS	316	316 x 360/5,467	21
	AS	948	948 x 360/5,467	62
Rongo University	TS	126	126 x 360/5,467	8
	AS	316	316 x 360/5,467	21
TOTAL		**5,467**	**5,467 x** 360/5,467	**360**

Source: Survey Data, 2019

2.6.2 Sampling Pocedures

In this study, more than one approach was used in sampling. This is because of certain underlying factors peculiar to the population of the study. For instance, first, the population for the sampling was large. Second, the population varied greatly in its composition. Accordingly, several sampling techniques were used in this study, these were: stratified sampling method (Kothari, 1993); census sampling paradigm (Cohen, Marion, and Marrison, 2005) and random sampling. Several scholars have observed that stratified sampling is acceptable when handling populations that are not uniform (Kerlinger, 2004).

For sampling purposes of this study, all six public universities in the Western Region of Kenya were sampled using census method. The six universities in the Western Region of Kenya were arranged in the order of Webometrics ranking for January 2019. To further ensure inclusion of all respondents, each of the six universities was stratified into two categories. These were: teaching and administrative staff. Accordingly, random sampling approach was used in drawing sample elements from each of the teaching, administrative staff. Six HROs from the six universities were sampled purposively because they are the custodians and key implementers of the HR policies. Inerviews schedules were used to collect data from Human resource managers

Forty two (42) Student leaders in the Students Governing Councils from the six unversities were targeted and were sampled by census method. Nominal discussion groups were used to collect data. Information gathered from student leaders was used to corroborate information gathered from staff. This done because if teaching and administrative staff receive service quality from HR departments, for instance in e-training, e-compensation, e-performance management, if their satisfaction is enhanced their loyalty and commitment to their tasks will be enhanced as arqued by Bondarouk *et al.,* (2017), Ruel *et al.,* (2007) and Kovach *et al.,* (2002).Therefore, students' views can either confirm whether staffs are committed in quality service delivery or not.

2.7 Data Collection Instruments

This study used questionnaires, interview schedules and nominal group discussion schedules for data collection.

2.7.1 Questionnaire for Teaching and Administrative Staff

A structured questionnaire with a five-point Likert scale was used to collect data from the teaching and administrative staffs. Structured questionnaire on a five point Likert scale measurement was used. Open-ended questions were used for instance, to clarify facts, verify information given or control a conversation (Gupta, 2002) and to capture participant's views on the influence of E-HRM practices on service delivery in universities in Kenya. The questionnaire was divided into five sections. Each section tackled an independent variable and dependent variable as listed in the conceptual framework. Cohen, Marion and Marrison (2005) observed that questionnaires are used as instruments for data collection. Saunders, Lewis and Thornhill (2009) point out that because each respondent is asked to respond to the same set of questions; it provides an efficient way of collecting responses from a large sample prior to quantitative analysis. Mugenda and Mugenda (2003) agree that the questionnaire has various merits; there is low cost even when the universe is large and is widely spread geographically, it is free from the bias of the interviewer, answers are in respondents' own words, respondents have adequate time to give well thought out answers, respondents who are not easily approachable can also be reached conveniently, large samples can be made use of and thus the results can be made more dependable and reliable.

2.7.2 Interview Schedules for HROs

Interview schedule was used to collect data from the HROs. The information gathered was used for triangulation and corroboration of information gathered from the questionnaires. Mugenda and Mugenda (2003) observe that it is

easier and faster for a researcher to get data from an interview than questionnaire. In this study, interview schedules were used to enhance quality of data, confirm and/or solicit some of the uncovered information by use of questionnaires.

2.7.3 Nominal Group Discussions Schedule

Student leaders represent students on university senates and senate committees. Through them, students present issues related to social welfare and academic life in the respective universities. Students are the main consumers of services offered in various schools, faculties, directorates, institutes departments and sections. Nominal group discussions were conducted on Students Leaders to enable the researcher get their views on quality of services received. Student leaders in each university were gathered in a room and guided discussions lasting for about one hour were conducted. The purpose of conducting NGDs on students' leaders was to gather information which will be used for triangulation and corroboration of information gathered from the questionnaires administered to teaching and administrative staff in the universities.

2.8 Piloting

The questionnaire was administered to a total of 36 (10%) respondents at University of Eldoret. Blumberg *et al.*, (2014) state that the size of a sample to be used for pilot testing varies depending on time, costs and practicality, but the same would tend to be 5-10 per cent of the main survey. The respondents for the study were not statistically selected. Blumberg *et al.*, (2014) state that the respondents in a pilot test do not have to be statistically selected when testing the validity and reliability of the instruments. University of Eldoret was chosen for piloting because it was in a similar environment in the neighborhood of the region and it was not covered in the study. The questionnaire responses were coded and entered into the statistical package for social sciences (SPSS) and Cronbach's alpha coefficient was generated to establish reliability. A coefficient index of 0.8 was attained and this was considered to be sufficient indicator that the questionnaire would give reliable results for the study.

2.9 Reliability of the Research Instruments

Internal reliability of the questionnaires for this study was measured and calculated using the Cronbach's alpha coefficient. This study used the Cronbach's Alpha Coefficient test to test for the reliability of the scale used to measure the study constructs. The study adopted 0.7 Cronbach's Alpha Coefficient value as the minimum threshold for deciding whether the scale was reliable; in the early stages of research on hypothesised measures of a construct, reliabilities of 0.70 or higher would be sufficient (Nunnally, 1994). Results for reliability test were as indicated in Table 3.

Table 2: Reliability Test Results

Variables (Constructs)	Number of items	Cronbach Alpha
E-Recruitment	8	0.806
Organization Factors	4	0.834
Quality Service Delivery	20	0.881

Source: Research Data, 2019

Findings in Table 3 show that Cronbach's alpha coefficient for all the six constructs were above minimum threshold of 0.7 (Nunnally, 1994); The Cronbach's alpha for e-RMP practice was 0.806, for Organizational factors was 0.834 and for SQD was 0.881. Therefore, this study concluded that the scale of the items used to measure the constructs was reliable and acceptable for further analysis.

2.10 Validity of Research Instruments

Construct validity, content validity, internal validity and external validity of research instruments for this study was determined. For construct validity, the questionnaire was divided into six sections to ensure that each section assesses information for a specific objective, and the constructs as reflected in the conceptual framework for the study. Factor analysis statistical methods of testing for construct validity were used. Frankfort-Nachmias and Nachmias (2007) describe validity as the degree of congruence between the explanations of the phenomena and the realities of the world. Factor analysis is a term that represents a large number of different mathematical procedures for analyzing the interrelationships among a set of variables and for explaining these interrelationships in terms of a reduced number of variables, called factors (Comrey & Lee, 2013). Factor analysis was conducted on all items for each of the study variables.

Content validity is usually established through expert or researcher judgement (Malhorta and Birks, 2007; Hair *et al.,* 2010). Content validity (also known as face validity) is a subjective assessment of the extent of correspondence between the items constituting a scale and its theoretical definition (Malhorta and Birks, 2007; Hair *et al.,* 2010). In this study, content validity was assessed through the use of four expert judges (academic members of staff) who examined the questionnaire to determine whether the scale items covered the full scope of the constructs being measured. Each of the

four academic staff independently rated the items and confirmed that the content was relevant and measuring the intended purpose.

Construct validity which sought to determine whether the questionnaire accurately measured the study phenomena, was tested using Factor Analysis method. Through factor analysis, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to affirm that the number of items used to measure a particular construct (variable) was adequate enough and Bartlett's Test of Sphericity was used to measure if the items were coming from a population with equal variance. The study results were as shown in Table 4.

Table 4 Sampling Adequacy and Sphericity Results

Variable	Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	Degrees of freedom	p-value
E-Recruitment	0.664	1386.124	28	0.000

Source: Research Data, 2019

The results in Table 4 indicate that the study met the validity test threshold. The KMO results for sampling adequacy for all the variables were above 0.6 threshold value as established by Saunders *et al.,* (2003), that is, the measure for sampling adequacy for E-RM practice was 0.664. These results indicated acceptable degree of sampling adequacy for all the factors. The significant results of Bartlett's Test of Sphericity shows that the sampled items were from population with equal variance; (χ^2 (91) = 146.402, $p < .05$) state for the variable.

Finally, the researcher performed Principal Component Analysis (PCA) to identify and compute composite scores for the factors underlying the version of the five-point Likert Scale that was used in the questionnaire. Communalities were obtained to see if the items were sharing a common variance with other items. Varimax rotation was conducted to provide the best-defined factor structure. The findings were as presented in
Table 5.

Table 5: Factor Analysis with Varimax for E-RM Practice

Statement		**Component**	**Remarks**
i.	The University has established internal e-communication mechanisms e.g. use of internet and social media platforms for recruitment of applicants.	0.699	Retained
ii.	Applicants are allowed to inquire/seek clarification on recruitment using e-platforms	0.488	Retained
iii.	University communicates information to recruitment panelists using electronic medium	0.713	Retained
iv.	University requests for departmental staffing needs using Intra-university email network.	0.648	Retained
v.	E-recruitment in our university has increased the number of applicants for advertised posts	0.323	Excluded
vi.	University sends feedback on departmental staffing needs via email and social media	0.778	Retained
vii.	E-recrutiment has reduced bias in recruitment exercise in our university	0.344	Excluded
viii.	Advertisement for declared vacant positions are placed on the university website	0.569	Retained
ix.	Job application forms are uploaded on the university website	0.680	Retained
x.	Recruitment of internal staff in the university is processed electronically	0.493	Retained
xi.	The university has established internal electronic system for storage of data on declared vacant positions	0.721	Retained
xii.	The university makes provision for applicants to submit soft copies of application documents	0.553	Retained

Source: Research Data, 2019

Results in Table 5 indicate that the factor analysis for 10 statements regarding eleclectronic recruitment attracted a coefficient of more than 0.4 minimum threshold (Saunders *et al.,* 2009) hence they were retained in the

questionnaire. However, 2 statements (romans number v and vii) attracted a coefficient of less than 0.4. Therefore, the two statements that attracted a coefficient of less 0.4 were excluded from the questionnaire.

2.11 Data Collection

The researcher personally administered the research instruments with the help of 4 trained research assistants. Respondents were allowed two weeks to fill the questionnaires. This method was used in order to minimize cost and time during field work. Questionnaires also enabled the study to gather information that is free from bias of the interviewer, thus answers were in respondents' own words, respondents. The questionnaires also allowed adequate time for the respondents to give well thought out answers. Respondents who may not be easily approachable were also reached conveniently. They also enabled the researcher to make use of large samples and thus the results were made more dependable and reliable. The researcher administered questionnaires to teaching and administrative staff in the identified public universities in the Western Region of Kenya. Interview schedules were administered to HROs and student leaders were subjected to NGDs.

2.12 Data Processing Analysis and Presentation

2.12.1 Data Proccessing

Data processing was done to ensure that data are accurate, consistent with other facts gathered, uniformly entered and complete as possible (Malhotra, 1999). According to Hayes, (2012) and Tabachnick and Fidel, (2013), missing values are common in social sciences and that this values are known to affect the results of statistical analysis.This tudy analysed missing values with respect to cases and variables.

2.12.2 Factor Analysis

Before factor analysis was conducted, data was first assessed for its suitability with regards to its sample size and strength of relationships among variables. Field (2005) and Tabachnick and fidell (2007) propose that 300 respondents is an adequate sample. The validity of the instrument was also confirmed with regard to its discriminating aspect by resorting to a factor analysis following the principal component method where the factor structure within the study variables was detected. The goal of principal component analysis is to explain multiple variables by a lesser number of factors. In determining the factors to be retained, the study utilized the Kaiser criterion of retaining factors with Eigen values greater than 1 and scree test as argued by Nunnally (1978) and Cattells (1996). Kaiser-Meyer-Olkin measure of sampling adequacy was used to check the adequacy of data for extraction of principal components(Tabachnick and Fidell, 2013).The study adopted Kaiser's recommendation of Kaiser-Meyer-Olkin values greater than 0.5 as acceptable to justify factor analysis (Kaiser 1974).

2.13 Quantitative Analysis

In this study, data collected from the field were coded and analyzed using computer supported software to adduce descriptive statistics and multiple regression analysis to produce results as per the study objectives. Simple linear regression was used to determine the relationships between e-RMP and QSD while multiple regression analysis was used to evaluate the moderating role of organization factors on the influence of e-RMP practices on Quality Service Delivery in public universities in the Western Region of Kenya. Kerlinger and Lee (2012) described data analysis as the categorizing, ordering, manipulating, and summarizing of data to obtain answers and inferences to research questions. The purpose of analysis is to reduce data to intelligible and interpretable form so that relationships of research problems can be studied and tested, Wambui and Waiganjo (2014).

One way ANOVA was used to determine whether samples from two or more groups come from populations with equal means. That is, it was used to determine whether the group means differ significantly by comparing the variance between different groups with the variability within each of the groups being used to determine whether the extent of the implementation of e-RMP practices in the universities differed significantly. An F ratio was calculated to be representative of the variance between the groups divided by the variance within the groups. A large F ratio will be an indication that there is more variability between the universities than within each university. When the F test is significant, the null hypothesis which states that Electroninc human resource management practices have no significant influence on Quality Service Delivery in public universities in Kenya will be rejected.

Simple linear regression analysis was used establish the nature and strength of relationship between the study variables. Pearson's product moment correlation coefficient (r) was used. This was calculated using equation 3:

Equation 3: Formulae for Correlation Analysis

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\left[N(\sum X^2 - (\sum X)^2\right]\left[N\sum Y^2 - (\sum Y)^2\right]}$$

Where X and Y are any two study variable.

2.13.1 Testing of Regression Assumptions

This study performed several tests of assumptions. The study tested for normality, multicollinearity, linearity, presence or absence of outliers, heteroscedasticity and correlation. Multicollinearity is the undesirable situation where the correlations among the independent variables are strong (Martz, 2013). Pearson correlation was used to test for correlation in this study.

2.13.2 Normality Test

For purposes of making inferences from the study, normality was tested using both the Shapiro-Wilk Test and the Kolmogorov-Smirnova Test. This was done to establish the pattern of distribution of the dependent variable, and its similarities to the universe population. Pallant (2005) observed that an assessment of normality of the dependent variable is a prerequisite condition in multiple linear regression analysis. If the dependent variable is not normally distributed, then there would be problems in the subsequent statistical analysis. The histogram plots and the Q-Q test plots which is a plot of percentiles of a standard distribution against the observed data were used to test for normality of the data.

2.13.3 Linearity

Testing for linearity assumption was done using scatter plots of independent variables which was checked for the presence or absence of a non-linear pattern. The presence of linear pattern would imply that the linearity assumption is satisfied.

2.13.4 Homoscedasticity

Constant variance (Homoscedasticity) assumption was checked by visual examination of a plot of the standardized residuals (the errors) by the regression standardized predicted value. The residuals were checked to see whether they are randomly scattered around 0 (the horizontal line i.e. to provide a relatively even distribution which would be an indication of no violations of homoscedasticity (Bendat & Piersol, 2011).

2.13.5 Simple Linear Regression Analysis

In simple linear regression analysis, the relationship between one dependent variable and one independent variable was assessed. To predict quality service (Y) in the Universities given E-Recruitment Practice (X_1) under first study hypothesis (H_{01}), the study used the following linear regression model:

$Y= \beta_0 + \beta_1 X_1$, where β_0, β_1, are constants and regression coefficient respectively.

2.13.6 Multiple Regression Analysis

In multiple regression analysis, the relationship between one dependent variable and several independent variables was assessed. The model below was used to determine the quantitative association between the variables:

Equation 4: Regression Model

$$Y= \beta_0 + \beta_1 X_1$$

Where β

X_1 = E-Recruitment

Y = Quality Service Delivery

2.13.7 Moderation Analysis

In moderation analysis, the study adopted the Hierarchical linear regression analysis, for which the relationship between one dependent variable and one independent variable were moderated with the Organization Factors. In the model, the interaction effect (Interaction between the moderator and each independent variable) was used to indicate the

presence/absence of the moderation effect. To model the moderation effect of the organizational factors on the relationship between Quality Service (Y) and E-Recruitment (X_1) under hypothesis (H_{05a}), the following model was used:

$$Y = \beta_0 + \beta_1 X_1 + \varnothing I_1,$$

where I_1 is the interaction effect between E-Recruitment and moderator (organizational factors) β_0 is constant and β_1 is a regression coefficient.

2.14 Qualitative Analysis

Qualitative data from interviews for HROs and Nominal Group Discussions was analyzed thematically.

2.15 Ethical Considerations

This study involved a variety of ethical issues both in relation to primary data and secondary data. For instance, some of the information will be considered sensitive and therefore classified. However, the respondents were assured of strict confidentiality to all information collected. Identity of respondents was also concealed (Saunders *et al.*, 2009) in pursuant to ethical considerations. The questionnaires were coded with numerical and alphabetical letters to conceal the identity of respondents. In addition, the researcher obtained an introduction letter from the university (JOOUST) and a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) that were used to seek for permission to collect data from the sampled universities. The researcher also assured the respondents that the information collected would specifically be used for academic purposes.

3.0 DATA COMPILATION, ANALYSIS AND PRESENTATION

3.1 Response Rate

Three hundred and sixty (360) questionnaires were distributed by the researcher to respondents in the six public universities in the Western Region of Kenya. A total of 287 completed questionnaires were returned to the researcher. Of these, 276 were useable for analysis, giving an effective response rate of 76.7 %. According to Baruch and Holtom (2008), the average response rate for surveys in management and behavioural sciences research is 52.7%. Therefore, the response rate for this study (76.7%) was considered to be satisfactory.

3.2 Data Preparation and Cleaning

In this study, data preparation and cleaning using SPSS involved; identifying and managing impossible values, handling missing data, identifying and managing outliers, and testing for normality of the data.

3.3 Managing Impossible Values and Missing Values

Descriptive analysis through running frequencies was done and the impossible values were rectified by tracing for the right values back in the questionnaires and replacing in the SPSS dataset. The final dataset was free of impossible values as indicated in the descriptive statistics in section 4.4. For the questions where there was no response, the values were well coded and uniquely identified in the SPSS datasets as missing vales.

3.4 Managing Outliers

Outliers' scores can only happen on interval and ration scale variables (Gravetter *et al.*, 2000). And therefore, this study checked for presence of outliers in the constructs (Service Quality, E-Recruitment HRM, E-Compensation HRM, Electronic HR Training, E-Performance HRM and Organizational Factors). According to Gravetter *et al.*, (2000), outliers are defined as those points that extend more than 1.5 box-lengths from the edge of the box plot and extreme points (indicated with an asterisk * in a boxplot) are those that extend more than 3 box-lengths from the edge of the boxplot. The study findings were as shown in Figure 4.1.

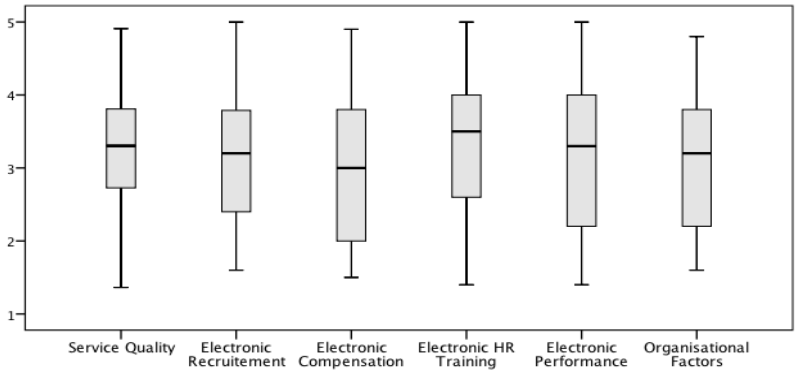

Figure4.1: Boxplots for Testing Presence of Outliers

From Figure 6, the presence of outliers nor extreme values in the data scores for all the variables (Service Quality, E-Recruitment HRM, E-Compensation HRM, Electronic HR Training, E-Performance HRM and Organizational Factors) was not detected; there was not any value that extended beyond 1.5 box-lengths from the edge of the boxplots.

3.5 Descriptive Analysis

3.5.1 Demographic Characteristics

Statistics for overall demographic profile of the sample were as presented in Table 4.7.

Table 6. Demographic Profile of the Sample

Demographic Variable	**Category**	**Research Sample Size (n=276)**	
		Frequency	**Percentage (%)**
Gender	Male	134	48.56
	Female	142	51.4
Age	20 to 30	18	6.5
	31 to 40	92	33.3
	41 to 50	112	40.6
	51 to 60	42	15.2
	60 and above	12	4.3
Highest Educational Qualification	PhD	42	15.2
	Masters	86	31.2
	Bachelors	72	26.1
	Other	76	27.5
Designation	Teaching	118	43
	Administrative	158	57
Length of Service in the current station	1 to 5 years	108	39.2
	6 to 10 years	87	31.5
	11 to 15 years	60	21.7
	16 and above	21	7.6

Source: Research Data, 2019

The overall demographic measure for this study indicated that 48.6% male and 51.4% female respondents participated in the study as shown in Table 4.7. The age of the participants ranged from 20 to 60 and above with the highest frequency and percentage (40.6%) being in the age bracket of 41 to 50. The study also involved participants of various academic qualifications ranging from other (which included certificate, diploma and higher diploma) to PhD with the highest percentage (31.2%) of respondents being those with master's degrees. The study also involved 43 % of teaching and 57% of administrative staff. Thirty nine point two percent (39.2) of respondents were those who had worked in their current stations for between 1 and 5 years; 31.5% had worked for between 6 and 10 years, 21.7% had worked for between 11 and 15 years and 7.6% had worked for between above 16 years. Thus the study covered both the long serving and new entrants into the university service hence the information gathered was inclusive of both the old and new staff. Therefore demographically, this study covered respondents of both male and female gender, all official working ages, academic qualifications, designations and length of service in their respective current stations as at the time of the study.

3.5.2 Descriptive Characteristic for Dependent Variable (Service Quality Delivery)

Service quality was the dependent variable for this study. The constructs considered in the study were customer requirements, resolution of customer complaints, cost of services, environment in which the services were given and persons giving the services.

This section presents results for descriptive data analysis for quality service delivery in public universities in the Western Region of Kenya. Respondents were assessed on service quality delivery in public universities using the matrix with questions on quality service delivery, they were asked to put a tick (√) in the column to the right side of the option that best suited their response. The rating was on a scale of 1 to 5 with 1 denoting Strongly Disagree, 2 - Disagree, 3 – Somewhat Agreed, 4 - Agree and 5 – Strongly Agree. Results for descriptive analysis for SQD were as indicated in Table 7.

Table 7: Descriptive Statistics for SQD

Statement	SD	D	SWA	A	SA	Mean	Std. Dev.
SQ1	14	15	62	136	51	3.7	0.995
	5%	5%	22%	49%	18%		
SQ2	8	34	121	75	39	3.37	0.968
	3%	12%	44%	27%	14%		
SQ3	10	15	129	62	59	3.53	1.005
	4%	5%	47%	23%	21%		
SQ4	14	105	56	69	28	2.97	1.123
	5%	39%	21%	25%	10%		
SQ5	13	88	47	90	33	3.15	1.147
	5%	32%	17%	33%	12%		
SQ6	13	111	60	64	27	2.93	1.104
	5%	40%	22%	23%	10%		
SQ7	9	88	48	84	46	3.25	1.169
	3%	32%	17%	31%	17%		
SQ8	13	26	129	67	41	3.35	1
	5%	9%	47%	24%	15%		
SQ9	7	21	113	101	30	3.46	0.884
	3%	8%	42%	37%	11%		
SQ10	6	45	62	98	61	3.6	1.075
	2%	17%	23%	36%	22%		
SQ11	22	121	43	55	37	2.87	1.213
	8%	44%	15%	20%	13%		

	Mean	% Mean	Std. Deviation	Std. Error of Mean
Average Satisfaction level of Quality Service Delivery	3.2933	66%	.66700	.03958

Source: Research Data, 2019

Results in Table 7 revealed that 5% of the respondents strongly disagreed that use of e-RMP in their university had reduced the time for providing services to customers 5% disagreed, 49% somewhat Agreed, 22% agreed and (18%) strongly agreed, with the statement; 3% of the respondents strongly disagreed that e-RMP practices in our university saves time and has helped employees to be more efficient in their work, 12% disagreed, 44% somewhat Agreed, 27% agreed and (14%) strongly agreed, with the statement; 4% of the respondents strongly disagreed e-RMP in my university has ensured customer complaints are addressed promptly by HR department, 5% disagreed, 47% somewhat Agreed, 23% agreed and (21%) strongly agreed with the statement; 5% of the respondents strongly disagreed that e-RMP practices in our university has reduced customer complaints on HR services, 39% disagreed, 21% somewhat Agreed, 25% agreed and (10%) strongly agreed with the statement; 5% of the respondents strongly disagreed that the university has used e-HRM to create good working relationships between employees and customers., 32% disagreed, 17% somewhat Agreed, 33% agreed and (12%) strongly agreed with the statement; 5% of the respondents strongly disagreed that complaints and complements office in my university uses e-platforms in handling complaints raised, 40% disagreed, 22% somewhat Agreed, 23% agreed and (10%) strongly agreed with the statement; 3% of the respondents strongly disagreed that HR staff are courteous, friendly and welcoming when engaging on e-HRM practices, 32% disagreed, 17% somewhat Agreed, 31% agreed and (17%) strongly agreed with the statement; 5% of the respondents strongly disagreed that Use of E e-RMP has reduced paper work, increased organization in offices where staff operate and makes the office environment appealing to customers, 9% disagreed, 47% somewhat Agreed, 24% agreed and (15%) strongly agreed with the statement; 3% of the respondents strongly disagreed that the university uses e-RMP to create awareness on costs of services provided to customers, 8% disagreed, 42% somewhat Agreed, 37% agreed and 11% strongly agreed with the statement; 2% of the respondents strongly disagreed that use of e-RMP system in their university had made staff confident in the way they handle their work, 17% disagreed, 23% somewhat Agreed, 36% agreed and 22% strongly agreed with the statement; 8% of the respondents strongly disagreed that university uses e-RMP system to ensure no extra charges are levied on services rendered, 44% disagreed, 15% somewhat Agreed, 20% agreed and 13% strongly agreed with the statement.

On average, the satisfaction level for SQD was 66% (mean = 3.2933, Std. Dev. = 0.667) (Table 4.8), rated moderate. There was no mean of 4 or five on any of the items in the questionnaire. This implies that the level of satisfaction with service quality in universities in the Western Region of Kenya is moderate. Thus staff are moderately satisfied with the quality of services they receive from the respective HR departments in universities. The moderate level of satisfaction with quality service delivery observed in this study could be attributed to the challenges faced by the public universities in the Western Region of Kenya, thus limiting them from achieving quality services delivery.

The challenges facing public universities in the Western Region of Kenya include inadequate ICT infrastructure to support full-fledged adoption of technology; organization factors which include restructuring of the institutions for purposes of maximizing utilization of e-services; and attitude of employees towards utilization of e-services. These challenges pose a risk on employee engagement, which in its absence would directly affect quality service delivery. These observations agree with Shuck, & Zigarmi (2016) observed that work engagement, job engagement, organizational engagement, and intellectual/ social engagement were constructs of employee engagement that if adopted and implemented would result into quality service delivery. Furthermore, Watson (2009) observed that an efficient human resource management structure enables companies to deal with matters related to human resource adequately. This assists the employees deliver an acceptable quality of services, in spite of the challenges within and without the organization. These observations agree with Walter (2017) who posited that a robust human Resource management structure assists organizations give more priority to their organizational and business plans while efficiently administering the variations inherent in their daily operations. Human Resource management assists in attracting and maintaining competent staff, assists staff and management in embracing to organizational change, and allows the application of technology in determining how and where a job is performed leading to improved service delivery.

3.5.3 Descriptive Characteristic for Independent Variables (e-Recuitment Management Practice e-RMP)

This section presents results and discussions on Preference between electronic media and print media, e-recruitment platforms used in universities, perception towards use of e-recruitment the universities, descriptive statistics for e-recruitment practice.

Respondents were asked to indicate their preference in relation to electronic and print media in communicating information on recruitment in their respective universities. The results were as shown in Table 8.

Table 8: Preference between Electronic and Print Media

Preferred media	Count Response	% Response
Electronic Media	274	99.3%
Print Media	2	0.7%
Total Response	276	100%

Source: Research Data, 2019

From the findings in Table 8, majority of the respondents, 99.3% prefer use of electronic media to print media (0.7%) when communicating information on recruitment in the university. Electronic media was preferred because its convenience in circulating and storage of electronic information without limitation of time and space. In addition use of electronic media helps the universities to cover a wider population when advertising; and it is also less costly when compared with print media. Retrieval of electronic information is easy, fast and convenient as it can be accessed from anywhere. These results indicate that both administrative and teaching staff prefer electronic platforms in their operations. Universities can capitalize on this preference by engaging employees more on e platforms. It also indicates a lot of potential on electronic platforms.This agrees with Chapman and Webster (2003) who observed that use of e-system in recruitment and selection of candidates for advertised positions heightens efficiency in hiring systems which could be achieved by reduction in selection cycle time in comparison with the manual approaches that may cause withdrawal by applicants and give the opportunity to the competitors to hire the best applicants.

The study sought to determine the E-Recruitment platforms used by most of the universities in the Western Region of Kenya. The responses were as shown in Table 9.

Table 9: Electronic Media Commonly Used

Electronic media	**Count Response**	**N**	**% Response**
Website	262	276	95%
Email	166	276	60%
What's App	138	276	50%

Source: Research Data, 2019

From the findings in Table 9, majority of the respondents, 95% indicated that their respective universities use Website to communicate information on the recruitment process, 60% use email, and 50% claim that their respective universities use WhatsApp media to disseminate the information on recruitment. Use of respective university websites was commonly used because the website is considered an official e-platform on which official university information is communicated to a wide range of interested persons within and outside the country. In this way, the university can attract applicants from all over the world to create a large pool of qualified professionals from which suitable candidates can be selected. Email and WhatsApp are used as complementary platforms for increasing circulation of advertisements to a wider population. Use of the two complementary e-platforms is not limited to university staff, but information picked by

the public is circulated to interested parties. WhatsApp is minimally adopted as an official complementary e-platform because once information goes out, it is picked by other people and circulated on walls where the universities do not have control on information circulated. Information on WhatsApp is usually circulated informally and is bound to be distorted as it moves on various walls.

The observations above agree with Chapman and Webster (2003) who posited that use of E-system of recruitment and selection lowers costs to the organization; is cheaper than advertising in the newspapers. Maric and Ilic (2012), observed that when using e-recruitment system, the organization will eliminate intermediaries, reduce in the time for recruitment (over 65 percent of the hiring time), facilitate the recruitment of right type of people with the required skills thus improving in efficiency of recruitment process and that it gives a 247 access to an online collection of resumes. Chapman and Webster (2003) also observed that online recruitment helps the organizations to weed out the unqualified candidates in an automated way. Besides, recruitment websites also provide valuable data and information regarding the compensation offered by the competitors, which helps the HR managers to take various HR decisions like promotions and on salary trends in industry.

The study sought to determine respondents' perception towards use of E-Recruitment services in public universities in the Western Region of Kenya. The responses were as shown in Table 10.

Table 10: Perception towards Use of E-Recruitment Services

Do you think effective use of Electronic media in recruitment processes can contribute to improved efficiency in recruitment of staff at the university?	**Count Response**	**% Response**
Yes	273	99%
No	3	1%
Total Response	276	100%

Source: Research Data, 2019

The findings in Table 10 indicated that majority of the respondents, 99% think that if electronic media is effectively implemented, it can improve efficiency in recruitment of staff at their respective universities. The study, therefore, sought to assess the use of e-recruitment services in the exercise of recruiting staff in the universities and the results were as follows:

This section presents results for descriptive data analysis for E-RM practice in public universities in the Western Region of Kenya, measured on a 5-point Likert scale. Respondents were asked to give their opinion on E-RM practice in their universities. Using the matrix with questions on E-RM practice, they were asked to put a tick (√) in the column to the right side of the option that best suited their response. The rating was on a scale of 1 to 5 with 1 denoting Strongly Disagree, 2 - Disagree, 3 – Somewhat Agree, 4 - Agree and 5 – Strongly Agree. The findings were as indicated in Table 11.

Table 11. Descriptive Statistics for Electronic-Recruitment Management

Statement	**SD**	**D**	**SWA**	**A**	**SA**	**Mean**	**Std. Dev**
E-Recruit1	113	15	31	48	79	2.88	1.703
	40%	5%	11%	17%	28%		
E-Recruit2	91	35	39	74	43	2.8	1.501
	32%	12%	14%	26%	15%		
E-Recruit3	16	38	118	66	45	3.3	1.068
	6%	13%	42%	23%	16%		
E-Recruit4	17	21	52	125	65	3.71	1.089
	6%	8%	19%	45%	23%		
E-Recruit5	20	19	47	141	57	3.69	1.084
	7%	7%	17%	50%	20%		
E-Recruit6	9	39	33	123	76	3.78	1.091
	3%	14%	12%	44%	27%		
E-Recruit7	39	96	57	38	48	2.86	1.311
	14%	35%	21%	14%	17%		
E-Recruit8	45	110	43	49	36	2.72	1.279
	16%	39%	15%	17%	13%		
E-Recruit9	37	121	30	49	48	2.82	1.328
	13%	42%	11%	17%	17%		
E-Recruit10	91	19	71	59	45	2.82	1.469
	32%	7%	25%	21%	16%		

	Mean	% Mean	Std. Deviation	Std. Error of Mean
Average Satisfaction level in E-Recruitment HRM services	3.1379	63%	.79646	.04701

Source: Research Data, 2019

Results in Table 11 revealed that 40% of the respondents strongly disagreed that the University has established internal electronic communication mechanisms e.g. use of internet and social media platforms for recruitment of applicants, 5% disagreed, 11% somewhat agreed, 12% agreed and (28%) strongly agreed, with the statement; 32% of the respondents strongly disagreed that applicants are allowed to inquire/seek clarification on recruitment using electronic media, 12% disagreed, 14% somewhat agreed, 26% agreed and (15%) strongly agreed, with the statement; 6% of the respondents strongly disagreed that the university communicates information to recruitment panelists using electronic medium, 13% disagreed, 42% somewhat agreed, 23% agreed and (16%) strongly agreed, with the statement; 6% of the respondents strongly disagreed that the university requests for departmental staffing needs using intra-university email network, 8% disagreed, 19% somewhat Agreed, 45% agreed and (23%) strongly agreed, with the statement; 7% of the respondents strongly disagreed that the university sends feedback on departmental staffing needs via email and social media, 7% disagreed, 17% somewhat Agreed, 50% agreed and (20%) strongly agreed, with the statement; 3% of the respondents strongly disagreed that advertisements for declared vacant positions are placed on the university website, 14% disagreed, 12% somewhat Agreed, 44% agreed and (27%) strongly agreed, with the statement; 14% of the respondents strongly disagreed that Job Application Forms are uploaded on the university website, 35% disagreed, 21% somewhat Agreed, 14% agreed and (17%) strongly agreed, with the statement; 16% of the respondents strongly disagreed that recruitment of internal staff in the university is processed Electronically, 39% disagreed, 15% somewhat Agreed, 17% agreed and (13%) strongly agreed, with the statement; 13% of the respondents strongly disagreed that the university has established internal Electronic system for declaration of vacant positions, 42% disagreed, 11% somewhat Agreed, 17% agreed and (17%) strongly agreed, with the statement; 32% of the respondents strongly disagreed that the university makes provision for applicants to submit soft copies of application documents, 7% disagreed, 25% somewhat Agreed, 21% agreed and (16%) strongly agreed, with the statement.

On average, the satisfaction level in the e-recruitment practice in the universities in the Western region of Kenya was 63% (mean = 3.1379, Std. Dev. = 0.79646), rated moderate as shown in Table 4.12. There was no mean of 4 or 5 on any of the items in the questionnaire. This indicates that universities in the Western Region of Kenya have moderately implemented e-recruitment management practice. Information gathered from HROs indicated that implementation of e-recruitment practice was on course but was faced with the challenge of inadequate ICT infrastructure upon which compensation modules could be uploaded and implemented. However, it was reported that the universities had phased the establishment of ICT infrastructure in order to facilitate full implementation of e-recruitment practice. There was consensus among HROs that implementation of e-recruitment practice would be beneficial to the universities in the region. Once full implementation would be achieved, there is hope that it will increase efficiency and transparency in the recruitment exercise.

This observation agrees with Marić and Ilić (2012) who posited that cost reduction and higher speed were benefits technology contributed to the selection process, but also they raise alert about the complication of activities in HR department at initial stage of the transition since for example involvement of the internal relevant employees during the development of the solution is necessary. Compared with Stefan and Rüdiger (2009) whose study established that e-HRM was a common practice throughout Europe since two-thirds of all organizations had already adopted e-HRM, universities in the Western Region of Kenya are still transiting from the traditional recruitment and selection practice to Electronic practice. It was observed that at the time of this study was when universities in the Western Region of Kenya were catching up with what happened in Europe in the year 2009.

3.6 Descriptive Statistics for Organizational Factors (Moderator)

The study sought to determine the moderating effect of organisational factors and their influence on the relationship between relational e-HRM practices (e-recruitment management, e-compensation management, e-human resource training management and e-performance management) and service quality delivery in public universities in the Western Region of Kenya.

In this sub-section, the study described the status of the organisational factors in the public universities in the Western Region of Kenya. The findings were as detailed in Table 12.

Table 12: Descriptive Statistics for Organizational Factors (Moderator)

Statement	SD	D	SWA	A	SA	Mean	Std. Dev.
Organisational factor 1	16	91	41	91	43	3.19	1.204
	6%	32%	15%	32%	15%		
Organisational factor 2	14	37	145	70	21	3.16	0.915
	5%	13%	51%	24%	7%		
Organisational factor 3	5	108	50	90	26	3.09	1.073
	2%	39%	18%	32%	9%		
Organisational factor 4	10	105	45	79	38	3.11	1.162

Organisational factor 5	4% 11 4%	38% 106 38%	16% 78 28%	29% 58 21%	14% 24 9%	2.92	1.046

	Mean	% Mean	Std. Deviation	Std. Error of Mean
Average Satisfaction level in E-Performance Management Practices	3.1129	62%	0.79521	0.04678

Source: Research Data, 2020

From the results in Table 12 above, 6% of the respondents strongly disagreed with the statement that leadership of the university is committed to providing resources for implementation of e-RMP, 32% disagreed, 15% somewhat Agreed, 32% agreed and 15% strongly agreed, with the statement. Five (5%) of the respondents strongly disagreed with the statement that the University has developed and implemented policies to enable operationalization of e-RMP, 13% disagreed, 51% Somewhat Agreed, 24% agreed and 7% strongly agreed, with the statement. Two (2%) of the respondents strongly disagreed with the statement that the university has developed work procedures that support implementation of e-RMP, 39% disagreed, 18% Somewhat Agreed, 32% agreed and 9% strongly agreed, with the statement. Four (4%) of the respondents strongly disagreed with the statement that eemployees of the university have requisite experience in handling intranet software with regard to e-RMP, 38% disagreed, 16% Somewhat Agreed, 29% agreed and 14% strongly agreed, with the statement. Four (4%) of the respondents strongly disagreed with the statement that there is sufficient infrastructure for implementation of e-RMP in my university, 38% disagreed, 28% Somewhat Agreed, 21% agreed and 9% strongly agreed, with the statement.

On average, the satisfaction level organizational factors in the universities in the Western Region of Kenya was 62% (mean = 3.1129, Std. Dev. = 0.79521), rated moderate as shown in Table 4.21. There was no mean of 4 or 5 on any of the items in the questionnaire. Provision of strategic leadership is a key ingredient in steering the public universities in the Western Region of Kenya reach the goal of quality service delivery. Leadership of the public universities in the region has established structures and documented information on establishment and use of e-RMP in improving service delivery. The universities in the region have prepared policies and procedures that support implementation of e-RMP. Managements' commitment is observed in universities in the region ensuring provision of physical, financial and human resources. The extent of provision of these resources directly affects the quality of services delived in public universities in the Western Region of Kenya. It is therefore important that management of respective public universities in the region ensure that these resources are provided for improved quality service delivery.

3.7 Hypothesis Testing - Tests for Regression Assumptions

The study sought to test for the assumptions for linear regression between e-RMP and service quality delivery. These included tests for Normality, Linearity, Homoscedasticity and presence of outliers.

3.7.1Test for Normality

The study sought to assess whether the scores for the e-RMP variable were normally distributed. To achieve this, the study used the Shapiro-Wilk Test and the findings were as shown in Table 13.

Table 13. Results for Normality Test

	Shapiro-Wilk test		
	Statistic (W)	**Df**	**p-value**
E-Recruitement	.947	287	.072
Organization Factors	.944	245	.082

Source: Research Data, 2020

From the results of Table 13, the p-values for all the variables were greater than 0.05 level of significance; e-Recruitment (W= 0.947, p-vale = 0.072 > 0.05), and Organisational factors (W= 0.944, p-vale = 0.082 > 0.05). The study concludes that the scores for all the variables were significantly normally distributed.

3.7.2Test for Linearity

To achieve test for linearity between the service quality delivery and the independent variables, the study used Normal P-P Plot and the residual scatterplot. The findings were as shown in the Figure 2.

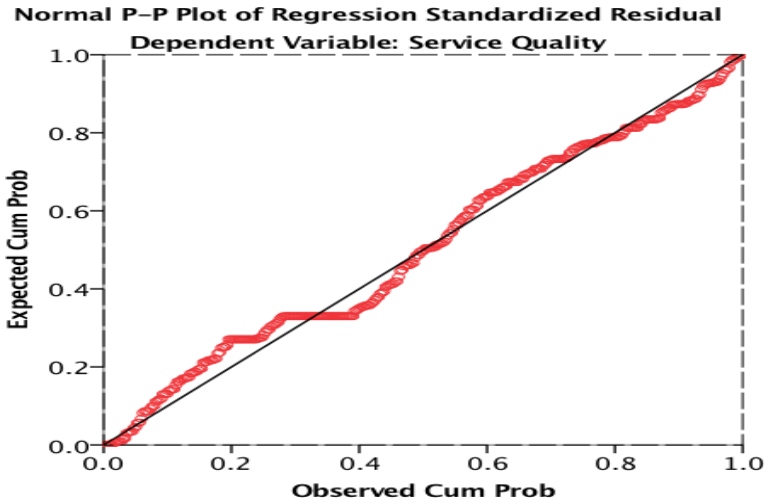

Figure 2: Normal P-P Plot of Regression Standardized Residual for E-RM Practice
Source: Research Data, 2020

In Figure 2 the points lie in a reasonably straight diagonal line from bottom left to top right; this was an indication that there was a linear relationship between e-recruitment and service quality delivery.

3.7.3 Test for Homoscedasticity

Homoscedasticity refers to the assumption that the dependent variable exhibits similar amounts of variance across the range of values for an independent variable. To achieve test for test for homoscedasticity, the study used the residual scatterplots and the findings were as shown in the Figures 4.6.

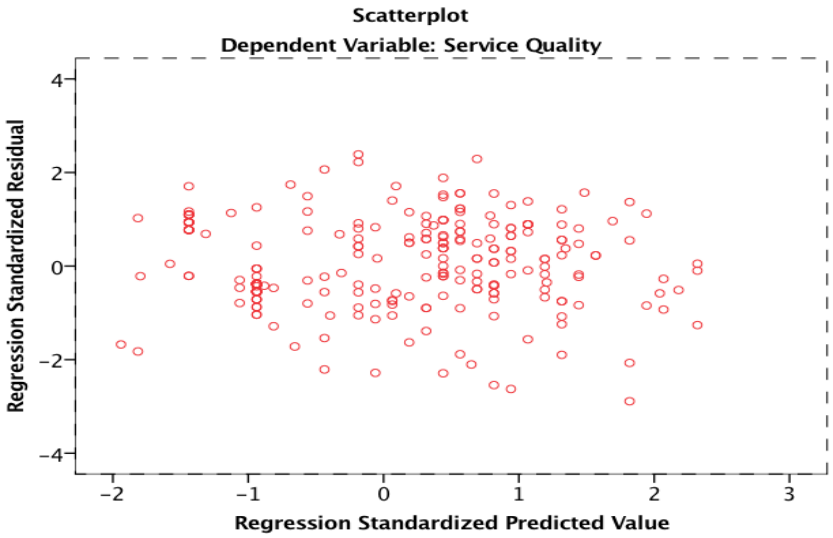

Figure 3: Scatter Plot of Standardized Residuals for E-RM Practice
Source: Research Data, 2020

In the Scatterplot shown in Figure 3 shows that the residuals are roughly rectangular distributed, with most of the scores concentrated in the centre, thus an indication that the assumption of homoscedasticity holds.

3.7.4 Multicolinearity Test

The study adopted the use of Variance Inflation Factor (VIF), tolerance values and correlation coefficients to detect multicollinearity a shown in Table 14 and 15 respectively. The study utilized the centering of independent variables and moderator variables prior to computing interaction terms to counter multicolinearity (Hayes 2013). This was tested through the visual inspection of variance inflation factors which revealed acceptable values which were all below the set values of -10 to 10. To further confirm that there was no multicolinearity, tolerance values were checked and it was established that they were all below 1.0 which is the accepted standard according to Hayes (2013).

Table 14: Multicollinearity Test Using Variance Inflated Factor (VIF)

Variable	Tolerance (1/VIF)	VIF
E- Recruitment	0.532	1.879

Source: Research Data, 2020

The correlation analysis results were based on threshold by (Moore, 2004). Acording to Moore, a bivariate Pearson correlation coefficient above 0.9 indicates multicollinearity. Therefore, for the independent variables, the study indicates that there was no multicollinearity among the independent variables thus supporting the Variance Inflation Factors (VIF) findings of table 14 above.

Table 15: Correlation Matrix

		Service Quality	Electronic Recruitment	Electronic Compensation	Electronic HR Training
Electronic Recruitment	Pearson Correlation	.558**	1		
	p-value	.000			

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

The correlation coefficients in the correlation matrix (15) show that none of the coefficients between independent variable was above 0.9. From the results of Table 15, e-recruitment management had a significantly positive relationship with the service quality delivery in ($r = 0.558 > 0.5$, $p = 0.000<0.05$). A coefficient (r) between +0.5 and +1 or -0.5 and -1 indicates a strong relationship based on the argument by Lyndsay (2009), therefore, the study conclude that e-recruitment management had a significantly strong positive relationship with the service quality delivery among the universities in Western Kenya.

4.5.3 Results for Simple Linear Regression Analysis

Model 1 represents the results of the simple linear regression for e-recruitment.

Table 16: Results of Hypothesis Testing

Model summary	Model 1
R	0.558
R Square	0.312
Adjusted R Square	0.309
Std. Error	0.55509
ANOVA	
Degrees of freedom (*a*,*b*)	(1, 280)
F- statistic, F(*a*,*b*)	126.760
p-value for F- statistic	0.000
Regression Coefficients	
Intercept	1.819
β (Unstandardized coefficient)	0.467
Standardized Beta Coefficient	0.558
t (β)	11.259
p-value (β)	0.000
t (Intercept)	13.500
p-value (Intercept)	0.000

Source (Research Data, 2020)

The hypothesis for the study was, H_{01}:

E-recruitment management has no significant influence on service quality delivery in public universities in the Western Region of Kenya. The Coefficient results in Table 16 showed a positive significant influence ($\beta = 0.467$, $t = 11.259$, $p=0.000<0.05$) and therefore the study rejected the null hypothesis and concludes that **e-**recruitment management had a statistically significant influence on service quality delivery in public universities in the Western Region of Kenya. Elctronic recruitment management had a positive standardized beta coefficient value of 0.558 as shown in the coefficients results of Table 16, an indication that a unit improvement in the e-recruitment management practices was likely to result to an improvement in the quality service delivery in public universities in the Western Region of Kenya by 55.8%. The ANOVA results as shown in model 1 in Table 4.25 were, $F (1, 281) = 126.760$, $P = 0.000 < 0.05$; this was

a clear indication that the linear regression model was a good fit to the dataset. The model (E-recruitment management practices) was able to explain 31.2% of the variation in the service quality delivery in public universities in the Western Region of Kenya as indicated by the R Square value of 0.312 as shown Table 4.25. The following was the linear regression model to predict the service quality delivery in public universities in the Western Region of Kenya when given the level of effectiveness of the e-recruitment management practices:
Service Quality Delivery = 1.819 + 0.467 E-Recruitment management practices.

According to the results of the model, e-recruitment management practices do improve service quality delivery in employee recruitment in public universities. This is because in the adoption of e-RM practice, information on advertised positions reaches many qualified persons within specified time at a very minimal cost. In electronic advertisement, the information is circulated to employees even areas where print media will not reach so long as there is network coverage for internet services. Smart phones are used to access the information on advertised positions at the convenience of people searching for jobs. Therefore when many staff access advertisements and submit applications in large numbers, it creates a bigger pool of applicants from which the most qualified and most suitable candidates can be selected. Thus, e-recruitment management practice increases efficiency in the recruitment process, lowers costs of advertisement, brings about convenience, and eliminates mediocrity in the recruitment exercise therefore improving quality service delivery.

The findings of this study agree with Stone and Lukaszewsky, (2013) who observed that online recruitment systems enable organizations to share important details about the positions available and also provide more specific information such as job descriptions. In addition, the findings reflect the observations by Parry and Wilson, (2009) who observed that institutions generally adopt a recruitment method that suits their size and budget for recruitment. Further, Galanaki, (2002) posited that the size and nature of the fraction that applies for an organization's vacancies will be affected by how (and to whom) the organization communicates its vacancies. In this case, public universities covered by this study have adopted online recruitment by adding recruitment pages to existing university websites; using specialized recruitment websites such as job portals, online job boards; developing interactive tools for processing applications; and using screening techniques. This study confirmed that technology has made it possible for the universities to become paperless where there is a possibility of creating portals and folders that could be used to archive employees' documentation such as offer-letters, credentials, CVs or recommendation letters. The study found out that applicants for positions are asked to submit their documents to HR officers in soft copy with no need of hard copies. It can as well be used with current employees' health insurance or car contracts, salary or information on other benefits. This observation resonates with that of Jackson *et al.*, (2011).

3.8 Moderated Hierarchical Linear Regression Analysis

This sub-section presents results and discussions on moderation effect of organisational factors on the relationship between e-recruitment management and service quality delivery in public universities in the Western Region of Kenya.

The second objective of the study was to determine the moderation effect of organisational factors on the relationship between e-recruitment management and service quality delivery in public universities in the Western Region of Kenya. The study adopted the use of hierarchical linear regression analysis to assess the moderation effect. The variables were centred in order to avoid potentially problematic high multicollinearity with the Interaction terms created (Lyndsay, 2009); the Interaction term (I) is the Interaction effect between the independent variable and the moderator. Lyndsay (2009) further concluded that a significant interaction effect indicates presence of the moderation effect. The findings were as summarised in Table 4.26.

3.8.1 Results for Moderation Analysis

Model 5 represent the results for moderation analysis for e-recruitment management using hierarchical linear regression. Model 2 presents the results for moderation analysis for e-compensation management using hierarchical linear regression.

Table 17: Results of Moderation Analysis

Model summary	Model 2
R	0.567
R Square	0.322
Adjusted R Square	0.317
Std. Error	
ANOVA	
Degrees of freedom (*a*,*b*)	(2, 279)

F- statistic, F(*a*,*b*)	66.131
p-value for F- statistic	0.000
F-Change statistic	4.100
p-value for F- Change statistic	0.044
Regression Coefficients	
Intercept	1.833
β (Unstandardized coefficient)	0.478
Standardized Beta Coefficient	0.571
t (β)	11.485
p-value (β)	0.000
t (Intercept)	13.660
p-value (Intercept)	0.000
Interaction Effect	
β (Unstandardized coefficient)	-0.077
Standardized Beta Coefficient	-0.101
t (β)	-2.025
p-value (β)	0.044

Source: Research Data, 2020 (see detailed results of Appendix B)

Hypothesis H_{02a}

states that there is no significant moderating effect of organizational factors on the relationship between e-recruitment and service quality delivery in public universities. Based on the findings in Table 17, model 5 shows that the interaction effect for of organizational factors had a negative and significant influence on the relationship between e-recruitment and service quality delivery as indicated by significant beta and p values (ß = -0.077, p-value =0.044 < 0.05). Therefore the study rejected the null hypothesis ($H_{05a)}$ and concluded that organisational factors had a negative significant moderation effect on the relationship between e-recruitment management and service quality. The ANOVA results as shown in model 5 of Table 17 were significant as indicated by the F-Statistic, F (1, 279) = 66.131, P = 0.000 < 0.05 which indicated that the moderated hierarchical linear regression model was a good fit to the dataset. The overall model was able to explain 32.2% of the variation in service quality delivery as indicated by the R Square value of 0.322 in Table 17). To determine how the organisational factor moderates the relationship between e-recruitment management and the service quality delivery, the study used the interaction Plots as suggested by Brien (2007). The plot is as shown in Figure 3.

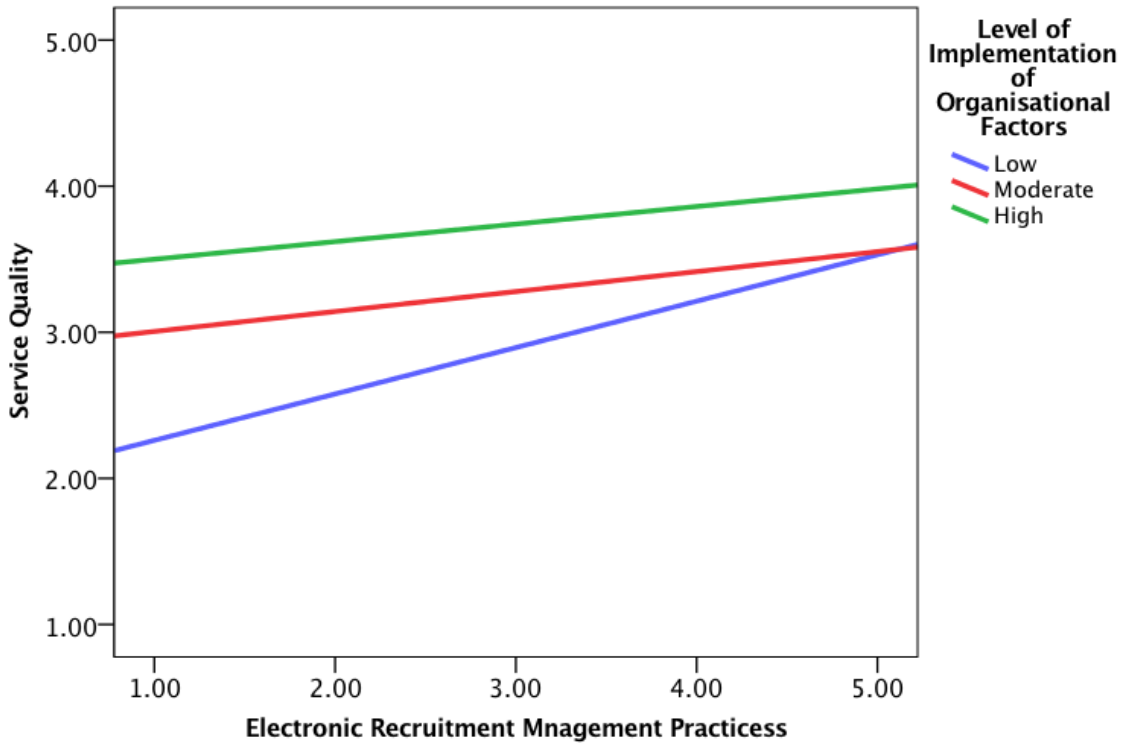

Figure 3: Interaction Plot on Mderation Effects of Organizational Factors on the Relationship between E-RM and Service Quality Delivery
Source: Research Data, 2020

Close and thorough examination of the interaction plot in Figure 3, revealed that organisational factors demonstrated an enhanced negative moderation effect on the relationship between e-recruitment management and service delivery. When the level of implementation of the organisation factors is low, e-recruitment management seem to have a lower influence on service quality delivery compared to moderate and high levels of implementation, and when the level of implementation of the organisation factors is moderate, e-recruitment management seem to have a lower influence on the service quality delivery compared to high levels of implementation of the organisational factors.

Creating a pool of quality applicants from which candidates for advertised positions are selected is key in establishing quality human resource workforce. As such, Management's strategy in ensuring a successful e-recruitment exercise needs to be underscored. Allocation of resources by management towards creation of e-recruitment platforms in the respective public universities in the Western Region of Kenya creates an environment that facilitates efficiency in the recruitment processing and improves on the quality of the recruits. Therefore continued support towards implementation of e-recruitment practice leads to establishment of a culture that satisfies both the universities in the region and the applicants. Easter, (1996) observed that culture determines differential treatment of personnel performing the same functions and may have a negative impact on overall mission effectiveness, as people performing the same tasks, under the same conditions and threats, receive different treatment or rewards. Staff may develop negative opinions and perceptions and this might result in dissatisfaction in the short-term and retention issues in the long-term. The outcome may inhibit the development of a healthy organizational climate, which in turn may impact the organization performance and the effectiveness and success of the operation (Macey, *et al.,* (2009). Thus the way the university establishes a culture influences the way e recruitment is operationalized and managed.

A summary of hypotheses testing results is presented in Table 18.

Table 18: Summary Table for Hypotheses Testing

Hypothesis No.	Description	Result	Decision
H_{01}:	E-recruitment management has no significant influence on service quality delivery in public universities in the Western Region of Kenya.	(β = 0.467, t = 11.259, p=0.000<0.05)	Rejected the null hypothesis
H_{05a}	There is no significant moderating effect of organizational factors on the relationship between e-recruitment and service quality delivery in public universities	(ß = -0.077, p-value =0.044 < 0.05). a	Rejected the null hypothesis ($H_{05a)}$

3.9 Qualitative Data Analysis

3,9.1 Findings from Human Resource Managers

Human Resource Officers from the six universities indicated that universities advertise vacant positions using print and electronic media. In print media, they advertise in local daily newspapers that have national coverage. Besides print media, the universities use their websites to advertise for vacant positions that require filling. It was reported that electronic media was found to be the fastest way of relaying information on advertised vacancies to a wider scope of interested applicants. Applicants use various electronic platforms such as WhatsApp, facebook, twitter, messanger and other modes to relay information to possible applicants.

It was reported by HROs that use of electronic advertisement was found to be more advantageous than use of print media. HROs were in agreement that electronic advertisements reached far and wide and were not restricted local coverage alone. It was reported that electronic mode of recruitment reached people in foreign countries thus attracting more qualified applicants for the advertised positions. They said that advertising in print media was okay though the advert only reaches those applicants who are able to buy the newspapers. However, the HROs observed that the main challenge with use of electronic advertisement is the insufficient ICT infrastructure in the universities to enable full implementation of recruitment and selection process.

These findings corroborate the findings of the questionnaire. In the questionnaire, the mean for most of the questions was 3.14 which indicates that majority of the respondents somewhat agreed with the statements, an indication that implementation of E-recruitment and service quality delivery in the universities was moderate. In the questionnaire it was also observed that there was no mean of 4 and 5 on any of the questionnaire items. This indicates that universities still had a lot to do in linking E-recruitment management to service quality delivery.

HROs from the sampled universities indicated that the universities had installed and were using enterprise

resource planning (ERP) software in processing payments to staff. The findings indicated that though ERP had been installed in all the six universities, implementation of the finance and human resource modules which are used to compute employee remuneration and payments were at different levels. In one university, all processes involving computing, giving necessary approvals and wiring money to the staff accounts is done online while in the other five universities, they blend electronic and manual systems. HROs explained that the main challenge facing the universities in full implementation of ERP software was insufficient ICT infrastructure. They reported that only a fraction of university staff have access to continuous access to internet facilities, training and retraining of staff on the application of ERP system has not been sufficiently done and other technical challenges related to implementation of the ERP system. However, each HRO in the six respective universities confirmed that use of electronic compensation method was more efficient enabling staff both in HR and finance departments provide fast and reliable service to employees. They preferred use of electronic system to hard copy transactions.

These findings corroborate the findings of the questionnaire. In the questionnaire, the mean for most of the questions was 3.07 which indicates that majority of the respondents somewhat agreed with the statements, an indication that implementation of E-compensation and service quality delivery in the universities was moderate. In the questionnaire it was also observed that there was no mean of 4 and 5 on any of the questionnaire items. This indicates that universities still had a lot to do in linking E-compensation management to service quality delivery.

3.9.2 Findings from Nominal Group Discussion wih for Students Leaders

The findings from nominal group discussions with students revealed that students were moderately satisfied with the physical facilities in their respective universities. The students held the opinion that insufficient physical facilities in their universities affected the service offered to them by staff. However they appreciated efforts made by the universities in improving physical facilities as time went by.

Students leaders observed that though universities had made effort to provide ICT equipment to staff, there was still a challenge since not all staff had been facilitated to get ICT Equipment that would enable them provide quality service. They observed that staff were using the limited ICT equipment available to provide electronic services. This had improved flexibility in staff work environment and had made staff to improve the quality of services they received from staff. In all the universities, student leaders observed the internet coverage was a big challenge as internet could only be accessed in certain areas and not others. They explained that non-resident students could not access internet services in their areas of residence unless they came to the universities. The findings indicated that employees in the universities were most of the times in official wear. The staff looked neat and they were warm to them as time progressed.

On rating rate university employees' ability of to perform the promised service dependably and accurately student leaders observed that not all university employees had the ability to perform their duties dependably and accurately. They cited cases where some staff both in teaching and administrative positions promised to deliver certain services but reneged on the promises at the last minute. They indicated that even in the top management of the university, some mangers delivered better than others. Issues that came out cospicuosly were related to teaching and handling of student welfare issues.

Student leaders were asked how they would describe university employees' willingness to help customer and provide prompt service. Responses to this line of discussion indicated that willingness of staff to help students fluctuated with staff being more willing at end and beginning of the month, but they also observed that it was difficult to even tress some staff on dates that fall in the middle of the months, leave alone whether they were willing to help or not. However, some student leaders observed that staff generally helped them whenever they presented issues. Other student leaders confirmed that staff in the university were generally cordial in their relationship with students, were fair in their dealings, appeared neat and were welcoming to students.

Student leaders were asked if the university employees inspire trust and confidence in students through their work performance. This line of discussion elicited mixed reactions in most of the responses received. Half of the student leaders observed that there was trust and confidence inspired by the teaching and administrative staff in the universities. They reported that there were cases of trusted staff both in teaching and administrative positions. However, they indicated that there were reports of staff who had even conned students of their monies. Other responses indicated that some teaching staff did not inspire confidence in the students as they missed lectures and involved themselves in malpractices with students. However, the students leaders louded other staff who went beyond requirements of their line of duty to help students. They cited cases of staff who did extrar work with students, provided adequate learning resources and facilitated students to get requisite learning mayerials. Such staff won the trust of students wholesomely.

Student leaders were also asked to describe the way the university treated the concerns raised by the students. They observed that on academic matters, the universities addressed their concerns moderately well. However, they

expreesed dissatisfaction in the way departments addressed issues of missing marks. They indicated that some students in the universities failed to graduate because their marks could not be tressed. On student welfare, students indicated that universities did not meet the expectations of students. They cited cases where they had raised concerns about security of non resident students, meals provided at the dining hall, games and sporting facilities, in twouniversities student leaders cited the bedbugs menace that had not been addressed over a period of tie.

Student leaders indicated that since introduction of electronic services in the universities, the staff improved in the performance of their duties. Students confirmed that the level of accuracy in performance of services had steadily increased. In addition, student leaders confirmed that they had observed that staff were more willing to provide services than in the past. They further confirmed that as time progressed, and as staff were getting used to integrating ICT in the operations, they were winning trust and confidence of students.

Student leaders also reported that though the universities were registering improvement in how they provided service to students, there were still areas where students concerns had been raised but were not addressed as fast as was anticipated. For instance, they observed that there were cases of missing marks that made some students not to graduate on time. They also reported that though they could receive details about their fee payment through electronic messages, they still noted that there were cases of irregularities in their statements thus making some of them to be denied chance to sit for their examinations.

These results agree with the observations made in the findings in the questionnaire and in the interview schedule for the HROs. In the questionnaire, it was noted that staff were moderately satisfied with e-HRM operations and service quality with an average mean of 3.22.

4.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary of Findings

This section presents a summary of the findings as per the study objectives, hypotheses and variables. For the first objective, the study purposed to establish to assess the influence of e-recruitment practices on service quality in public universities in the Western Region of Kenya. The findings of the study revealed that on average, the satisfaction level in the e-recruitment in the Universities in the Western region of Kenya was 63% (mean = 3.1379, Std. Dev. = 0.79646), rated moderate. The results indicated that e-recruitment Practice had a significantly strong positive relationship with the service quality in universities in Western Kenya ($r = 0.558$; $p = 0.000<0.05$). A coefficient (r) between +0.5 and +1 or -0.5 and -1 indicates a strong relationship. ANOVA test showed a postive significant influence of e-recruitment management on service quality $\beta = 0.467$, $t = 11.259$, $p=0.000<0.05$.

The second objective of this study was to investigate the moderating role of organization factors on the relationship between e-HRM practices and service quality delivery in public universities in Western Region of Kenya. The findings revealed that organisational factors had a negative significant effect on the relationship between e-recruitment management practices and e-compensation management practices, and service quality delivery in public universities in the Western Region of Kenya respectively. However the findings also revealed that organisational factors had no significant effect on the relationship between e-HR training management and e-performance management and service quality delivery in public universities in the Western Region of Kenya as indicated by ß = -0,032, t =-0.787, p-value =0.432 > 0.05] and ß = -0.030, t =-0.762, p-value =0.447 > 0.05] respectively.

Findings from HROs indicate that universities were transiting from the traditional human resource management to electronic human resource management. The human resource management officers observed that operationalization of e-RMP and its influence on service quality was moderate. Findings from student learders indicated the service quality offered by both teaching and administrative staff was moderate.

CONCLUSION

Based on evaluation of the hypotheses and on the findings of this study, the conclusions were drawn as follows:

- The study rejected the null hypothesis and concluded that e-recruitment had a statistically positive significant influence on service delivery in public universities in the Western Region of Kenya.
- Organizational factors have a negative significant moderating effect on the relationship between e-recruitment management practices on service quality delivery in public universities in the Western Region of Kenya.

4.2 New Knowledge

This study contributes to the body of knowledge by providing a strategic framework based on relational e-RMP practice dimensions that public universities can use to improve on service quality delivery. The findings of this study have led to the development of a new model which states that the relational e-RMP practice dimensions: e-recruitment

management practices can be adopted as a strategy to improve service quality delivery contrary to some of the previous findings.

The study contributes to the empirical literature by establishing that relational e-RMP dimension has a significant relationship with quality service delivery in public universities in the Western Region of Kenya and that public universities should focus on implementing the relational e-HRM strategy appropriately by focusing on training programmes that support the implementation of the relational e-HRM practice strategy.

The study brings out the importance of the independent variable: e-recruitment management practice to service quality delivery. This is a departure from the previous relational HRM practices that were not information technology based. The findings will be used in the education industry to ensure that despite the challenges experienced; they can reach the target of quality service delivery by operationalizing relational e-RM Practice.

4.3 Recommendations

The recommendations from the study are two tier; recommendation for practice and policy and recommendations for future research.

4.3.1 Recommendations for practice and Policy

The following recommendations were made based on the findings and conclusions of the study:

- Public universities in the Western Region of Kenya should upgrade and adopt usage of e-recruitment practice to improve on quality service delivery.
- Public universities in the Western Region of Kenya should commit enough resources for continued improvement of e-HRM practices in order to improve on quality of service delivered.
- Government through the ministry of education and other education stakeholders should consider increasing funding for ICT infrastructure in universities so as to enable provision of e-HRM services.

4.3.2 Recommendation for Further Research

First, the study relied on mixed method design where the respondents were asked to assess viewpoints on the item in the instrument. But some success factors of e-RMP are known to be strategic and dynamic in nature. Therefore, a longitudinal study would be more preferable as it could provide a better perspective in addition to further informing the policy frameworks of quality service delivery.

Second, the findings presented in this study are based on evidence gathered from public universities in the Western Region of Kenya. Further research should be carried out in other industries, for example, financial and manufacturing industries whose e-HRM issues closely relate to those of the educational industry.

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