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Influence of Human Resource Information Systems' e – Training and Development on the Performance of Kenyan Public Universities

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Abstract

With the advent of the twenty-first century came the ever increasing effect of globalization and technology. There is, therefore, a tremendous surge in the implementation of new technology and organizations have amplified the use of information systems in various functions and departments for organizational competitive advantage and success. Even though Human Resource Information Systems (HRIS) propels this technology rush, little information exists on HRIS in the Kenyan public universities and hence forms the focus of this study. To get a clear understanding of the influence of human resource information systems'e-training on the performance of Kenyan public universities, this study sought to assess the levels of systems manipulation of the human resource training and development utilities, such as, skills inventory, catalogue of learning options, course dates, record of training expenses incurred, competency or training interventions required for a given job or position.

This study used a descriptive survey method, which employed both qualitative and quantitative approaches. The target population of the study was human resource information system users and service providers who have served in the public universities for more than two years. Questionnaires and interview tools were used to collect both quantitative and qualitative data respectively. Stratified sampling was adopted to identify category of university staff for the study. Simple Random Sampling technique was then employed to identify individual staff for the interviews. Qualitative data was analyzed under the thematic method and quantitative data under statistical method. A total of 187 questionnaires with self-explanatory questions were administered to both academic and non- academic employees of 3 public universities in Kenya. Separately, 23 interviews were carried out and 20 of the respondents were interviewed and recorded. Data collected was analyzed by use of statistical tools for data analysis namely, MS-Excel and Statistical Package for Social Sciences (SPSS). The results of the research give valuable insights about the success and effectiveness of human resource information systems in organizations. The findings of the study are discussed in the context of the theoretical and empirical background of HRIS application on human resource management function of recruitment. The findings indicate that HRIS application on recruitment provide quality, accurate

and consistent data that enables effective and efficient decision making for organizational competitive advantage, while lack of financial support and poor computer competency impede the effective application of human resource information systems. The results further confirm that HRIS'e-training reduces operational cost compared to manual systems as it helps to maintain data with more accuracy and in less time. Based on the findings of this study, it is concluded that applying an effective HRIS e-training can be an assurance for HR to stay competitive in its bid to deliver more effective and streamlined services that can influence the performance of public universities. It is further concluded that HRIS function of e-training enhances human resource management in terms of administrative and analytical purposes. It is, therefore, recommended that a continuous assessment on the influence of HRIS, especially e-recruitment on overall performance is necessary if the public universities are to maintain the competitive advantage resulting from human resource information systems.

Keywords: Human Resource Information systems, E-training and development, Human resource management

1. Introduction

It is believed that future economic and strategic advantage will rest with the organizations that can most effectively attract, develop, and retain diverse group of the best and the brightest human talent in the market place. This strategy of highly skilled human capital can now be effectively accomplished through the application of human resource information systems (HRIS) on the human resource management functions. Human resource information systems has increasingly transformed since it was first introduced at the General Electric in the 1950s.To put it another way, a HRIS can now be viewed as a way, through software, for businesses big and small to take care of a number of activities including solutions in training and other human resource functions. In most situations, HRIS will also lead to increases in efficiency when it comes to making decisions in HR and as a result enabling the HR practitioner to obtain many hours that would otherwise be spent dealing with mundane activities required to run the administrative-side of HR. The decisions made should also increase in quality and as a result, the

productivity of both employees and managers should increase and become more effective (Rietsema, 2015).When HRIS is integrated to the ERP solutions, organizations can enjoy the ultimate benefit of an all-in-one system that can decrease errors, reduces responsive time and support management decisions (Teotia, 2012). On the other hand, e - recruitment is a sub – system of human resource information systems and one of the most critical.HR functions, because choosing the right people at the right time is very important for organizational success. E-recruitment, it is believed, can make the recruitment process much easier (Rietsema, 2015). This automated utility can enable prospective employees to submit applications and resumes online, which saves costs associated with printed applications and helps to keep the hiring process much more organized. Using HRIS' e-training and development for hiring may attract more qualified applicants that find using technology to be more convenient. HRIS recruitment systems also make it easier for organizations to track exactly how much money is spent on recruitment and recruitment-related expenses so that budgets can be planned with more accuracy.

In Kenya, deliberate strides have been taken to get the country to some high technology levels. The Government sees ICT as a driver towards economic and social development, hence National ICT Policy 2008. The HRIS implementation team for Capacity Kenya (CK) has championed the use of human resource information systems in Kenya since 2009 and in 2010 their own Dr. Wakibi collaborated with the Kenya Ministry of public health and sanitation to ensure all HR data for hiring, training, transferring and retiring health workers are electronically entered into human resource information systems by the complement section. However, continuous monitoring and evaluation is vital in determining whether results are being achieved and what needs to be improved. Once a human resource information systems investment has been implemented by an organization, management needs to assess how successful it has been in achieving its goals. Many companies find this hard and may take an informal approach to evaluation (Stair et al, 2010); few organizations systematically attempt to measure the effectiveness of their information systems or even know how to do so (Teotia 2012). The evaluation should determine whether or not HRIS is performing up to its expectations and if it is being used to its full advantage and return on investment (ROI) (Mohammed 2012), Though the demand for useful measures for assessing the overall opportunities of information systems

investments has long been acknowledged, there is neither any one acceptable nor overall framework that organizes the important aspects of effective human resource information systems in a way that supports implementation of human resource information systems and influence. The single available option is by looking through the lens of well-known theories and model of IS effectiveness, by which the value of human resource information systems can be usefully assessed. It follows then that when assessing the impact and effectiveness of the human resource information systems' e – training at the Kenyan public universities, one should be guided by among others; whether or not there is reduced amounts and costs in human resources (HR) data storage; improvements in time and accuracy; improved service standards, together with improved status of the HR function. Previous studies carried out in Kenyan public universities, shed light on the implementation and use of human resource information systems. Kananu (2013) carried out a comparative survey between the private and public universities in Kenya to assess the HRIS on service delivery. Consequently this study reviewed extant literature related to HRIS, its sub-system of e-training and development and influence on the performance of public universities, and eventually verified and validated a multi measurement model, based on IS effectiveness theories such as Servqual and De Lone and McLean IS success model (De Lone & McLean, 2003)

2. Statement of the problem

In today's corporate world human resources has come to play a very critical role in a business, whether it concerns the hiring and firing of employees or whether it concerns employee motivation, the human resources department of any organization now enjoys a very central role in not only formulating company policies. Many developing countries encounter serious constraints to maintaining accurate workforce data and information, including a lack of well-functioning Human Resource (HR) databases. Continuous monitoring and evaluation is vital in determining what an human resource information system is accomplishing, what needs to be improved and whether results are being achieved, to enable the firm to gain a competitive advantage. However, one of the most significant challenges faced by public personnel executives today is measuring the performance of their human resource information systems in order to justify the value-added contribution. (Dottorato & Benfatto, 2010) and in spite of the increasing

functionality and affordability which allows for human resource information systems to be used extensively in the public service organizations of all sizes, limited research is available on assessment to establish whether disparities exist or the impact of human resource information systems on the general performance. Additional studies are needed to demonstrate relationships between human resource information systems and firm outcomes (Kinnie, 2008) as the impact of this IT on productivity and performance is still being questioned mainly due to weaknesses in measurement and evaluation practices.

Africa is no exception to above viewpoints. A study on e-recruitment, e-training and development techniques and e - performance management in the Ghanaian public universities confirmed that there is significant effect between the quality of the output of HRIS and overall institutional performance, but suggested that further evaluation of the system is necessary (Manu, 2009). De Vries et al. (2009), in their survey on evaluation of human resource information systems in Swaziland, Uganda and Rwanda, inferred that there was barely any monitoring and evaluation system in place in the three government departments. An evaluation of implementation of HRIS carried out by Capacity Kenya project 2009, expressed similar sentiments and contends that more evaluative research needs to be done to determine HRIS effectiveness. Besides there is inadequate information about the relationship between emerging technologies and business performance (Mukulu & Karimi, 2010); this is particularly so in the Kenyan public universities, where there is insufficient knowledge on the relationship between HRIS. and the performance of public universities. Furthermore, Wandago, Odhuno and Kambona (2011) in their study on key performance indicators (KPI) in the Kenyan public industry revealed that most managers at Kenyan organizations are still focusing on financial result measures, while ignoring non-financial and other determinant measures, which makes this proposed study necessary as it will establish the critical role played by HRIS applications on major HRM functions like e-training and development, in determining organizational performance.

A study, establishing a robust and sustainable HRIS in Kenya by Ministry of Public Health and Sanitation in Kenya (2010) confirms the importance of HRIS in organizational performance as this system provides the necessary data for effective and efficient planning and recruitment of high caliber workforce. However, Rodrigues (2009) in a survey of ICT research capacity

challenges in Kenyan public universities reveals that most Kenyan public universities have not yet developed comprehensive ICT policies and strategies and that they allocate only about 1% of their revenue to ICT research, as well, Muriithi et.al (2014) in a study of human resource information systems in Kenyan public sector argues that there is need to investigate the entire information system to ascertain impact on organizational performance. Kamar, Ongondo and Katanga (2009) confirm that HRIS has come to the Kenyan public universities, only recently. Further, Kananu (2013) of Moi university argues that even though human resource information systems has gained popularity as a strategy for competitive advantage little information exists on HRIS and its sub system of e-training and development, in Kenyan public universities. There was, therefore, the need for further research to contribute to the knowledge gap; clarify the influence that human resource information systems and its e-training and development function has on the performance of public universities by further exploring this phenomenon.

3. Purpose of Research

This study was purposed to establish the influence of human resource information systems in the performance of public universities in Kenya. Specifically this study is to assess the influence of e- training and development on the performance of Kenyan public universities.

4. Literature Review

This section provides a detailed understanding of issues related to the study. Specifically the section focuses on HRIS and how this initiative influences the performance of Kenyan public universities. The measurement of information systems (IS) success is critical to our understanding of the value of IS management actions and investments. Therefore to reach the objective of this research, the researcher employed theoretical models that allow measurement of the effectiveness of HRIS and apply this framework within the Kenyan public universities to measure its effect on performance. This is followed by a conceptual framework which provides clear link of the literature to the objectives. For purposes of this study there was a review of the relevant literature to inform the discussions, conclusions and recommendations; also formed a framework that helped in the analysis of the study findings and opted for multi-dimensional

models because a single theoretical model may not be sufficient to adequately capture the ultimate significance of HRIS and influence on the performance of public universities. One of the most popular models, servqual is based on the perception gap between the received service quality and the expected service. It can be measured as the gap between the service that customers expect and the performance they perceive to have received (Landrum, Prybutok, Kapplemen & Zhang, 2008). It is important to note that although service quality can be evaluated and measured using servqual, which measures seven service quality dimensions, that is, service quality, system quality, information quality, user involvement, usefulness, user self-sufficiency, user satisfaction; measured too by its servperf subset, which employs a performance only approach with the first five dimensions of customers' perceptions of service provider performance. This study also applied the De Lone and McLean (2003) updated/refined model. As a result of several empirical studies it was found necessary to add a 3rd dimension, Service Quality to the two original characteristics; System and Information quality and to combine individual and organizational impacts into a single variable, net benefits. The purpose of combining the success taxonomy with the success model was to aid in the understanding of the possible causal interrelationships among the dimensions of success and to provide a more parsimonious exposition of the relationships. For purposes of this research the conceptual framework will depict how human resource information systems influences dependent variable, public universities performance, as measured through independent variable, e-training and development (see Figure 4.1). The variables which emanate from the specific objectives, research questions and hypotheses to be tested are clearly articulated in this conceptual framework. Linked to the problem statement, the conceptual framework set the stage for presentation of the specific research question that derived the investigation being reported. For purposes of this research the conceptual framework depicts how HRIS influence dependent variable, the performance of Kenyan public universities, as measured through independent variable, e-training and development (see Figure 4.1). The variable which emanates from the specific objective and hypothesis to be tested are clearly articulated in this conceptual framework.

Conceptual Framework

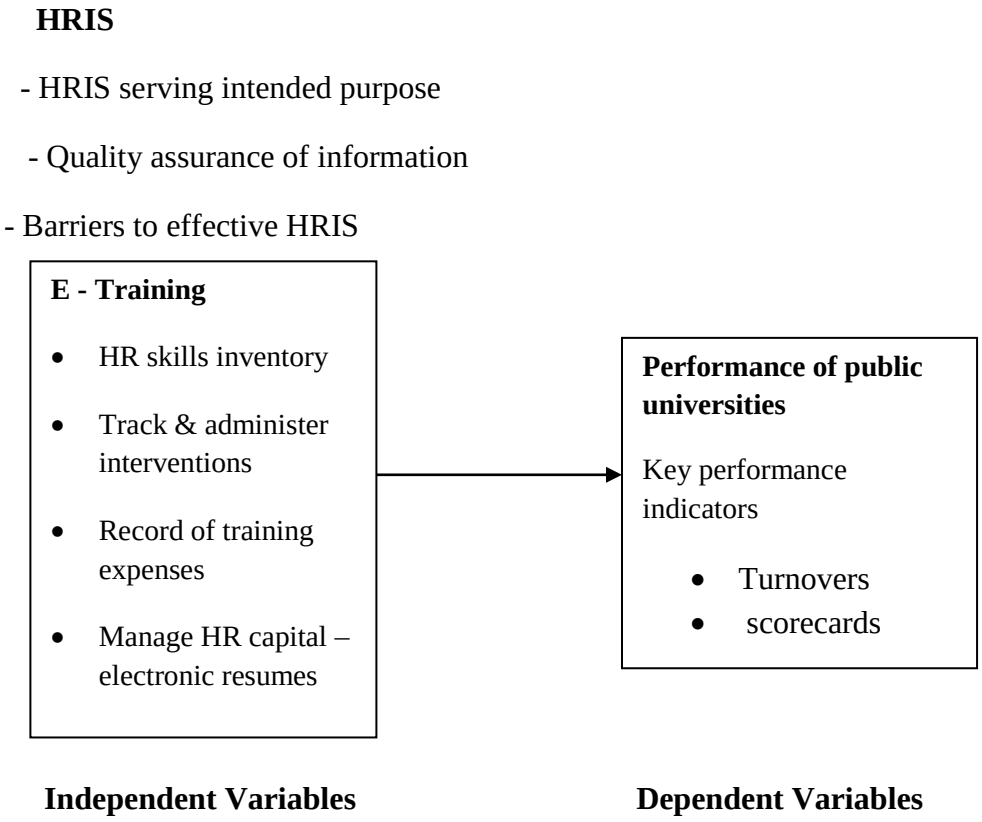

Figure 4.1: Conceptual Framework

4.1General objective: Influence of Human Resource Information Systems on the performance of Kenyan public universities

Efficient and effective management of human capital is increasingly an imperative and complex process. As a result, there has been a considerable increase in the number of organizations gathering, storing, and analyzing information regarding their human resources through the use of software which is human resource information system. Adoption of HRIS by organizations presents the HR function with new challenges which demands the HR professionals to participate and contribute fully to their companies, as true strategic business partners (Shiri 2012). Rawat (2010) in a study on human resource information systems and performance of Jordanian universities as well argues that nowadays universities face a significant task; improving learning environments at the same time, reducing administrative operating cost and as such implementation of human resource information systems to determine its influence in higher educational institutions; provide the utmost updateability use of resources, speed, compatibility,

accessibility, data integrity, privacy and security. Even though extensive research has been done to address the benefits in the introduction of human resource information systems, little investigation, instead, is available to measure the effects of human resource information system on performance of public institutions.

Kananu (2013) argues that despite the investment of HRIS in the surveyed universities, there is tremendous amount of unrealized HRIS potential in services delivery. Therefore, there is need to diversify the use of HRIS in the universities. This will enable the universities to efficiently and effectively run HRM matters. Further issues of cost saving retrieval methods, easier access and speedier and more comprehensive reporting will be assessed. Human resource information systems performance measure requires that HRIS is aligned to organizational performance issues. For this reason HRIS utilization should go beyond payroll management and tracking employee records. They should connect to the strategic objectives of the organization, for instance, be aligned to organizational performance issues, like use of technology to evaluate organizational performance.

Key performance indicators (KPI) must be key to organizational success, that is why when identifying the KPIs, it is critical to limit them to those factors that are essential to the organization reaching its goals (Reh, 2012). For instance employee turnover, which is the total of the number of employees who resign for whatever reason, plus the number of employees terminated for performance reasons, and that total divided by the number of employees at the beginning of the year. This may be measured by analyzing the records that human resource information systems contain of each employee. The separation section lists reason and date of separation for each employee; monthly or when requested; the HRIS group will query the database and provide Departmental Heads with Turnover Reports by posting graphs of each report on the Intranet. Further HR should improve on its score keeping process; measuring HR's impact on organizational performance as well as alternate HR roles in the score keeping process. The HR score card is one of the strategies that come into focus when clarifying HR impact on organizational performance. Operational outcomes of the score card process may include customer satisfaction, service quality, speed of delivery and productivity; doing more with less (Hagood & Friedman, 2002). HRIS should accelerate HR role of executing the business strategy

for HR to become more of a value-added player. HRIS therefore provides opportunity for HR to play a more strategic role, through their ability to generate metrics which can be used to support strategic decision making (Lengnick-Hall et al. 2005).

4.2 Specific objective 1: Influence of e – training and development on the performance of Kenyan public universities

The training software gives provisions for skills inventory. It is used to store record of acquired skills and monitor the skill data base, at both employee and organizational levels. The system can equally be used by managers, employees and training staff to plan and administer all types of training interventions. Typically such systems will hold a range of data: a catalogue of learning options, course dates, HR skills inventory, record of training expenses incurred; competency or training requirements associated with positions/jobs, employee training data (learning plan, training history competencies, qualifications and so on). With regard to training and development work focus has been through HRIS. The system helps track training, skills and competencies. Human resource information systems can be used to manage human capital and maximize talent. The system stores electronic resumes for each current employee, which gives the company an electronic inventory of its human capital. It can track where skills are in short supply and HR can develop appropriate training; training needs analysis, training cost benefit analysis, promotion analysis; this supports decision on career management, simulation, training evaluation and decisions (Lin, 2006). De vries et al, (2008) argues that accuracy in data provides for a qualified workforce.

For better tracking and management of employee training, specific training often is required by regulators, and documenting successful course completion can be a major burden for organizations. Employees may be required by law to complete Occupational Safety and Health Act training, sexual harassment courses or patient care procedures. An HRIS can help employees track which courses have been successfully completed and what upcoming training opportunities may fit their needs. Managers can track the training as well as reducing redundancy and training costs. In one option, a Learning Management System (LMS) can be used to manage the administration, tracking and reporting of training in the organization. By allowing the

organization and employees to develop talent and skill profiles, sign up form courses, and register course attendance, an LMS can cut costs, streamline training and empower employees to manage their own skill development more effectively. E - training capability provides employee engagement survey and succession planning tools, needed to implement and maintain comprehensive Talent Management, and identify high potential employees as part of an organization wide succession planning process. This capability allows for the establishment of core competency requirements against roles, at all levels within the organization (Shibly, 2011).

Generally HRIS is configured to evaluate programs, policies or practices, for instance to evaluate the effectiveness of a training program. The training and development sub system of HRIS includes data on an employee's skills and competencies, training courses taken, costs of courses, developmental activities and career planning in terms of which positions might be most ;appropriate for an employee based on skills and competencies. Human resource information systems must now be judged on whether it enhances the firm's competitive advantage by adding real value, measurable economic value for instance shortened training circle time, not merely on its perceived value like training builds skills (Huselid, Becker & Beatty, 2008).

The realization that every organization faces the need to invest in its existing workforce. During the late 1990s and early 2000s, recruiting from the outside was the path organizations used to fill the need for talent. With the approach of the talent deficit of 2010—which will mean a shortage of more than 10 million knowledge workers in the United States alone, companies and institutions of all types realized that they must do a better job of re-skilling and retraining their existing labor (Averbrook, 2012). Rietsema (2015) argues that when a company invests in an affordable HRIS, it suddenly becomes capable of handling its workforce by looking at two of the primary components: that of training and development and that of HR. Beyond these software solutions, companies also invest in HRIS modules that help them put the full productivity of their workforce to use, including the varied experiences, talents, and skills of all staff within the enterprise.

In most situations, human resource information systems will also lead to increases in efficiency when it comes to making decisions in HR. The decisions made should also increase in quality and as a result, the productivity of both employees and manages should increase and become more effective. These systems enable employees to manage much of their own HR administrative work. They can take care of many routine transactions whenever they wish. In addition to their former operational role, HR professionals can also act as a competency manager by arranging the right people to the right positions in the right time with their new skills.

Career and succession plans - most existing HR solutions provide tools and technologies to store career and succession plans for the workforce. Integrating these plans with performance management processes is crucial to support employee growth and job satisfaction. Executives have requested this data for years, as retention is a top metric within most companies. Today, this data is not a request, but a requirement, and the need to automate a very manual process is crucial for success and keeping a competitive edge.

Competency management: - understanding the skills and abilities of the workforce continues to baffle most executives. Many organizations know more about their IT investments and expenses than about their people. On average, companies spend 8 percent of their total expense line on IT and 70 percent on labor. The fact that a company would know more about how much memory is in a computer, who sends e-mail to whom and what Web sites get visited most frequently than what their "most important asset" knows illustrates the need for a renewed critical focus on assessing the true value of the workforce (El – kot & Leat, 2011).

When we consider the Kenyan scenario, there are very few studies on evaluations of human resource information systems but which concentrated mostly on record keeping and mainly the payroll; anything similar has been the routine employee satisfaction surveys and the annual ISO inspection which is more manual based and has minimally audit on human resource information systems. Whatever has come out of this is that there is an element of employee dissatisfaction with the training and development function of organizations, several public universities due to lack of effective functioning system for tracking and inaccurate competency analysis to

determine who needs training, where and when; proper career pathing to streamline promotions based on competency analysis. This study could not have come at a more opportune time.

Besides in the context of higher education institutions (Rawat, 2010) informs that the efficiency and effectiveness of an HRIS will enable universities to format a profile of their staff, their strengths and weaknesses, so they will know what they have in the personnel sense. Accordingly they will be able to structure appropriate development promotion, training and recruitment.

However, in Kenya a handful of evaluation studies carried out reveal that the need for e-trainng and developmentt is vital to an organization efficiency and competitiveness in the growing global economy. Kananu (2013) in a comparative assessment survey on the utilization of human resource information systems in Kenyan universities premises her observations on similar grounds and acknowledges that human resource information systems is to be commonly used for payroll and record management. Besides, HRIS was also found to be used for recruitment, promotions and skills inventory. Kananu study as a result urged that the management of Kenyan universities should allocate adequate resources for the implementation and maintenance of the system. HR managers should play a proactive role to support HRIS implementation in their organizations. Again her study advocated that since the universities in Kenya have adopted different types of Human Resource information systems, these systems needed to be integrated and exchange data in order to increase availability and readiness of information to support top management on decision making.

5. Research Methodology

This chapter intended to highlight the research methods that were used to achieve the specific study objective; assessing changes brought about by HRIS' e-training and development and to determine influence on the performance of Kenyan public universities. It comprised the following: research design, population, sampling, instrumentation, data collection and operational measures of variables used in the study as well as the statistical tests used to evaluate the hypothesis during data analysis. This study adopted a descriptive survey design to establish the relationship and influence between dependent variable, the performance of public universities and independent variables, HRIS, concentrating on the sub-system of e-training and

development. The focus of this study was public universities in Kenya, then, namely the University of Nairobi, Kenyatta University, Moi University, Egerton University, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Masinde Muliro University and Maseno University. However since it is not viable to undertake a census study, this research opted to work with a representative number of universities. Various factors came into play to determine the target population. The University of Nairobi was selected as a target population because of its period of existence as the first public university and its geographical distribution which also determine successful adoption of information technology, including HRIS. JKUAT was the first university of technology and Maseno University is amongst the latest fully fledged public universities. Questionnaires and interview tools were used to collect both quantitative and qualitative data respectively. Stratified sampling was adopted to identify category of university staff for the study. The method of stratification was by job scales/groups and this was done to ensure homogeneity during data collection and ease of administration of the data collection tools like questionnaires. In this study, there were two strata: (academic and non-academic levels). From each of these strata, sampling with probability proportional to size was adopted and this was to ensure that those who completed the questionnaires and interview schedules were of a representative percentage of the target population of study. The thirty percent (30%) plus rule was employed because the sample size derived from it was found to be representative for the target population for the study. Simple Random Sampling technique was then employed to identify individual staff for the interviews. Qualitative data was analyzed under the thematic method and quantitative data under statistical method. A total of 187 questionnaires with self-explanatory questions were administered to academic and non- academic employees of 3 public universities in Kenya. Separately, 23 interviews were carried out and 20 of the respondents were interviewed and recorded. Data collected was analyzed by use of statistical tools for data analysis namely, MS-Excel and Statistical Package for Social Sciences (SPSS).

Since the population size is less than 10,000, the effective sample size will be:

$$n_f = \frac{n}{1+\frac{n-1}{N}} = \frac{384}{1+\frac{383}{455}}$$

$= 209$

$$n = \frac{Z^2 pq}{d^2}$$ Where:

n = the desired sample size z = the standard normal deviate at the required confidence level P = the proportion in the target population estimated to have characteristics being measured q = 1 – p, d = the level of statistical significance set = 384.

The sample size in this study (209), constituted 46% of the population (455). This is appropriate size because according to (Cohen, 2005) and (Mugenda & Mugenda, 2003), a sample size of 30% and more enables the researcher to gather sufficient details and enhance the reliability of the study and appropriate for generalization. .

Simple regression analysis was the model employed to test the relationship between the performance in public universities and the independent variable, HRIS' e-training and development (x_1) since only one specific variable was being tested (Kothari, 2008). The simple regression model was articulated as: $Y = \alpha + \beta_1 x_1 + e$, whereby,

$\bar{Y}$= Dependent Variable (performance of public universities) α = constant (HRIS)

x = Independent Variable x_1= e-training and development β = regression coefficient of x_1.

e = error term which is here assumed to be normally distributed with mean 0 and some constant variance.

Reliability index of the instrument was established through Cronbach's Alpha statistical model:

$0 \leq Z \leq 1$ where as if ≥ 0.7 then the instrument is reliable.

To test the significance of the of the partial regression coefficient, the prediction would be that each independent variable had no influence on the performance of public universities that was $\beta_j = 0$ otherwise $\beta_j \neq 0$; $j = x_1$

T – test was used in the hypothesis testing and articulated as: H_0: $\beta_j = o$ **Vs** Ha: $\beta_j \neq o$

Test Statistic: T calc = $\beta_j / S_{\beta j}$; Critical value T crit = t n - 1 $(1 - \infty/2)$

Conclusion: Rule based on Tcalc & Tcrit

If t calc ≤ t crit, we reject the H_0 and conclude that there is some level of significance; there was therefore, influence of HRIS on the performance of public universities.

6. Research Findings and Discussions

The study sought to investigate influence of HRIS on the performance of public universities in Kenya. Specifically it explored how the application of this system on training and development influenced the performance of Kenyan public universities. Findings of the study revealed that the majority of respondents agreed that HRIS influenced the performance of Kenyan public universities and argued for the following reasons; the e - training and development skills inventory capability provides succession planning tools needed to implement and maintain comprehensive talent management, and identify high potential employees as part of an organization wide succession planning process. This capability allows for the establishment of core competency requirements against roles, at all levels within the organization. Employee capability is then measured against the roles competencies and supports employee progress towards acquisition of competencies, through training and professional development. The majority observed that training skills inventory generates adequate and useful data necessary for career pathing and succession planning. In addition, to arrive at these deductions the IS success models were used to describe hypothesis during the analysis to determine inferences such as, how e-training and development functions; its strength of influence on system effectiveness and how to optimize their interactions towards realization of strategic objectives and the larger organizational outcome.

Reliability was tested using Cronbach's alpha. Normally, the variables are internally reliable if the Cronbach's Alpha is greater than 0.70. After applying Cronbach's coefficient Alpha test on influence of HRIS's e-training and development an alpha coefficient of 0.886 was reached. This indicated satisfactory reliability as the values exceed the recommended threshold 0.70, portraying good internal consistency among the items within each dimension, each variable, and the entire scale.

Table 6.1 shows the Pearson correlation coefficient between the independent variable, e-training and development process and the dependent variable, the performance of public universities. It shows a significant positive correlation between e-training and development process and the public universities performance of 0.546.These results are consistent with Gautel et al (2005) who in their research detailing how to use technology to enhance organizational performance confirm that application of HRIS functions enhance operations of organizational performance. In their correlation analysis the linear relationship between their independent variable HRM functions and dependent variable, organizational success was positively skewed and had a significant relationship.

Table 6.1 Correlation Coefficient between e-training and performance of public universities

		university Performance	Training And Development Process
University performance	Pearson Correlation	1	.546**
	Sig. (2-tailed)		.000
	N	85	85
e-training	Pearson Correlation	.546**	1
	Sig. (2-tailed)	.000	
	N	85	85

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

Regression Analysis

Regression analysis was carried out in order to determine whether the independent variable, HRIS' e - training can be relied upon in explaining the dependent variable, Kenyan public universities performance. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between HRIS' e-training and development and the performance

of Kenyan public universities. Table 6.2, the model fitness of the regression analysis, shows a relationship of R = 0.546 and R^2 = 0.290 which means that 29% of the corresponding change in E - training process can be explained by performance of public universities in Kenya in all predictor variables jointly. In other words e - training and development process has significance and influences university performance according to the percentage level described above.

Kheri & Gulati (2013) in their study on HRIS and its impact on HR planning in Delhi, India and in their empirical testing of the relationship between the independent and the dependent variable found out that there was a positive relationship between the variables. Results of their analysis was R = 0.377 and R^2 = 0.310. Impact of HRIS on HR planning, beta/ b= 0.300 was significant; this implies that HRIS has a positive impact on HR planning.

Table 6.2 Model Fitness: e -training process vs universities performance

	R	R Square	Adjusted R^2	Std. Error of the Estimate
	.546[a]	.299	.290	7.81556

a. Predictors: (Constant), e - training and development process

In table 6.3 a further test on the beta coefficients of the resulting model, the constant $\alpha = 13.328$ is significantly greater than zero. The coefficients $\beta_1 = 0.546$ is significantly different from zero (0) with p-value of 0.000. This implies that e-training and development process has a positive and significant effect on the performance of public universities; which reveals that an increase in the e-training and development process leads to increased universities performance. This is corroborated by Muriithi et.al (2014) in their test of beta coefficient of their HRIS research in the public sector, where findings indicate that there was positive gradient which implies that an increase in the adoption of Human Resource Information Systems leads to increased training and development and hence firms performance.

Table 6.3 Regression coefficient – e training vs universities performance

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	13.328	3.118		4.275	.000

	Training& Development	.578	.097	.546	5.945	.000

a. Predictor: e- Training and development

b. Dependent Variable: universities performance

7. Conclusions and Recommendations

In light of the above findings, the study generally concluded that HRIS influenced the performance of Kenyan public universities by facilitating the following utilities: First, ease of access to information thus it is faster, much quicker and easy to obtain and retrieve information from electronic records. Secondly, user friendly which means that automation of the human resource functions provides for user friendly interface. The majority of employees are now able to interact with the HRIS system and this enables them to perform their e-tasks effectively to influence the performance of public universities. Thirdly, HRIS saves time and funds as the employees can now utilize the extra time and funds to concentrate on improving productivity levels of Kenyan public universities. On the other hand, based on the results on the usage of HRIS, it can be concluded that lack of computer literacy and competency is a barrier and great drawback to the advancement of HRIS technology in the Kenyan public universities. Again based on the results of this study variable which revealed moderate influence and statistically significant relationship as supported by the coefficient of determination which shows that average variations in overall universities performance is explained by automation of training and development process. It can, therefore, be concluded that at the operational level, human resource information systems data can be used to identify ensuring existing employees of career opportunities. Based on research findings that e-training and development will improve institutional operations through the creation and frequent update of HRIS sub system, skills inventory, it can be concluded that frequent upgrade of this skills tracking utility will increase the performance of public universities since through its evaluation of ability and competency of potential employees in relation to what the universities need, will enable the institutions to undertake training and development interventions on short notice..

In light of the preceding conclusions, the following recommendations were made: a) Human resource Practitioners – The conclusions reveal that there is need to improve effectiveness and

efficiency human resource information systems. It is, therefore, recommended that human resource practitioners review this study as it should help them acquire better understanding of the current human resource information systems status of influence. It is believed that with this new knowledge they would advise the university management on the strategic importance and contribution of HRIS to the overall performance of the public university. b) Kenyan public universities - For those university institutions who have not fully digitized their systems, they should review their status and to update capacity of operation of their systems. c) Diversification of use of HRIS –based on the conclusion that a few respondents believed that HRIS was not serving intended purpose, the researcher recommends that here is need to diversify the use of HRIS in the universities. This will enable the universities to efficiently and effectively manage performance human resource performance matters. e) Lack of funds and required skills –Based on the conclusions of this study, it was recommended that the Kenyan public universities need to invest in modern information technology in such areas as computer hardware and internet connectivity. Enough funds should be made available to the respective public university institutions in order for their workforce to acquire the necessary IT competency.

Suggestions for further study

The results for this study provide empirical evidence that human resource information systems (HRIS) influence the performance of Kenyan public universities. The bundle of HRIS on human resource management (HRM) functions adopted for this study included only recruitment. However, it should be appreciated that HRM practices are diverse and there's no standard bundle. Further study is, therefore, recommended on other unexplored HRM factors to further clarify the influence of HRIS on overall organizational performance that have not been addressed in this study. Such clarification would provide additional valuable guidance to HR professionals and the university institutions as a whole.

c) Academically this study has important implications for further studies aimed at understanding the human resource information systems and its influence in other public universities in developing countries. Further study should apply diverse models of measurement other than the models used in this study.

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