The Influence of Management Participation on Adoption of HRIS IN Teachers Service Commission (TSC) Operations in Kenya

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Abstract

While it is generally accepted that Human resource plays an important role in organizations, organizations now take cognizance of the fact that the more strategic the approach to human resource management (HRM), the greater the contribution of HRM to organizational performance. This is because HRM powerfully impacts on the policies, practices and systems that influence employees' behavior, attitude and performance The purpose of this study is to investigate the factors affecting the adoption of human resource information (HRIS) systems in the operations of Teachers Service Commission (TSC) in Kenya. The current status in the TSC is that there is limited usage of information systems especially in human resource management hence the rationale of this study. In most cases HRIS is still at transactional level. Moreover, management of HR in Africa has not changed much since countries attained independence. The HR function is still a support function that provides services to its internal customers and which is constantly under challenge to improve its service quality and in turn nurture further organizational development. This is the scenario in most of the government organizations in Kenya. It is also worth noting that most of the literature available on HRIS is from other countries and not the Kenyan context. The study addressed the question as to whether management participation had influence on adoption of Human Resource Information Systems at the TSC in Kenya. The study employed descriptive research design. The study population was the staff of the TSC in all its offices spread across Kenya. Purposive stratified sampling was used to select the sample for the study. Data was collected using a self administered questionnaire. 202 questionnaires were distributed and 140 were received back. It was then analyzed using, SPSS window Version 21. Multiple regression and correlation

analysis were conducted with results pointing to the fact that management participation has significance on adoption of HRIS in TSC operations in Kenya.

1.0 Introduction

Human Resources (HR) and information technology are the two elements that many firms are learning to use as strategic weapons to compete. The vision 2030 economic reform progress initiated by the government of Kenya is aimed at turning Kenya into a middle level income country. It incorporates ICT as a social economic force under the economic pillar for driving development among other sectors. The government's key objective is to turn Kenya into a global ICT hub and a premier location for business process outsourcing (BPO). This led to the formation of the current ICT board in 2007, (Musimba, 2010). To capitalize on the synergy between these two assets, human resource information systems (HRIS) is an emerging area that may lead human resource management into a new era. Technological developments and particularly those based on advancing IT, are essential for organizational effectiveness and are powerful drivers of organizational change (Mullins, 2007).

The TSC has grown tremendously since its creation through an act of parliament cap 212 in 1967 in terms of the teacher population it serves, as well as its secretariat staff. Recently it was made a constitutional office through an act of parliament 237(1) of 2012. It is therefore expected to improve service delivery to its customers. Being the biggest employer in eastern and central Africa means it manages a massive payroll. The HR issues it has to manage lead to a lot of correspondences in a day. The introduction of HRIS in the organization can improve efficiency and in consequence reduce the amount of correspondences and clients visiting the commission at any given time. Worth noting is the commission introduced ICT department in 2003 but the paper work is still a lot. This therefore calls for adoption of computer based HRIS systems for maintenance of employee related data and generating appropriate HR reports (Armstrong, 2006). However the current scenario is that there is minimal implementation and adoption of HRIS and therefore the rationale of the study.

1.1 General objective of the study

The purpose of this study was to find out the determinants of adoption of human resource information systems in Teachers Service Commission operations in Kenya.

1.2 Specific objectives of the study

To analyze the effects of management participation on the adoption of human resource information systems in TSC operations in Kenya.

2.0 Literature Review

Soares- Aguiar & Palma-Dos- Reis,(2008), define management participation as the managers and leaders' attitude and involvement in designing and developing HRIS with the help of IT professionals and ensuring that HRIS is accepted in an organization.

2.1 Management participation and HRIS

Management participation refers to managers and leaders' attitude and involvement in designing and developing HRIS with the help of IT professionals and ensuring that HRIS is accepted in an organization. It involves the managements role in ensuring that HRIS is accepted despite the resistance to change that may arise.

Maumbe and Okello (2013) observe that the full use of ICT provides new avenues for resolving the problems of information asymmetry and information poverty that characterize rural areas in Africa. ICT enabled farmers to receive real time information on input product prices, weather conditions, pest infestation and related farm management extension advice. Zhu and

Weyant (2003) observed that common benefits of technology adoption are the capability to compete in product markets at lower costs or with better efficiency. Thus technology adoption decisions are often made under strategic considerations or competitive pressure. In an oligopolistic industry with several competitors, adopting a new technology is a strategic decision. Implementation of HRIS is an organizational change. For any change, resistance is expected: To ensure successful HRIS implementation, context issues need to be assessed.

A number of factors are identified from the literature. Lippert and Swierz (2005) observed that HRIS brings changes to everyone's work. It is important for managers, leaders and HR professionals to be involved together when designing and developing HRIS with the help of IT professionals. This they add may cause co-operational challenge between managers, leaders and HR people. It is the prerogative of top management to ensure there is acceptance of HRIS. There are barriers associated with acceptance of new or upgraded HRIS among key end –users of the system and the importance attached to managing the change process associated with its implementation and introduction. Further, obtaining organizational 'buy-in' regarding the strategic contribution of the HRIS has been in some cases been hindered by skepticism, a lack of understanding, insufficient management commitment, and fears that existing modes of work will be changed and result in for example job loss or altered leave entitlements and shift arrangement (Dery et al, 2006).

Compare HRIS (2012) in discussing HRIS strategy implementation argues that employees, would rather be lectured and inspired by line leaders than they would by HR. HR, meanwhile, has the power to generate opportunities to bring employees together with managers and executives, leading from behind the scenes. For successful implementation of HRIS, it is recommended there be a thorough understanding of the strategic objectives, willingness to make sacrifices in order to achieve strategy, common view regarding what parts of organization must change and commitment to a systematic plan of employee management, support, and interdepartmental relations that will cultivate efficient execution of the strategy. Another factor that may affect the implementation of HRIS is the attitude and involvement of human resource leaders. Where management is finding difficulties in implementing HRIS it is the job of HR professionals to urge the management group to address these issues and suggest means of bringing HRIS (Compare HRIS 2012). In addition, Dery et al (2006) observed that as organizations experience significant changes in structure, size, ownership and government this has resulted in a shift of senior management attention away from development of HRIS to move immediately pressing organizational issues and functional priorities. One consequence of this is the allocation of insufficient resources to the HRIS and, in some cases, the increased delegation of responsibilities to vendors and consultants.

In the study of four Australian universities, Dery et al. (2006) noted that there was the challenge for HRM on how to manage the tension between the need to adapt practice to meet the needs of HRIS versus customizing the technology to fit existing practices and the unpredictability involved in the management of people. Associated with this challenge is the decision of where to locate the management of HRIS i.e. within information technology or as an HR technology group within HR. Nevertheless, there was consensus that there was a significant implication for knowledge transfer from between IT and HRIS. Vries (2006) asserts that there is need to focus on concurrent professionalism of HRIS functions. To sum it up an ICT investment needs senior management commitment to provide necessary budget and support, hardware, operational training, and maintenance.

Vries et al (2009), in evaluating capacity project's HRIS in the health sectors of three African countries i.e. Rwanda, Swaziland and Uganda, the project staff observed the following in

Swaziland: that, trainers perceived a general lack of basic computer literacy among many (especially senior staff). Most of them felt that the statistics unit data base fell outside their usual administrative responsibilities and were reluctant to engage the new system. To resolve the issue and emphasize the systems relevance and benefits, the local statistics development team introduced the system to the HR team in the form of a general HR workshop, identifying objectives, and then later illustrating the utility of the HRIS in providing responses. This approach of the training as a HR strategy as opposed to more technical HRIS training helped align relatively computer- illiterate personnel to HRIS. Therefore management participation is paramount in giving continuous learning and training for a successful implementation of HRIS in an organization.

Research has also explored several chief executive officer (CEO) characteristics that influence the IT adoption process. Innovation adoption is related to the innovation decision process when the knowledge of the innovation is gathered, an attitude will be formed towards the innovation as to whether to adopt or reject innovation (Rogers 1995). It is the top managers who make the final decision to adopt IT based on the internal needs of the organization or environmental changes (Damanpour & Schneider, 2006). The CEO also takes the responsibility of managing and use of technological innovations in organizations. (Pinheiro, 2010). An organizations strategic decision to adopt or reject an innovation often reflects the personal characteristics of its top managers. The CEO's attitude and perception of new innovation plays an important role in the adoption of IT. A CEO's innovativeness and favorable attitude of new technology affects in a positive way the adoption of IT. The creation of an attitude towards an innovation happens before a decision to adopt has been made. Top managers' favorable attitude assists in all stages of adoption.

2.2 Theoretical Frame Work

DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Rogers 1995). He explained that individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time. Breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, laggards. The innovation process in organizations is much more complex. It generally involves a number of individuals, perhaps including both supporters and opponents of the new idea, each of whom plays a role in the innovation-decision.

Based on DOI theory at firm level, innovativeness is related to such independent variables as individual (leader) characteristics, internal organizational structural characteristics, and external characteristics of the organization. Individual characteristics describe the leader's attitude toward change. In light of this study this supports the variable of management participation. Internal characteristics of organizational structure include observations according to Rogers (1995) whereby: "centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals"; "complexity is the degree to which an organization's members possess a relatively high level of knowledge and expertise"; "formalization is the degree to which an organization emphasizes its members' following rules and procedures"; "interconnectedness is the degree to which the units in a social system are linked by interpersonal networks"; "organizational slack is the degree to

which uncommitted resources are available to an organization"; In the study this ties to the variables finances and infrastructure supportive to technology adoption. "Size is the number of employees of the organization". External characteristics of organization refer to system openness.
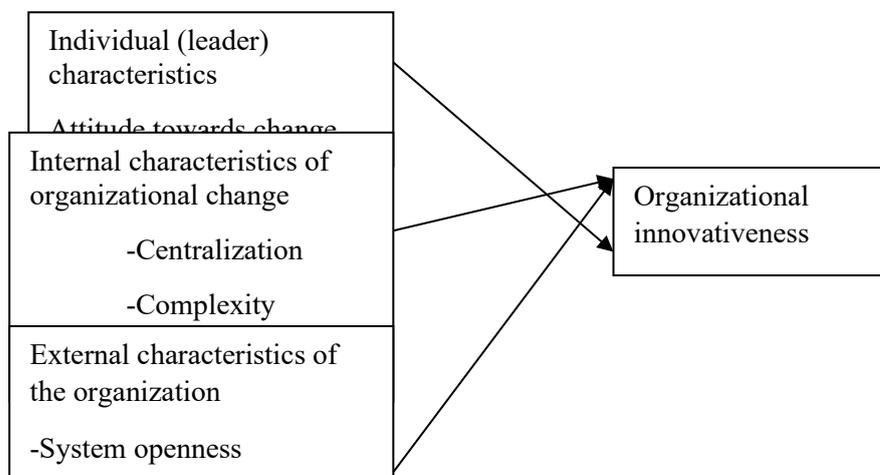

Figure 1: Diffusion of innovation mode (source: Tiago and Fraga 2011)

2.3 Conceptual framework

The conceptual frame work was created based on management participation in relation to HRIS policies, finances, training of top management, implementation and maintenance of HRIS infrastructure. The relationship is shown in figure 2 below.
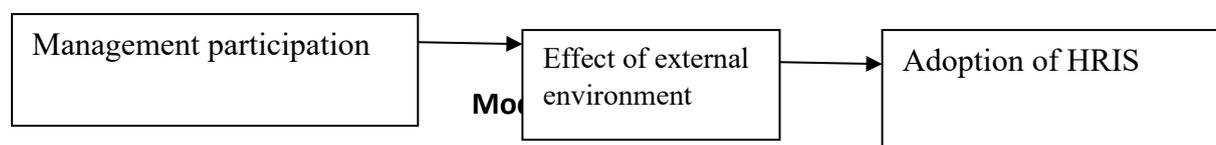

Figure 2: conceptual Framework

3.0 Research Methodology

The study employed descriptive research design. Descriptive design is one that is typically guided by hypothesis and focuses on frequency with which something occurs or the relationship between two variables (Churchill & Iacobucci, 2005). According to Cooper and Schindler (2006), descriptive research design informs how and why things happen and is concerned with exploring people's everyday behavior (Orodho, 2004). The design was suitable for this study since it offered the opportunity to establish the relationship between the independent variable and dependent variable.

3.1 The population

The population is also referred to as the universe. Target population includes all the members real or hypothetical set of people, events or objects to which researchers wish to generalize the results of their research (Singleton and Strait 2010). The population of the study was the secretariat staff of the TSC which according to datum obtained from human resource department-2014 was 3000. For the purpose of this study the sample population was confined to all top level and middle level management staff in TSC offices spread across Kenya. The top management (job groups Q and above) comprised of directors heading the seven directorates namely: teacher management, human resource management, finance,

audit, accounts, administration and ICT, TSC county directors and, and senior deputy directors in charge of divisions. The middle level management included all deputy directors, assistant deputy directors and senior officers in the field offices (job groups L-P). This target population was also most likely to be well informed about human resource information systems.

3.2 Sample Size Determination

Wisker (2001) defines a sample as a selected and chosen group upon which you carry out your research. A sample is a subset of the population. It comprises of some members selected from it. By studying the sample, the researcher should be able to draw conclusions that would be generalized to the population of interest (Sekaran 2003).

A sample size 203 respondents was used in the study. Out of these, 41 were drawn from top management and 162 from middle level management. All made the population of study since they comprised the group that is faced with decision making at the commission.

This was arrived at by using the formula below as espoused by Mugenda & Mugenda (2003). $n = z^2pq/d^2 = (1.96)^2(0.5)(0.5)/(0.01)^{2.} = 384$.

However this is only applicable when the population size is at least 10,000. When the population is less than 10,000 as was the case with this study, then the sample size was subjected to the formula: $nf = n/1 + (n-1)/N$

=384/1+383/417= 384/1.91846 =200

Where 200/203 × 100= 99

Therefore the sample for top management was 99% × 40 = 3.

Middle management was 100% × 160 = 158

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 of adoption being measured assumed to be 50% = 0.5

q=1-p =0.5

d=the level of statistical significance set. (0.05).

3.3 Data Collection Method

A self administered questionnaire was used to collect data. Most question statements in the questionnaire were designed as close ended, open ended and a Likert scale. The closed ended questions sought to solicit standard responses while the open- ended questions were also employed in the study. They gave liberty to the respondents to answer the questions in any way they chose. The statements on Likert scale measured the employees' opinions, perceptions and attitude. The statements were assigned numerals between 1- 5. This coding is necessary for computer aided analysis (Kothari 2004).

4.0 Summary, Conclusions And Recommendations
4.1Background of the Respondent

The characteristics of the respondents involved the study were collected as indicated in table 1.

Table 1: Characteristics of the Respondents

Gender	Frequency	Percent
Male	58	42.3
Female	79	57.7
Total	137	100

Age		
Below 30yrs	8	5.7
31-40	38	27.1
41- 50yrs	84	60
51yrs and above	10	7.1
Length of service		
Less than one yr	**2**	1.5
1-4	**7**	5.1
5-10yrs	45	32.8
10 and above	83	60.6
Total	137	100

Out of the 140 respondents, 137 responded positively while three did not indicate their gender. 42.3% (58) were male while 57.7% (79) were female from the sampled TSC offices countrywide. This is true of the education sector where females are more than the males and especially in the county offices and TSC headquarters which are located in major towns in the country.

The responses indicate that most of the employees who were drawn from middle and top management level were in the age bracket of 40- 50 years at 60% (84) and 27.5% (38) for the age bracket 31- 40 years. These age brackets mainly comprised of the operation managers who are the implementers of policies at the TSC. The organizational structure narrows towards the top comprising of employees in job group 'Q' and above. The least were in the age bracket of 30 years and below at 5.7 %.(8) who are yet to rise to management level, followed by above 50 years at only 7.1%. (10).

4.1.1Response by length of service

Most of the respondents had worked at the TSC for over ten years at 60.6% (83). This is understandable since the schemes of service to a large extent control how long it takes to move to the management levels at job group 'M 'and above. This was followed by 5-10 years at 32.8% (45). Only two, 1.5 % respondents had worked with the organization for less than a year. Three respondents did not indicate how long they had served at the TSC. Out of the 140 respondents, 137 responded positively while three did not indicate their gender. 42.3% (58) were male while 57.7% (79) were female from the sampled TSC offices countrywide.

4.2 Descriptive analysis

The study sought to discover whether management participation had any influence on adoption of HRIS in the operations of TSC in Kenya.

4.2.1 Descriptive Analysis for independent variables

From the results, most respondents, 62% agreed that the top management at TSC was involved in adoption of HRIS which also includes having official policies and procedures for managing email records. Most respondents, 84.1% were positive that HRIS helped managers to make timely decisions. However 80.9% disagreed that HRIS should be confined to ICT department. On average the respondents were of the opinion that top management played a major role in adoption of HRIS at TSC. Deryl (2006) collaborates this opinion. He asserts that to obtain organizational buy-in regarding the strategic contribution of HRIS has been in some cases hindered by skepticism and lack of management support See Table 2.

Table 2: Management Participation

Statement	SD	D	N	A	SA
Top Management at the TSC is actively involved in adoption of HRIS	10.7%	22.9%	9.3%	43.6%	13.6%
The TSC has official policies and procedures for managing email records	8.6%	25.0%	10.0%	46.4%	10.0%
HRIS is more of a clerical than top management issue	26.4%	27.1%	8.6%	20.7%	17.1%
HRIS should be confined to ICT department	47.1%	33.8%	8.8%	2.9%	7.4%
Top Management assigns enough funds to support HRIS infrastructure	15.0%	37.1%	32.9%	11.4%	3.6%
HRIS assist managers to make timely decisions	2.9%	7.2%	5.8%	56.8%	27.3%
There is management of HRIS software in the post implementation stage	9.4%	20.1%	23.7%	38.1%	8.6%
Top management is trained on the use of HRIS	14.5%	31.9%	21.0%	23.2%	9.4%
The head of HRIS sits at the top management meetings	5.0%	12.2%	14.4%	37.4%	30.9%
Information specialists at the commission are well acquainted with the needs of management to produce relevant reports	9.4%	26.6%	10.1%	41.7%	12.2%

SD= strongly disagree; D= disagree; N= neither agree nor disagree; A= agree; SA= strongly agree

4.3 Regression on Management Participation and Adoption of HRIS.

To test the null hypothesis: *H_0 there is no significant association between management participation and adoption of HRIS in TSC operations in* Kenya both correlation regression analysis were conducted.

The test was conducted using the linear regression model. First is the model summary showing the correlation (R) and the coefficient of determination R square. The degree to which two or more predictors(X) are related to the dependent(Y) variable is expressed in the correlation coefficient R, and in multiple regressions the R square value can assume values between 0 and 1.0. The R-square is an indicator of how well the model fits the data. An R-square value which is close to 1.0 indicates that the dependant variable entirely depends on the independent variables while a value close to 0 indicates no correlation between the explanatory variables and the dependent variable (Ming'ala 2002). Table 3 shows the regression analysis findings between HRIS and management participation.

Table 3 Regression analysis for management participation and adoption of HRIS
Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625[a]	.390	.385	4.42136
2	.609[a]	.371	.366	4.44154

a. . Model 1 and 2 Predictors: (Constant), Management participation and management participation with moderator effect of external environment (EEE)*Z

a. Dependent Variable: Adoption of HRIS

From the table 3 above, the value of R- square without the moderating variable was 0.390. This implied 39.0% of adoption of HRIS could be explained by Management Participation. However with the moderating variable, effect of external environment, the R- square value reduced to 0.371, (37.1%) but there was still some significant influence of management participation on adoption of HRIS.

4.3.1ANOVA

This finding was further illustrated in the Analysis of Variance table 4. Where, the p-value was 0.000 which was less than 0.05. This was the case without moderating variable effect of external environment. It therefore implied that there was a significant relationship between management participation and adoption of HRIS in TSC operations in Kenya.

Table 4. ANOVA[a] for management Participation (X_1)

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1538.746	1	1538.746	78.715	.000[b]
1	Residual	2404.454	123	19.548		
	Total	3943.200	124			
	Regression	1350.896	1	1350.896	68.479	.000[b]
2	Residual	2288.367	116	19.727		
	Total	3639.263	117			

a. Dependent Variable: Adoption of HRIS (Y)

b. Model 1 and 2 Predictors: (Constant),X_1 and X_1* EEE

4.3.2 Test for Beta Coefficient on Management Participation and Adoption of HRIS.

From the coefficient table 5 t- test was also used to test the relationship between the predictor variable management participation and adoption of HRIS and there was significance relationship between the two variables with or without moderator with p-value= 0.000 < 0.05 for model 1 and 2. The regression equations between adoption of HRIS and management participation for the two models can be expressed as; $Y=11.631+ 0.563X_1$ and $Y=18.950+ .009X_1$. The two models indicate that for every unit management participation values changes by 0.563 for model one and 0.009 for model two.

Table 5: Coefficients[a] for Management Participation (X_1)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF

1	X_1	11.631	1.988		5.849	.000		
	.	.563	.063	.625	8.872	.000	1.000	1.000
2	X_1* EEE	18.950	1.261		15.027	.000		
		.009	.001	.609	8.275	.000	1.000	1.000

a. Dependent Variable: Adoption of HRIS

4.4 Discussion

From the aforesaid the null hypothesis is rejected and we accept the alternative hypothesis and conclude that management participation has significant influence on adoption of HRIS. A study by Rycroft and Kash (2009) showed that if management skills and activities are practiced then the question arises about what is the best way to prepare managers for the complexity, uncertainty, uniqueness and value conflicts. Further, obtaining organizational 'buy-in' regarding the strategic contribution of the HRIS has been in some cases been hindered by skepticism, a lack of understanding, insufficient management commitment, and fears that existing modes of work will be changed and result in for example job loss or altered leave entitlements and shift arrangement (Dery et al, 2006). This underpins the role of management in adoption of HRIS.

Acknowledgment

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