INFLUENCE OF THE LEADER AS A CONDUCTOR ON E-READINESS ACCESSION IN HIGHER EDUCATION INSTITUTIONS IN KENYA

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Abstract

Global competition has become increasingly information-intensive. E-skills have gained impetus in order to create and maintain competitive advantage. Harnessing the full potential for ICT in higher education requires skills for the management, governance and leadership in the information age. The responsibility to build e-skills and other capabilities to tap the benefits of ICTs rests on the leadership. This study investigates Wallin's business orchestration model proposal of the leader as a conductor and the influence on e-readiness accession in higher education institutions in Kenya. Desktop research was carried out to identify the key attributes of leader as a conductor and e-readiness accession. Multiple regression equation is determined as $Y=1.556+.594X_1$ with X_1 being the conductor index. At α = 0.05 level of significance, conclusion is made that there exists enough evidence to conclude that the leader as a conductor is useful for predicting e-readiness accession; therefore the model us useful.

Keywords: e-skills, business orchestration, e-readiness accession, higher education institutions

INTRODUCTION

Since global competition is increasingly centered on knowledge, skills related to information societies (e-skills) are a strategic investment. The private sector is naturally concerned about its ability to create and maintain competitive advantage around an appropriate skill-mix across its human resources. Governments also look at these questions as priorities, both from the point of view of adapting national education and innovation policies to the requirements and challenges of global competition, and from that of employment creation and inclusion (Lanvin & Pamela, 2008).

This state of affairs is also true to the education sector in general and higher education sector in particular whether in public or private higher education institutions in Kenya. The role of ICT in education is an essential ingredient for quality research, training and innovation in higher education. It has been observed that a high degree of e-readiness contributes significantly towards the realizations of a university's academic and administrative goals (Kashorda & Waema, 2013).

Harnessing the full potential for ICT in higher education requires skills for the management, governance and leadership in the information age. The following e-skills are required for innovation, competitiveness and employability in this age: ICT user skills, required for effective application of ICT systems and devices by the individual; ICT practitioner skills, required for researching, developing and designing, managing, producing, consulting, marketing and selling, integrating, installing and administrating, maintaining, supporting, and servicing ICT systems; and e-business skills, needed to exploit opportunities provided by ICT, notably the Internet, to ensure more efficient and effective performance of different types of organizations, to explore possibilities for new ways of conducting business and organizational processes, and to establish new businesses(Lanvin & Pamela, 2008).It is the senior leadership who will have to measure and monitor the strategic e-readiness indicators in order to achieve significant accession in all 17 e-readiness indicators in higher education (Kashorda & Waema, 2013). Hence, it is feasible to state that the responsibility to build e-skills and other capabilities to tap the benefits of ICTs rests on the leadership.

Driving multicultural and geographically dispersed teams while attracting talents from afar, requires new qualities from leaders in higher education. E-leaders will be expected to understand the pervasive application of technology to organizational processes and to turn innovation into productivity gain (Lanvin & Pamela, 2008). The advancement of ICT – the Internet, advanced analytical capabilities, cloud computing, e-services – requires new capacities for leading organizational and economic transformation (Ochara, 2013).

ICTs continue to advance in scope and impact on the organizations. New concepts such as e-governance, e-business, e-education, e-health, virtual organization and social networking among others in the spheres of connectivity, collaboration and communication are emerging dynamically. Whereas in the earlier years e-government was considered as a tool for dissemination of information and delivery of services online, in current times going into the future it is a mechanism to transform government through use of ICT (Pina, Torres, & Royo, 2010). These changes are not only true in the spheres of e-government but in all other spheres and especially leadership that must transform the systems therein.

Great research has been done over many centuries on traditional management, governance and leadership, there is now need to study these domains in the emerging sphere of information society. It is clearly evident that the management, governance and leadership skills of the past will not work in the information age hence e-skills and e-leadership skills are in particularly high demand (Lanvin & Pamela, 2008).

According to Wallin (2006) leadership orchestration has four dimensions namely, conductor, architect, auctioneer and promoter. The four dimensions make a contribution in the ability of the leadership of an institution to provide value to the interested parties. The leader as conductor: able to ensure ongoing activities of the organization are timed correctly and performed in the proper sequence to achieve the desired results; leader as architect: able to analyze situations, problem scenarios and specifications and design appropriate solutions (Tobias, 2015); leader as auctioneer: able to remain watchful, engaging and confident and maintain right pace, poise, preparation, panache (mood) and brilliance (catch opportunities); leader as promoter: able to motivate anti-status quo sentiment, sustain political and technical trust, stimulate thoughts and dreams, mobilize interest, influence peoples creativity and willingness, exhibit charisma and a together-we-will-make-it-approach to achieve mutually desired goals (Lyons, 2011) (McGuire & Rhodes, 2009) (Sayers, 1978) and the leader as developer: able to help people to identify the right course of action, commit to the achievement of that cause effectively and efficiently, advance into unknown territories, attain skills to transform, nurture ability to take responsibility and make decisions (McGuire & Rhodes, 2009). This study focuses on the leader as a conductor.

Objective of the Study

To investigate the influence of the leader as a conductor on e-readiness accession in higher education institutions in Kenya.

THEORETICAL AND CONCEPTUAL FRAMEWORK

The access quality of education lies at the core of the realization of Kenya national aspirations (Government of Kenya, 2007). Effective and efficient delivery of services is a critical focus of the Kenya constitution (Government of Kenya, 2010). Fundamentally, ICT is identified as a core component of the improvement of education and needs to be reinforced under the national ICT master plan (Kenya ICT Board, 2012). ICT is also considered necessary and essential to re-orientation of the modern university ecosystem from the traditional, outmoded ivory tower to a more flexible, rational institution (Schuetze, Bruneau, & Grosjean, 2012). Universities provide leadership in the management and utilization of new technologies (Schuetze, Bruneau, & Grosjean, 2012). Universities that invest in good ICT strategy, financing and human capacity have the potential of better development in their e-readiness status (Kashorda & Waema, E-Readiness Survey of East African Universities (2008), 2009).

In a research on leadership for technology integration it was observed that a large proportion of the school administrators felt that they are unprepared to supervise teaching and learning technology in their schools (Leonard & Leonard, 2006). Under such circumstances it was considered highly unlikely that schools will appropriately use and optimally incorporate the various forms of instructional technology if understanding and expectations do not emanate from the formal positions of school leadership. This scenario could also be true in higher education in Kenya and the East African region as denoted in the e-readiness reports of 2006, 2008 and 2013 (Kashorda & Waema, 2013).

Making the most of the opportunities that appropriate technology use can provide schools—in terms of administrative applications, but especially in the facilitation of quality instruction and learning—requires a dedication of purpose that can be achieved only through the expectation and the support of the entire school community. However, quality technology integration in schools is likely to be determined largely through the caliber of the leadership directed to sustain it. This e-leadership must be informed, visionary, and committed (the term e-leadership in this instance refers to the provision of electronic or technology leadership functions in the school setting): an aspirant combination of attributes that may continue to remain largely absent or essentially illusory (Leonard & Leonard, 2006).

It is therefore imperative to study e-management, e-governance and e-leadership skills for the information especially in the higher education domain that plays a great role in the development of human resources and capabilities for social, economic and political development. The world has experienced a very rapid development in the field of communication and information technology which has had a great impact on the leadership of institutions (Ibrahim, 2014). The rapid emergence of the information age has led to the 'new

knowledge economy' in which education must be 'constantly' reformed to meet the demands of the 'rapidly changing global economy' (Bartlett, 2013). With the advancements in the modern technology and its permeation in every sector of the society education cannot lag behind especially since education exists in a socio-cultural context, and thus must change as well in order to adapt to the emergent needs of an increasingly digital public (Franciosi, 2012). The role of new technologies in advancing quality and accessible education is amplified with UNESCO citing ICT as being able to help in the achievement of the "education for all goals" including broadening access, eliminating exclusion, and improving quality (Wallet & Melgar, 2014).

It is the senior leadership who will have to measure and monitor the strategic e-readiness indicators in order to achieve significant accession in all 17 e-readiness indicators in higher education (Kashorda & Waema, 2013). Hence, it is feasible to state that the responsibility to build e-skills and other capabilities to tap the benefits of ICTs rests on the leadership. Organizational leadership that takes on and follows through on the process of cultural transformation in support of other large changes consistently succeeds in terms of larger performance goals, while other organizations generally fail to change and struggle to survive (McGuire & Rhodes, 2009). The contention that colleges and universities are challenged not only by the shortage of and competition for the specific technical skill sets needed to advance institutional strategies related to ICT but also by the need to ensure effective information technology leadership at the highest levels (Hawkins, Rudy, & Wallace, 2002) rings as true today as it was in 2002.

It is also noteworthy that apart from internet availability, affordability and reliability of power supply which are external factors, all others are generally internal to the universities (Kashorda & Waema, E-Readiness Survey of East African Universities (2008), 2009). ICT leadership and governance within the institutions should therefore be an area of keen focus by the institutional leaders and managers. It is also noteworthy that lack of involvement of management, lack of rational decision making, poor leadership styles, culture and bureaucracy are identified as some of the key inhibitors of good ICT project implementation (Gichoya, 2005). Many projects suffer total failure, partial failure or sustainability failure.

All these point to the need for effective leadership in an ICT-mediated institutions and especially so in the higher education eco-system. The digital fluency, the ability to articulate the value of digital technologies to the organization's future, of the leaders is a key ingredient of the organization's capability to tap into the benefits of the digital age (Kane, Palmer, Philips, Kiron, & Buckley, 2015).It is expected that the results of this will provide leaders in higher education with indicators of the leadership orchestration needed to steer higher education institutions

towards improved e-readiness accession as means of survival, sustainability and improved service experiences in the information age.
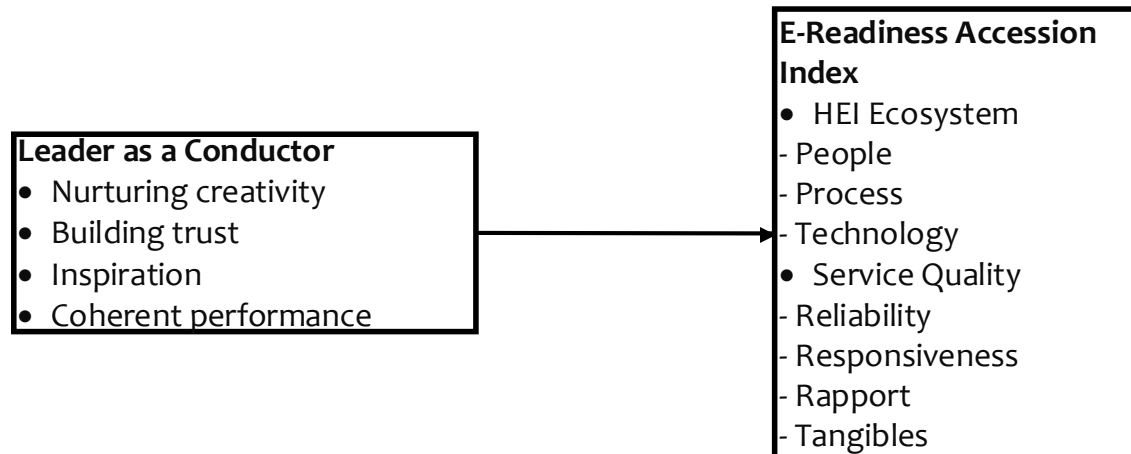
This study proposes an assessment model of e-readiness accession that blends people, process and service quality to the existing models which focus on technology – a novel way that could transform the way e-readiness is studied and improved in the digital age. The results of the study will provide researchers and scholars of e-readiness and e-leadership with an alternative model for e-readiness assessment and leadership orchestration (Wallin, 2006)required to leverage on ICT for better quality education in the digital age.

According to Wallin (2006) business orchestration has four dimensions namely, conductor, architect, auctioneer and promoter. The leader as conductor: able to ensure ongoing activities of the organization are timed correctly and performed in the proper sequence to achieve the desired results. As a conductor (Wallin, 2006) the role of the leader is to make sure that the ongoing activities of the group are timed correctly and performed in the proper sequence to achieve results. An orchestrating leader has to live with a constant pressure for efficiency and sustained good performance. At the same time the leader has to nurture creativity, build trust, and inspire professionals. When doing this the orchestrator often has to conciliate between different stakeholders with alternative opinions.

The performance of the leader as a conductor is measured on the basis of the ability to nurture creativity, build trust, inspire professionalism, conciliate between stakeholders (customers, co-producers and competitors), and reconcile alternative/differing opinions, listening and diagnosis. The conductor is expected to provide inspiring feedback (irrespective of whether the actions leading to the feedback are positive or negative), coaching and leading by doing. The conductor must nurture effective communication skills, apply the principle of subordination (that each team member, part of the job or project is subordinate to achievement of the common goal), relationship on the basis of mutual respect, acknowledgement of expertise of team members, proactivity, right timing and right speed, situational awareness, balancing efficiency and creativity, delegating responsibility and convincing others to perform according to the common game plan (business plans, strategic plans, policies and resolutions).

The conceptual framework (Figure 1) for this study is developed on the basis of the business orchestration (Wallin, 2006) approach to leadership and the proposal for leadership development as a constant in the enterprise environment. Attention is specifically on the leader as a conductor. The dependent variable, E-Readiness Accession is unbundled into two distinct and significant elements; the people, process and technology (PPT) nexus and the service quality (SQ) nutshell.

Figure 1. Conceptual Framework

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┌─────────────────────────────────┐          ┌──────────────────────────────┐
│ Leader as a Conductor           │          │ E-Readiness Accession        │
│ • Nurturing creativity          │          │ Index                        │
│ • Building trust                │─────────▶│ • HEI Ecosystem              │
│ • Inspiration                   │          │ - People                     │
│ • Coherent performance          │          │ - Process                    │
└─────────────────────────────────┘          │ - Technology                 │
                                              │ • Service Quality            │
                                              │ - Reliability                │
                                              │ - Responsiveness             │
                                              │ - Rapport                    │
                                              │ - Tangibles                  │
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METHODOLOGY

Desktop research was carried out to identify the variables depicting leadership orchestration (conductor, architect, auctioneer, promoter and developer) as the independent variable and the e-readiness accession as the dependent variable. This study focuses on the leader as a conductor. Data was collected from 4 chartered universities in the republic of Kenya. The universities were selected purposively for the study.

Hypothesis testing was done with respect to the respective research questions developed for this study to determine correlation (University of Strathclyde, 2015) between leadership orchestration and e-readiness accession. For the purpose of congruence, the statistical significance is $p \leq 0.05$. The hypotheses will be retained if a test of significance shows that if the research were repeated many times, similar results would occur in at least 95 out of 100 repetitions, or in other words if the p-value (probability of obtaining the results) is less than 5% (that is $\rho < 0.05$). This specific criterion of significance level is a convention (University of Strathclyde, 2015). The null hypotheses, H_0, was: leaders as a conductor has no significant influence on e-readiness accession in higher education institutions in Kenya.

The following regression model was applied for the individual predictors (that is, for each of the independent variables) on the dependent variable:

$Y = \beta_0 + \beta_i X_i + \varepsilon \; (where \; i = 1, 2, 3, 4, 5)$

The β_0 represents the value of E(Y) where the regression surface (or plane) crosses the Y axis. - the expected value of Y when all the independent variables equal 0, β_i represents the change in E(Y) associated with a one-unit increase in Xi when all other independent variables are held constant while ε is the error term conceived as representing (1) the effects on Y of variables not explicitly included in the equation, and (2) a residual random element in the

dependent variable (Williams, 2015).The following regression model will be applied for the aggregate index of the predictors on the dependent variable:

$Y=\beta_0+\beta_1X_1+\varepsilon$

If the null hypothesis is rejected ($p < 0.050$), then predictor Xi will be taken to have significant influence on Y. The direction and magnitude of the influence will be determined by the sign on the beta coefficient and the size of the standardized coefficients in relation to the rest.

ANALYSIS AND FINDINGS

Determination of the Multiple Regression Equation

The constant and the coefficients for multiple regression equation are determined using the results in the Table 1 below.

Table 1: Determination of the Multiple Regression Equation

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	1.556	.366		4.252	.000	.823	2.288
	Conductor Index	.578	.103	.594	5.623	.000	.372	.784

a. Dependent Variable: E-Readiness Accession Index

From the output above, the regression equation is:$Y=1.556+.594X_1$.

Interpretation of the Coefficient of Multiple Determination, R^2

The coefficient of multiple determination R^2 is guided by the results captured in Table 2 below.

Table 2: Coefficient of Multiple Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.594[a]	.353	.342	.57715	2.095

a. Predictors: (Constant), Conductor Index

b. Dependent Variable: E-Readiness Accession Index

The coefficient of multiple determination, adjusted R Square is 0.342; therefore, about 34.2% of the variation in the e-readiness accession is explained by the leader as a conductor.

Usefulness of the Model at the 5% Significance Level at Predicting the Response

The evaluation of the usefulness of the model is guided by the hypothesis and results captured in Table 3 below.

Table 3: Usefulness of Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.533	1	10.533	31.622	.000[b]
	Residual	19.320	58	.333		
	Total	29.853	59			

a. Dependent Variable: E-Readiness Accession Index

b. Predictors: (Constant), Conductor Index

The test of hypothesis proceeds as follows: Hypotheses, H_0: $\beta_1=\beta_2=0$; H_a: at least one $\beta_i\neq0$. Significance level, $\alpha= 0.05$. Rejection region, reject the null hypothesis if p-value ≤ 0.05. ANOVA Table (test statistic and p-value), $F = 31.622$, p-value < 0.0001. Conclusion, since p-value < 0.0001≤ 0.05, we shall reject the null hypothesis and thus conclude that at $\alpha = 0.05$ level of significance, there exists enough evidence to conclude that the leader as a conductor is useful for predicting e-readiness accession; therefore the model us useful.

RECOMMENDATIONS

This study sought to investigate the influence of the leader as a conductor on e-readiness accession in higher education institutions in Kenya. The leader as a conductor means being able to ensure ongoing activities of the organization are timed correctly and performed in the proper sequence to achieve the desired results. It is measured on the basis of the ability to nurture creativity, build trust, inspire professionalism, conciliate between stakeholders (customers, co-producers and competitors), and reconcile alternative/differing opinions, listening and diagnosis. At adjusted R2 at 0.342, about 34.2% of the variation in the e-readiness accession is explained by the leader as a conductor. Conclusion is made that at α = 0.05 level of significance, there exists enough evidence to conclude that the predictor, the leader as a conductor, is useful for predicting e-readiness accession; therefore the model us useful.

It is therefore recommended that leadership in higher education institutions in Kenya need to invest in building leader as a conductor capabilities to provide inspiring feedback (irrespective of whether the actions leading to the feedback are positive or negative), coaching and leading by doing; nurturing effective communication skills, applying the principle of subordination (that each team member, part of the job or project is subordinate to achievement

of the common goal), building relationships on the basis of mutual respect, acknowledgement of expertise of team members, proactivity, right timing and right speed, situational awareness, balancing efficiency and creativity, delegating responsibility and convincing others to perform according to the common game plan (business plans, strategic plans, policies and resolutions) in order to be able to leverage on the digital age opportunities and accelerate increase e-readiness accession.

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