



The Relationship between the Engagement, System Thinking, Leading Learning, Self-Awareness and Students' Outcomes in Niger State Secondary Schools

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Abstracts

The connection between the principals' leadership attributes and students' academic achievements have been a topic of discussion worldwide. There is general belief that principals' leadership impact students' success in schools. Therefore, to scrutinize on those educational leadership attributes becomes paramount. This paper examines the connection between the Engagement, system thinking, Leading learning, self-awareness and students' outcomes in Niger state secondary schools. The study is a quantitative approach and employed correlation analysis to determine the correlation between the Engagement, system thinking, leading learning, self-awareness and students' outcomes in Niger state senior secondary schools, Nigeria. The study includes all the senior and assistant senior masters, which gives the total population of 460. The sample size is 272 and was determined by using the Cochran formula. The simple random sampling technique was used. Questionnaire was an instrument used for the collection of data; Leader Attributes Inventory (LAI) was used to measure the Principals' Leadership Attributes and it measures each of the 37 leadership attributes. The findings indicated that, all the educational leadership attributes, including Engagement, system thinking, leading learning and self-awareness are strongly and positively significantly correlated to students' academic outcomes.

Keywords: Engagement, System thinking, Leading learning, Self-awareness, Students' outcome, Secondary schools, Niger state.

Introduction

A growing body of evidence highlighted a significant and positive association between effective discharge of leadership attributes by the principal and student learning and achievement. Recent research includes qualitative case studies of highly challenged, high-performing schools (Akinola, 2013). Many studies examined the indirect leadership effects on student outcomes (Hallinger, 2005; Leithwood, 2006; Marks & Printy, 2003)). In fact, an extensive review of evidence related to the nature and size of these effects concluded that, among school-related factors, leadership is second only to classroom instruction in its contribution to student learning (Andersen et al., 2006). Educational scholars organize these leadership attributes in similar approach, observing that successful principals ship relies upon a set of fundamental attributes of leadership, which, when put into practice, resulted in the high impact on students' learning (Lopez, 2010). These basic domains of leadership attributes include efforts to (a) define and advance school purpose, vision, and direction, (b) develop people and encourage their individual and collective sense of efficacy for the work, and (c) redesign and improve organizational structures, systems, and contexts (Hallinger & Heck, 1999; Leithwood et al., 2004). Thus, effective leaders work to develop a shared vision of the future, building consensus for relevant short-term goals. They offer intellectual support and stimulation, providing models of exemplary practice and modeling important values and beliefs (Bono & Judge, 2004). They create productive learning cultures, transforming systems and structures that impede improvement efforts (Leithwood et al., 2004). More recently, scholars reintroduced a fourth domain, managing organizations, as an essential component of successful school leadership (Leithwood & Riehl, 2005). The primacy of these core functions was further substantiated through an in-depth investigation of 63 successful principal leadership cases across seven countries (Leithwood, 2005). Principals' leadership attributes is perceived as an essential variable towards the effectiveness of every secondary school, right from the goals setting to its means of attainment. Numerous researches identified the association between the principals' leadership attributes and the school effectiveness (Bush, 2011). In the absence of effective and efficient leadership there is no assurance of school success and its goal attainment. It is generally believed that under normal circumstances, where there are no obstructions on the number of teaching staff, number of students from similar background, schools' rules, an educational institution reprobate or rises to yearning standard with the change of the school principal (Sailesh, 2012). Principals' leadership attributes is highly interrelated with the school improvement, school effectiveness and total students' achievements. Studies have shown that, principals' leadership attributes are concerned with the overall improvement and effectiveness of the school, and the academic success of every student (Santhanamary, 2010)

Senge (2000) proposed a leadership model that focuses on four key leadership attributes that allow people to lead without having to control. Those include the followings

(1) Engagement: It is the capability to recognize an issue or situation that has no clear definition, no simple cause and no obvious answer. Recognition of such complex issues is a stepping forward to for a solution to such problems. Principals have to be smart and provide leverage for such situation.

(2) System Thinking: The ability to recognize the hidden dynamics of complex systems, and to find leverage, goes hand in hand with the engagement. School leaders, in this regard, might look at a situation from the perspectives of the next larger system, the school district or elsewhere.

(3) Leading Learning: The ability to engage people and to study systems is not enough for dealing with complex issues in public education. To lead learning, means to model a “learner-centered,” as opposed to an “authority-centered,” approach to all problems inside and outside the classroom. Leading learning gives principals the freedom to say, “I don’t know where we’re going...and I’m still willing to dig into this ‘mess’ to discover a way for us to go” (p. 416).

(4) Self-awareness: Leaders must be self-aware. They must know the impact they are having on people and the system and how that impact has changed over time. Self-awareness is a position of strength. Knowing one’s strength, personal vision and values, and where your personal “lines in the sand” are drawn will build a base of self-awareness that allows you to craft your career and have more good days than bad. School principals appear to have the greatest influence on student outcomes when their efforts are instructionally focused (Marcia Ford Seiler, 2010).

Despite the fact, to identify such educational leadership attributes becomes a contemporary challenge in an educational industry. This is because majority of principals found it very difficult in leading their schools to meet up with the high levels of students’ achievements and the general effectiveness of the school (Mathibe, 2007; Premium Time, 2012). Yet there were very scanty research in the area of educational leadership in Niger state, in order to bridge up the gap between the principals’ leadership and students’ outcomes in the state. The major Objective of this study is to examine the correlation between the engagement, system thinking, leading learning, self-awareness and students’ outcome in Niger State secondary schools, Nigeria.

Review of Literatures

Principal as a school leader “needs to be prepared to deal with the complex nature of the principal’s responsibilities and unavoidable social, economic, technological, political and cultural problems that can serve as a barrier to improvement efforts to their respective secondary schools. The relationship between the principals and their subordinate staff are of utmost importance. However, they lead both internal constituencies and external constituencies to influence the environment and get support for the development and effectiveness of school programs (Isaacs, 2003). There is a general acceptance that the professional practice of principals greatly affects the process of schooling, and that more successful schools are run by most effective principals, the support for this connection comes from related literature sources in school change, school improvement, staff development, and school effectiveness (Bookbinder, 1992). In study after study it has been shown that the one key determinant of excellence in public schools is the leadership of the individual school principal. The effective schools literature has established that principal leadership influences student achievement, at least indirectly, through a multitude of complex interactions, therefore “behind every successful school is a successful principal” (Hallinger, 2005).

In many studies conducted involving 13 school principals, it is recognized that the single individual most responsible for the success or failure of a public school is the principal; Certainly these conditions warrant regular and relevant professional leadership development to enable the school principals to address the issue concerning new approaches, new ideas and the best practice of principal ship. The principal is assumed to be perceived as a promoter of human learning (Leithwood, 2006). The duties and responsibilities assumed in order to do this are complex and vast; principals are described as artists and technicians. As an artist, the principal anoints heroes, tells stories, celebrates important events and values, and acts as a cultural symbol. As a technician, the principal is a planner, resource allocator, coordinator, disseminator of information, jurist, gatekeeper, supervisor and analyst (Catano & Stronge, 2006).

In the current climate of education reform and improvement, the principal has been viewed as a key player in efforts to foster excellence in schools. If we are to realize dreams of sustained and widespread improvement as asserted, we must look for several ways of improving his leadership to meet up with the targeted needs (Hallinger, 2005). Without strong leadership in school, change and growth within the entire school population, is said to be less productive, this is because is the principal leadership that creates and communicates the compelling purpose and aligns the school with a vision for change in order to improve schooling for children (Omeke Faith & Onah Kenneth, 2012). Principals stand as a crucial link between policy set for school development, school improvement and actual classroom practice. Based on the key position held by school principals in school, many school districts use professional development opportunities as a means to empower their school principals, that principals should be included as key participants in quality professional development. Khagendra, (2006) is of the view that, “good leaders are perpetual learners.” In schools also, it is believed that principals should be models of lifelong learners, committed to continuous improvement. Principals as promoters of human learning need to consider themselves as learners, as well as, leaders.

The aimed of secondary schools is to produce a desirable and productive citizen that would contribute to the development of the nation. This is synonymous to the aim of the present secondary schools in Nigeria. The Federal Government of Nigeria in 2004, highlighted in the National Policy on education, that the broad aims of secondary education are to prepare students for useful living within the society and preparing them for higher education (Arikewuyo, 2009). To achieve the above expectation, there is a need for an effective school leader that would energize the activities of the teachers to maximize the utilization of their potential towards high student’s achievement and school effectiveness (Ekundayo, 2010).

There are many leadership theories as accentuated by the literatures, such includes the great man, trait, behavioral, contingency, path-goal and situational theory (Kristic, 2012). But this study considers behavioural theory as the most substantial theory to be used in explaining the theoretical foundation of the principals’ leadership attributes in this study. This is because leadership attributes need to be acquired by the principals through learning and training processes. Behavioural theory is emphasizing that all those leadership attributes can be learnt and thereby making school principals to become great leader (Khagendra, 2006). Researcher also employed new model of educational leadership developed by Senge in (2000). The model is elaborated below:

Senge (2000) proposed an educational leadership model that focuses on four key dimensions to allow people to lead without having to control, these includes the followings; engagement, system thinking, leading learning, self-awareness
Engagement: It is the capability to recognize an issue or situation that has no clear definition, no simple cause and no recognizable answer. When faced with such complexity is called for System Thinking: The ability to recognize the

hidden dynamics of complex systems, and to find leverage, goes hand in hand with the engagement. School leaders, in this regard, might look at a situation from the perspectives of the next higher system.

Leading Learning: Engaging people and systems thinking is not sufficient for dealing with complex issues in the educational sector. Leading learning gives principals the liberty to say, “I don’t know where we’re going and I’m still willing to dig into this ‘mess’ to discover a way for us to go”.

Self-awareness: Principals must know the impact they are having on people and the system and how that impact has changed over time. Self-awareness is a position of knowing one’s strength, personal vision and values, and where your personal “lines in the sand” are drawn will build a base of self-awareness that allows you to craft your career and have more good days than bad (Isaac, 2003). Leadership models help us to understand what makes leader the way they behave and realized every situation calls for a particular behavior (Khagendra, 2006).

Researcher employed Capital theory of school effectiveness to explain students’ achievements, which is referred to as the degree of students’ outcomes, it encompasses the achievement of all the three domains of learning including the cognitive, effective and psychomotor (Ekundayo, 2010). Capital theory of school effectiveness was developed by David H. Hargreaves in 2000, it has four master concepts, namely as outcomes, leverage, intellectual capital and social capital.

The four master concepts are explained below:

Outcomes: The outcomes of a school represent the extent to which its goals and objectives are achieved (Hargreaves, 2001). The major open goal of the school is ensuring students’ academic achievement both cognitively and morally in which Hargreaves has been mentioned as one of the master concept of the theory which is explained in Aristotelian ways.

Here we meet a second intractable problem of translation: *arête* a Greek word meaning virtue, is perhaps better rendered as excellence (Hargreaves, 2001). In Aristotle’s view, there are two kinds of excellence, namely intellectual excellence and moral excellences. Intellectual excellences include many forms of knowledge, skill and understanding while moral excellences include many aspects of social and emotional life. The main aim of education is to initiate the young into these excellences, through which they acquire the disposition to make sound intellectual, moral judgments, choices and finally become good citizens (Hargreaves, 2001).

Leverage: Capital theory supported the above factors with ‘Leverage,’ which explained the relation between the teachers’ input and educational output, it can also be seen as the quality and quantity of effected change on students’ intellectual and moral state base on the level of teachers’ invested energy. Teachers in effective schools share and regularly apply combinations of high leverage strategies and avoid low leverage strategies: they respond to demands for change by working smarter, not harder. An improving school learns how to identify and apply effective, efficient and ethically justifiable leverage points to enhance the intellectual and moral excellences as outcomes. Many schools do not know how to increase their leverage, that is, to know how to work smarter rather than work harder (Hargreaves, 2001). Mastery of the art and science of leverage requires an understanding of professional ability to apply, for ‘what works’ on the basis of research or personal experience, and a capacity to innovate and experiment in novel situations and where evidence is lacking (Hargreaves, 2001). He further added that, an effective school discovers how to combine high leverage strategies and to sequence their implementation over time, so that the quality and quantity of their outcomes are high with less energy investment. Understanding school effectiveness involves discovering how high leverage works.

Intellectual capital: This is defined as the total sum of the knowledge and experience of the school’s stakeholders that they could deploy to achieve the school’s goals and objectives while social capital can be viewed in two components, cultural and structural components. The cultural part is mainly the degree of trust between people and the generation of norm of mutual favor and collaboration. The structural aspect is the networks, in which the people are fixed firmly by strong ties, thus improve orderly and safely school climate (Hargreaves, 2001). **Social capital:** Social capital gives much emphasis on improving safely and orderly environment through maintaining the degree of trust between the co-workers and again enhancing collaboration among the colleagues which bring about mutual understanding in an organization.

Methodology

This research is a survey method and it is a quantitative approach which involved 460 populations, sample of 272 was selected from 230 secondary schools and these schools were randomly selected. It has been designed to examine the correlation between the engagement, system thinking, leading learning, self-awareness and students’ outcome in Niger state senior secondary schools. In this context, the study demands a correlation analysis to measure the correlation between the engagement, system thinking, leading learning, self-awareness and students’ outcome. The subjects of this research work are principals of Niger state senior secondary schools who have been assessed by the senior and assistant senior masters of their respective schools. Niger state ministry of education provided all the necessary information to the researcher by given the researcher details of the total number of secondary schools to be visited of which determined the population of the study. Questionnaire shows high reliability and validity in measuring the constructs under this study (Cronbach’s alpha = .86). The sample size was obtained from the population of 460, using the Cochran formula which is 209 and 30% of 209 was added to the total sample size and thereby raising the sample size to 272, because of the experience of the pass researchers; that is, it is very unusual for a researcher to obtain the exact number of distributed questionnaires, therefore there is need to add a certain percentage to cover up the percentage unreturned (Barlett, 2001). The main tool for data collection of this study was questionnaires in the form of observing rating form, the instruments address, the demographic information of the respondents, all the leadership attributes expected from principals and finally questions on students’ achievements. The instrument used for measuring principals’ leadership attributes was Leader Attributes Inventory (LAI) and was developed by Moss, Johanssen and Judith J. Lambrecht in 1991 and later refined in 1994 by Moss, Lambrecht, Jensrud and Finch. They further explain that, Leader Attribute Inventory was administered to determine the degree to which individuals possess each of 37 attributes (Donald W. Knox, 2000).

These 37 items of leadership attributes were categorized under the four major dimensions of Educational leadership attributes, which are Engagement, System Thinking, Leading Learning and Self-Awareness. Researcher was permitted to use and adapt the instrument by the developer to suit the study. The questionnaire used a 5-point Likert type scale for senior and assistant senior masters to rate their principal's leadership attributes and the effectiveness of the Niger state secondary schools by selecting one item out of the on the following options: Strongly disagree, disagree, moderately agree, agree and strongly agree

Analysis and Discussion

The aimed of this study is to examine the correlation between the Engagement, system thinking, leading learning, self-awareness and students' academic achievements in Niger state secondary schools. Data collected for the study was analyzed using SPSS software version 22. Correlation analysis was used to determine the association between the Engagement, system thinking, leading learning, self-awareness and students' outcomes in Niger state secondary schools. Below are the tables showing results of the analysis.

Table 1: Correlation Matrix

Variables	Y	χ_1	χ_2	χ_3	χ_4
Y (Students' Outcomes)	1				
χ_1 (Engagement)	.589**	1			
χ_2 (System Thinking)	.610**	.699**	1		
χ_3 (Leading Learning)	.677**	.736**	.795**	1	
χ_4 (Self-Awareness)	.651**	.715**	.752**	.843**	1

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

Pearson correlation analysis was conducted to determine the correlation between the Engagement, system thinking, leading learning, self-awareness and students' outcomes in Niger state secondary schools As shown in Table above, there is significant positive and a high correlation between engagement and total students' outcomes ($r = .59, p = .000$). This finding is in line with (Ekundayo, 2009). It also indicated that, there is strong significant and positive correlation between the System Thinking and students' achievement ($r = .610, p = .01$), the result is in line with the study of Isaac in (2003). The correlation between the total students' achievement and leading learning is also positively and significantly strong ($r = .68, p = .01$). The correlation between the self-awareness and students' outcomes ($r = .65$).

Discussion

Strong educational leadership has been found to be among the essential characteristic of school students' achievements, most scholars believed that; leadership is interconnected with the leadership attributes of the principal being him the head of the school (Akinola, 2013). The study was set out to investigate the correlation between the principals' leadership attributes and students' outcomes from the perspective of senior and assistant masters of secondary schools. The findings indicated that, there is high positive significant correlation between the engagement, system thinking, leading learning, self-awareness and students' outcomes as perceived by the senior and assistant senior masters. This served as evidence that, both the senior and assistant senior masters are familiar with the connection between the engagement, system thinking, leading learning, self-awareness and students' outcomes. With this finding, it may provide the bedrock of creating the learning and training techniques that may lead to the acquisition of such leadership attributes by the principals, thus may lead to the improvement of students' achievements through probable solutions to the contemporary challenges facing the principals (Arikewuyo, 2009).

Leadership attributes are subject to learning, therefore leadership learning environment should be created to equip the school principals with those desirable leadership attributes, because people can learn to become great leaders (Khagendra, 2006). With the provision of the current leadership learning programs to the principals, may serve as one of the measures of improving their leadership skills attributes and knowledge. As regards to the past experience of the researcher that, there were frequent poor performance of the students' academic achievement, it may be as a result of the inadequate deployment of such leadership attributes by the principals.

Conclusion and Recommendations

It can be concluded that, there is a significant positive correlation between the engagement, system thinking, leading learning, self-awareness and students' outcomes in Niger State secondary schools, Nigeria. Despite the fact, it is very pertinent to measure the level of principals' leadership attributes and students' outcomes in Niger State Secondary Schools, but yet it could not measure in the study.

In the Nigerian system of education teachers were given high priority in terms of development training programs while neglecting the escalating responsibilities of the principals, therefore it is very significant to design a learning and development program with the aimed of improving the leadership attributes of school principals (Arikewuyo, 2009). The result of the analysis indicated, there is high positive significant correlation between the engagement, system thinking, leading learning, self-awareness and students' outcomes in Niger state secondary schools. Designing a special program inform of pre-service training for aspiring principals, induction training programs of new principals and In-service training for serving principals by the Niger state government, may serve as a means of providing the basic knowledge on educational leadership of which may assist in increasing the level of principals' leadership attributes and students' achievements in the state (Taipale, 2012). The knowledge of engagement, system thinking leading learning and self-awareness may provide the basic needs of such leadership attributes and thereby overcoming the mandatory challenges of diminishing the rate of students' academic achievements in Niger state secondary schools.

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