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Principal leadership practices and school effectiveness in Niger State, Nigeria

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In the study reported on here, we investigated the effectiveness of principal leadership practices in secondary schools in Niger State, Nigeria. Surveys were conducted with 154 principals, 269 heads of the department and 25 members of staff from the Secondary Education Board in Niger State. The findings indicate that the extent of principal leadership practices and school effectiveness attributes in secondary schools in Niger State is high. The result of multiple regressions shows that about 14% ($R^2 = 0.14$) of the variation in school effectiveness accounted for leadership practices. We recommend that the Federal and State Ministries of Education in Nigeria focus on issues other than leadership practices, such as training programmes for secondary school teachers to enhance school effectiveness. There is also a compelling need for secondary school principals to identify and promote the professional development needs of teachers and to ensure that teachers are effectively trained to enhance the development of secondary schools into centre of excellence.

Keywords: Nigeria; Niger State; principal leadership practices; school effectiveness activities; secondary school

Introduction

Education as a social organisation is one of man's most stable instruments for development. In developing countries like Nigeria, some secondary schools are poorly equipped, have limited infrastructure, and are managed by less experienced principals. The most important criterion for choosing principals in educational institutes in Nigeria is based on teaching experience rather than leadership qualities. This is due to the lack of formal leadership training (Hennessy, Harrison & Wamakote, 2010). Secondary school education assumes a central and key position in the Nigerian educational system. Tertiary education depends significantly on secondary education as a hub; hence secondary education is a feeder to the tertiary education system in Nigeria. In coordinating the affairs of the secondary school where he/she is appointed, the role of the principal cannot be overemphasised. Arikewuyo (2009) observes that one of the primary functions of the school principal is to assign duties to personnel within their school. Other than this, the principal is seen as the chief accounting officer, whose functions include school management, school administration, and providing leadership in curriculum and instructional development. Onwubiko, Eze, Udeh, Okoloagu and Chuka-Okosa (2015) observe that the role of the school principal is that of an administrative head, a manager, a community public relations officer, a supervisor, an instructional leader, a curriculum innovator, and a catalyst of planned revolution in the educational system. The Federal Ministry of Education in Nigeria manages and regulates all national education sectors and allocates budgets to schools for running cost.

Similarly, school effectiveness refers to the extent to which the students have improved in their performance in terms of assessment results in Nigeria (Todd & Mason, 2005). The school goal can be achieved through the continuous supervision of the teaching and non-teaching staff (Ayandoja, Aina & Idowu, 2017). Thapa, Cohen, Guffey and Higgins-D'Alessandro (2013) claim that school effectiveness is positively influenced by the staff and principal's experience and their respective values and norms. Good interaction between principal and teachers also improves school effectiveness. Brown and Militello (2016) stresses that school leaders should observe and evaluate teacher instruction to provide valid feedback. In short, school effectiveness cannot be improved without the principal being effective.

Although many research efforts have attempted to investigate principals' leadership effectiveness in Nigeria, most of the methodology reviewed focused on teachers and students and the majority were conceptual and limited to empirical studies (Abdulrasheed & Bello, 2015). Similarly, teachers and students were the targeted respondents for data collection rather than principals, heads of department and staff of the Federal Ministry of Education (SFME). The changed conditions in secondary schools require of principals to be trained and equipped with the necessary skills in school administration to be able to make objective and sound decisions. It is in this regard that Hughes (2007) notes that it is no longer possible to believe that practical experience alone constitutes valid management training; too many costly mistakes can occur while experience is being acquired, and in any case, the quality of experience can vary widely. According to Arikewuyo (2009), the time has come for meaningful management training programmes for Nigerian secondary school principals.

Therefore, in this study we assessed principals' leadership practices towards school effectiveness. The study became imperative as a review of literature indicated that most principals of secondary schools in Nigeria lacked the capacity to manage and administer their schools.

Literature Review

Ifedili (2015) notes that the performance of local principals in monitoring the school environment is very low. Ayandoja et al. (2017) agree that Nigerian school principals fail to supervise the teachers in the classroom to effectively enhance the school performance and the performance level of the students. Odeh, Oguche and Ivagher (2015) reveal that the principals constitute the main cause of the problems in schools. Also, Victor (2017) indicates that the primary contributors to the failure of secondary schools in Nigeria are the school principals. Despite the fundamental role played by school principals in terms of school management and administration, Abdulrasheed and Bello (2015) state that the secondary education system in northern Nigeria is faced with many challenges. This includes the low secondary school educational achievement in Niger State.

Although the Nigerian government is determined to improve the level of education provided by public schools, the lack of experienced and well-trained school principals continue to affect the level of performance of secondary school education (Lipham, 2016). Effective administration of schools depends on the leadership capabilities of the principals. The quality of training acquired by prospective school principals improves their administrative vision and mission (Igu, Ogba & Igwe, 2014).

The appointment of principals is paradoxical. Experienced classroom teachers are taken from the classroom where they are performing well, and without adequate preparation, they are transferred to becoming principals. Classroom experiences of such teachers might not have fully qualified them to assume the administrative and leadership role of a principal. Such openness of appointment to the highest office in a school does not only defeat Frederick Taylor's views of getting the suitable candidate for the job, but it also places school management in the hands of technically unqualified personnel (Lipham, 2016). A principal, as an administrator, has to face extremely difficult challenges because of the wide variety of roles he/she has to play. These roles are very demanding upon the physical, mental and psychological makeup of the principal. Thus, this necessitates for capacity building of secondary schools principals.

McCarley, Peters and Decman (2016) report that such capacity building has been done for quite some time in the Eastern part of the country and it has been yielding positive and effective results in the schools. McCarley et al. (2016) highlight that periodic capacity training of principals and teachers culminated to the reduction of the failure rate of students in Kogi State. In addition, the Federal Government of Nigeria (2014) reports that principals and teachers have access to several types of professional development opportunities such as

capacity training in Singapore. These programmes range from in-service training to online classes on a variety of subjects related to human and financial management. It has gone a long way to improving the country's educational system. Principals' needs for capacity building, especially in human resource and financial management, have become imperative for the effective performance of secondary schools in Niger State. Capacity building of school principals is a function with various interconnected traits, competencies and abilities to ensure effective school administration and leadership (Hoy & Miskel, 1982). The capacity building needs of school principals imply that the principal as leader must be able to develop appropriate staff development programmes for his or her teachers, manage and enhance an effective school community and school, build parent relationships, devise effective financial management systems, ensure effective human resource management practices in the school organisation, apply conflict resolution practices, promote good moral values to curb unacceptable and deviant behaviour in the school, and a host of other aspects of school management (Hoy & Miskel, 2008; Owen & Valesky, 2011; Yukl, 2011).

Theoretical Framework

In this section we present a detailed overview of all the theories that guided this study. In this regard we used the basic framework (Katz & Kah, 1978), the latent capacity building model of Beazley, Griggs and Smith (2004), the leadership capacity matrix of Lambert (2000), the five-factor theory of effective schools by Sadker and Zittleman, (2010), the effective school model (Ghani, Siraj, Radzi & Elham, 2011) as well as financial and resource management theory (Levačić, 2000).

Von Bertalanffy and Rapoport (1956) introduced their systems theory at a seminar held at the University of Chicago. Von Bertalanffy and Rapoport are researchers in the field of life sciences and the setting of ecology. They stipulate that nothing could be comprehended by confining research to just one player, and they examined the significant role that one part can play in a framework. However, the idea of systems theory was to investigate and examine the open system, which is based on input and output. Unfortunately, Von Bertalanffy's system theory failed to explain the input and output of the environment.

The effective school component was examined using the five-factor theory of effective schools. Scholars and researchers of school administration have used the five-factor theory of effective school administration and management. Additionally, the five-factor theory has replaced the 3R's of reading, writing, and arithmetic, which is regarded as the basis of learning. However, Sadker

and Zittleman (2010) argue that for schools to be effective, these five factors must be present and carefully applied: i) strong leadership; ii) clearly stated vision and mission statement; iii) setting high expectations for students and teachers in terms of academics and character; iv) establishing a safe and orderly school climate; and v) effective monitoring.

In addition to other theories, the concept involved in the framework of this study was that of financial management, and the related theory is the financial and resource management cycle in an open system of an educational organisation (Levačić, 2000). It possesses the characteristics of an open system theory, which is inherent to the rational and natural system outlook. In this system of school organisation, the four attributes identified in financial and resource management are (i) obtaining resources; (ii) allocating resources

(IMPREST); (iii) using resources; (iv) evaluating the past use of this data for future decisions. If all these attributes are closely linked with each other, school effectiveness will be achieved.

The latent capacity-building model was developed by Beazley et al. (2004) in order to extend the traditional theory of capacity building. It helps redefine the traditional approach of capacity building in a different approach with the addition of community engagement and involvement. Furthermore, the latent capacity-building model focuses on the community as a vital tool to build the capacity needs of school principals from the open system (Smith & Beazley, 2000).

Conceptual Framework

The conceptual framework of this study is illustrated in Figure 1.

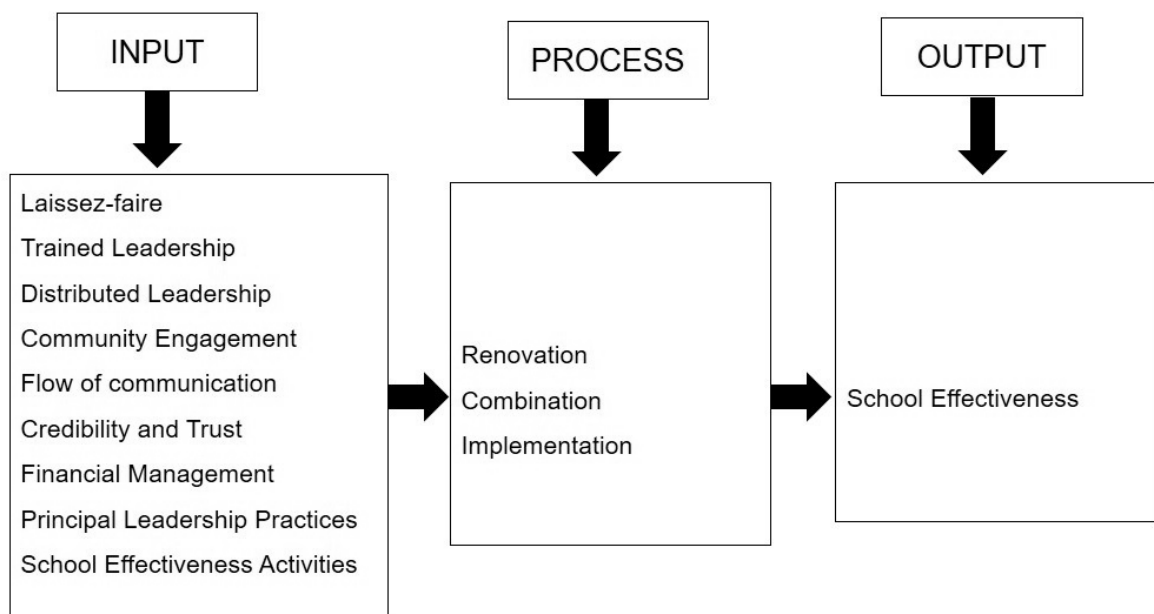


Figure 1 Conceptual framework of the study (Beazley et al., 2004; Ghani et al., 2011; Hoy & Miskel, 1982; Lambert, 2000; Levačić & Vignoles, 2002; Yukl, 2011)

As indicated in the conceptual framework in Figure 1, the theory of school effectiveness will assist school principals in improving their level of professional leadership, while the capacity building theory will help them to develop broad-based and skilful participation of all stakeholders (Lambert, 2000). Capacity-building and school effectiveness from this framework, emphasise the continuing process of strengthening of principals' abilities to perform core functions, especially in management of human resources, solving problems, defining and achieving objectives, understanding and dealing with their own and their teachers' developmental needs through in-service training

programmes, and attendance of conferences and workshops (Fullan, 2002).

Research Questions

The aim of this study was to assess principals' leadership practices towards school effectiveness in Niger State, Nigeria. This study was guided by the following research questions:

- 1) To what extent are leadership practices carried out in secondary schools in Niger State?
- 2) What are the levels of secondary school effectiveness activities in Niger State?
- 3) To what extent has principal leadership practice contributed to the effectiveness of secondary school management in Niger State?

Methodology

We investigated the extent of principal leadership practices, school effectiveness attributes, and determined the best practices to predict school effectiveness. We considered the quantitative approach to be appropriate for data collection as data collection was done through validated and reliable instruments to determine best principal practices to predict school effectiveness. According to Gay, Mills and Airasian (2006), correlation predictive research involves collecting data to determine whether and to what degree a relationship exists between two or more quantifiable variables and then predict the phenomenon. Similarly, we collected data on principals' leadership practices from secondary school principals, heads of department and secondary school board officials. From the analysis of the data we predicted best practices on school effectiveness in Niger State, Nigeria.

The population of the study consisted of three categories of participants, namely secondary school principals (SSPs), heads of department (HODs) and Secondary School Education Board officials (SSEBOs) in Niger State. The population from which the sample was taken consisted of a

total of 852 individuals, as indicated in Table 1.

Table 1 Population of the study (Niger State Ministry of Education, 2018)

Zone	SSPs	HODs	SSEBOs	Total
Minna	86	172	25	283
Suleja	35	70		105
Bida	60	120		180
Kutigi	49	65		114
Borgu	21	36		57
Rijau	16	27		43
Kontagora	28	42		70
Overall total	295	532	25	852

A simple random sampling technique was used to select three educational zones in Niger State. The sample size was selected from the total population of SSPs, HODs and SSEBOs in the three educational zones in Niger State (see Table 1). According to Krejcie and Morgan (1970), no formula or calculation is needed to select a sample size from the population as it is calculated in the sample size. In table 2, N represents the population and n represents the sample size. The sample size of the study population was 154 SSPs, 269 HODs, and 25 SSEBOs.

Table 1 Sample size of the study (Krejcie & Morgan, 1970)

Zones	Principal (N)	Sample size (n)	HOD (N)	Sample size (n)	SSEBO (N)	Sample size (n)	Total (N)	Total (n)
Minna	86	70	172	118	25	25	283	213
Suleja	35	32	70	59			105	91
Bida	60	52	120	92			180	144
Overall total	181	154	362	269	25	25	568	448

A structured questionnaire was designed in such a way to collect the required data from the respondents. Keeping the objective of research in mind, we collected the required data from the literature and developed the structural questionnaire. By subjecting the research instrument to content and face approval, the organised survey, which is the instrument used for this research, was acknowledge. By reasonably linking each item or question in the questionnaire to one or more objectives, the face validity was established. It was of paramount importance that questionnaire items covered attitudes and/or issues that have been assessed. Applying the prior assertion in estimating the items in the questionnaire prompts what is known as content validity (Kumar, 2019).

The face validity of the instrument was determined by three experts from the Department of Educational Management, Planning and Policy in the Faculty of Education, at the University of Malaya in Malaysia and two experts from the Faculty of Education (Test and Measurement Department) at the Ibrahim Babangida Badamasi University in Lapai, in the Niger State of Nigeria.

The instrument was pilot tested to determine its reliability. According to Blumberg, Cooper and Schindler (2008) and Sekaran and Bougie (2016), a scope of 25 to 100 respondents is an appropriate size for a pilot test. Table 3 shows the lists of respondents selected to participate in the pilot test of this study.

Table 3 Lists of respondents selected to participate in the pilot test of this study

Respondents	Number of participants
SSPs	35
HODs	45
SFMEs	20
Total	100

Cronbach's alpha was used to determine the internal consistency of the pilot questionnaire items. The overall reliability coefficient of the instrument yielded 0.79, indicating that the reliability of the instrument was good. The reliability coefficient scores are considered as "poor" when the Alpha coefficient is below 0.6, "moderate" if in the vicinity of 0.6 and 0.7, "good" if in the vicinity of 0.7 and 0.8, "great" in the vicinity of 0.8 and 0.9, and "excellent" when the

Alpha coefficient is equivalent to or more than 0.9 (Hair, Black, Babin & Anderson, 2010).

Data Analysis

The present practices of different leaders and the level of secondary school effectiveness activities were determined based on the mean values. Descriptive statistics was used to analyse the data. The practices were categorized as low (mean value of 1.0–2.9), moderate (mean value 3.0–3.9) and high (mean value 4.0–5.0). Mean and standard deviation were used to analyse the data. The mean was used to answer the research questions and the standard deviation was used to establish the extent of homogeneity between the items. Multiple regressions were used to predict the best principal practices for school effectiveness.

Results

The Extent of Principal Leadership Practices

Descriptive statistics (mean and standard deviation) were used to answer the research questions and the results are presented in Tables 4, 5 and 6.

Perception of Principals

Table 4 indicates items on principals' leadership practices (PLP1–PLP16) that returned mean responses between 4.44 and 4.64, which is very high (4.00–5.00). This implies that principals in Niger State created clear school visions and missions, shared these with the school community, possessed a high level of sincerity, and created a culture that enhanced staff professionalism. The high mean value also means that the principals observe teachers teaching formally and informally and possess high knowledge and skills to assess teachers, discuss the assessment results with teachers, and provide high facilities and equipment for smooth teaching and learning processes. They improve relationships with outsiders (for instance, the parent-teacher association [PTA]) to obtain support for the school to realise its vision and mission and to motivate the teachers to perform their jobs effectively. They possessed excellent knowledge of their subject matter in order to be able to identify the knowledge and skills needed by staff.

Table 4 Extent of principal leadership practices carried out in secondary schools in Niger State ($n = 154$)

Serial Number (S/N)	Principals' leadership practices	<i>M</i>	<i>SD</i>	Remark
PLP1	Create clear school vision and mission.	4.56	0.50	High
PLP2	Sharing vision and mission with school community.	4.60	0.49	High
PLP3	Have a high level of sincerity of duty by showing earnestness to work.	4.53	0.50	High
PLP4	Create a culture that develops staff professionalism.	4.54	0.50	High
PLP5	Observe teachers teaching formally and informally.	4.50	0.50	High
PLP6	Possess the knowledge and skills to assess teachers.	4.53	0.50	High
PLP7	Discuss the assessment results with teachers.	4.44	0.49	High
PLP8	Provide facilities and equipment for smooth teaching and learning processes.	4.53	0.50	High
PLP9	Improve relationship with outsiders (for instance, PTA) to obtain support for the school to realise its vision and mission.	4.48	0.50	High
PLP10	Always motivate the teachers to perform their jobs effectively.	4.55	0.50	High
PLP11	Knowing the subject matter to be able to identify the knowledge and skills needed by staff.	4.49	0.50	High
PLP12	Care for the welfare of teachers.	4.60	0.49	High
PLP13	Teaching a specific duration to be made a role model by the staff.	4.64	0.48	High
PLP14	Chairs each school curriculum meeting.	4.59	0.49	High
PLP15	Obtains instructional materials for teachers to prepare lesson plans and lesson notes.	4.64	0.48	High
PLP16	Practice the concept of "Leadership through example."	4.53	0.50	High

Perceptions of Heads of Department

Table 5 indicates that HODs' responses on the extent of leadership practices applied in secondary schools in Niger State delivered mean responses between 4.44 and 4.59, which is very high (4.00–5.00). This implies that HODs in Niger State perceived that the principals provided and shared the school vision and mission with school community. They also perceived that the principals were sincere in their leadership roles and created a culture that enhanced staff professionalism. It also indicates that principals possess high knowledge and skills to assess their teachers. Furthermore, it indicates that principals discuss assessment results

with their teachers and provide facilities and equipment for smooth teaching and learning processes to their schools. The result also shows that the principals improve relationships with outsiders (for instance, the PTA) to obtain support for the school to realise its vision and mission. The HODs agreed that the principals always motivated the teachers to do their jobs effectively. Furthermore, they were of the opinion that the principals possessed great knowledge of their subject matter to be able to identify the knowledge and skills needed by staff. The highest mean revealed that principals always motivated the teachers to perform their jobs effectively. This

shows that there was not much difference between the HODs' and principals' opinions on the extent of

principal leadership practices carried out in secondary schools in Niger State.

Table 5 Perceptions of HODs on the extent of principals' leadership practices in secondary schools in Niger State ($n = 269$)

S/N	Principals' leadership practices	<i>M</i>	<i>SD</i>	Remark
PLP1	Create clear school vision and mission.	4.48	0.50	High
PLP2	Sharing vision and mission with school community.	4.44	0.49	High
PLP3	Have a high level of sincerity of duty by showing the earnestness to work.	4.46	0.50	High
PLP4	Create a culture that develops staff professionalism.	4.38	0.48	High
PLP5	Observe teachers teaching formally and informally.	4.48	0.50	High
PLP6	Possess the knowledge and skills to assess teachers.	4.52	0.50	High
PLP7	Discuss the assessment results with teachers.	4.55	0.49	High
PLP8	Provide facilities and equipment for smooth teaching and learning processes.	4.52	0.50	High
PLP9	Improve relationship with outsiders (for instance, PTA) to obtain support for the school to realise its vision and mission.	4.54	0.49	High
PLP10	Always motivate the teachers in order to perform their jobs effectively.	4.59	0.49	High
PLP11	Knowing their subject matter to be able to identify the knowledge and skills needed by staff.	4.57	0.49	High
PLP12	Care for the welfare of teachers.	4.44	0.49	High
PLP13	Teaching a specific duration to be made a role model by the staff.	4.43	0.47	High
PLP14	Chairs each school curriculum meeting.	4.44	0.47	High
PLP15	Obtains instructional materials for teachers to prepare lesson plan and lesson notes.	4.44	0.49	High
PLP16	Practice the concept of Leadership through example.	4.48	0.50	High

Perception of Secondary School Education Board Officials

Table 6 shows the responses of SSEBOs on the extent of principals' leadership practices in secondary schools in Niger State. The mean responses were between 4.18 and 4.50. All the mean responses were very high (4.00–5.00). The results indicate that the secondary school education board officials in Niger State perceived that the principals provided and shared the high school

vision and mission with school community. They also perceived that the principals were sincere in their leadership roles and created a culture that enhanced staff professionalism. They also believed that principals discussed assessment with teachers, provided facilities, improved relationships with parents, always motivated teachers, had extensive knowledge of the subject matter, cared for teacher welfare and showed leadership by example.

Table 6 Perception of SSEBO on the extent of principals' leadership practices in secondary schools in Niger State ($n = 22$)

S/N	Principals' leadership practices	<i>M</i>	<i>SD</i>	Remark
PLP1	Create clear school vision and mission.	4.36	0.49	High
PLP2	Sharing vision and mission with school community.	4.32	0.48	High
PLP3	Have a high level of sincerity of duty by showing earnestness to work.	4.36	0.49	High
PLP4	Create a culture that develops staff professionalism.	4.18	0.40	High
PLP5	Observe teachers teaching formally and informally.	4.27	0.46	High
PLP6	Possess the knowledge and skills to assess teachers.	4.36	0.49	High
PLP7	Discuss the assessment results with teachers.	4.36	0.49	High
PLP8	Provide facilities and equipment for smooth teaching and learning processes.	4.41	0.50	High
PLP9	Improve relationship with outsiders (for instance, PTA) to obtain support for the school to realize its vision and mission.	4.41	0.50	High
PLP10	Always motivate the teachers in order to perform their job effectively.	4.45	0.51	High
PLP11	Having knowledge of their subject matter to be able to identify the knowledge and skills needed by staff.	4.36	0.49	High
PLP12	Care for the welfare of teachers.	4.23	0.43	High
PLP13	Teach in a specific duration to be made a role model by the staff.	4.36	0.49	High
PLP14	Chair each School Curriculum meeting.	4.18	0.40	High
PLP15	Obtain instructional materials for teachers to prepare lesson plan and lesson notes.	4.32	0.48	High
PLP16	Practice the concept of "Leadership Through Examples."	4.50	0.51	High

Levels of Secondary School Effectiveness Activities in Niger State

Table 7 indicates the responses among the principals on the level of secondary school

effectiveness activities in Niger State. The mean response was between 4.42 and 4.58.

The data in Table 7 reveal that there is high planning, distribution of financial resources and

allocation among principals. There was a high level of managing school resources such as infrastructural facilities among the principals. Regular meetings were held between principals and the parents to discuss students' achievements and discipline. There was a high level of acceptance and applying of suggestions from within the school and the community by the principals. It seemed as

though the principals were intent on identifying and promoting the professional development needs of teachers. Allocating of subjects were based on competence to deliver good services to students. Good relationship existed between the school and the community. Principals created ways to generate funds and good hygiene practices were applied in schools.

Table 7 Principals' responses on levels of secondary school effectiveness activities in Niger State (*n* = 154)

S/N	Levels of secondary school effectiveness activities	<i>M</i>	<i>SD</i>	Remark
Level of school effectiveness activities (LSEA) 17	Planning and distributing financial resource allocation wisely	4.55	0.50	High
LSEA18	Managing school resources, such as infrastructural facilities	4.46	0.50	High
LSEA19	Meetings with parents to discuss students' achievements and discipline	4.54	0.50	High
LSEA20	Accepting and practicing suggestions from within the school and the community	4.43	0.50	High
LSEA21	Identifying and promoting the professional development needs of teachers	4.45	0.50	High
LSEA22	Allocating subjects and classes to teachers based on qualifications and competence	4.42	0.49	High
LSEA23	Providing good services by the school to the students in order to encourage parents to cooperate with the school	4.58	0.49	High
LSEA24	Good relationship with the community to gain their support for the school to realise its aim and objectives	4.53	0.50	High
LSEA25	Creating more avenues to generate additional funding from within and outside the school to improve the school facilities	4.56	0.50	High
LSEA26	A high level of hygiene within the school environment in order for the community to be comfortable within the school	4.52	0.50	High

Table 8 indicates the responses of HODs on the level of secondary schools' effectiveness activities in Niger State. The mean response was between 4.49 and 4.61. The highest mean was for the item "regular meetings between the principals and the parents to discuss students' achievement such as academic and discipline progress." The

HODs agreed that principals planned, distributed and allocated financial resources wisely. They agreed that the principals managed school resources and infrastructural facilities well. They agreed that principals held regular meetings with parents to discuss students' achievements and discipline progress.

Table 8 Perceptions of the HODs on levels of secondary school effectiveness activities in Niger State (*n* = 269)

S/N	Level of secondary school effectiveness activities	<i>M</i>	<i>SD</i>	Remark
LSEA17	Planning and distributing financial resource allocation wisely	4.55	0.50	High
LSEA18	Managing school resources, such as infrastructural facilities	4.50	0.50	High
LSEA19	Meetings with parents to discuss students' achievement such as academic and discipline progress	4.61	0.49	High
LSEA20	Accepting and practicing suggestions from within the school and the community	4.51	0.50	High
LSEA21	Identifying and promoting the professional development needs of teachers	4.55	0.50	High
LSEA22	Allocating subjects and classes to teachers based on qualification and competence	4.51	0.48	High
LSEA23	Providing good services by the school to the students in order to encourage parents to cooperate with the school	4.49	0.50	High
LSEA24	Good relationship with the community to gain their support for the school to realise its aim and objectives	4.49	0.60	High
LSEA25	Creating more avenues to generate additional funding from within and outside the school to improve the school facilities	4.54	0.50	High
LSEA26	High level of hygiene within the school environment in order for the community to be comfortable within the school	4.52	0.50	High

Table 9 indicates that items LSEA17–LSEA26 had mean responses of between 4.23 and 4.55. All the mean responses were very high (4.00–

5.00). This indicates that financial resources were planned, distributed and allocated well. The HODs were of the opinion that the principals managed

school resources and infrastructure well and that they held regular meetings with parents to discuss

students' achievement and discipline.

Table 9 Perception of the SSEBOs on levels of secondary school effectiveness activities in Niger State ($n = 22$)

S/N	Level of secondary school effectiveness activities	<i>M</i>	<i>SD</i>	Remark
LSEA17	Planning and distributing financial resource allocation wisely	4.55	0.51	High
LSEA18	Managing school resource, such as infrastructural facilities	4.32	0.48	High
LSEA19	Meetings with parents to discuss students' achievement such as academic and discipline progress	4.45	0.51	High
LSEA20	Accepting and practicing suggestions from within the school and the community	4.36	0.49	High
LSEA21	Identifying and promoting the professional development needs of teachers	4.23	0.43	High
LSEA22	Allocating subjects and classes to teachers based on qualification and competence	4.32	0.48	High
LSEA23	Providing good services by the school to the students in order to encourage parents to cooperate with the school	4.32	0.48	High
LSEA24	Good relationship with the community to gain their support for the school to realise its aim and objectives	4.50	0.51	High
LSEA25	Creating more avenues to generate additional funding from within and outside the school to improve the school facilities	4.55	0.51	High
LSEA26	High level of hygiene within the school environment in order for the community to be comfortable within the school	4.23	0.43	High

Best Principal Practices to Determine Secondary School Effectiveness in Niger State

To determine the relative contribution and effect of leadership practices on school effectiveness, multiple regressions were used to test whether the independent variables (IV) were significantly predicted by the dependent variable (DV) on school effectiveness. Multiple regressions were used because there were more than one independent variable. The independent variables were normal. A rule of thumb for the sample size is that regression analysis requires at least 20 cases per independent variable for the analysis, which was satisfied in this instance.

Another assumption was that the conventional ratio of 10 observations for each dependent or independent variable was considered ideal (Miller & Kunce 1973). As there were 445 respondents in

this study and it included nine independent variables, this assumption was met.

The assumption of multicollinearity was not violated (all variance inflation factors (VIF) < 10). The finding is as presented in Tables 10 and 11. Table 10 shows the number of independent variables entered and none of the variables entered were removed. The leadership practices were the nine IVs that were entered. Table 11 shows the coefficient of multiple regression determination for all independent variables (DL, LSEA, TL, FM, FC, LF, PLP, CT, and CE) which together show .140 of the variance (R^2) in school effectiveness. This indicates that about 14.0% of the variation in school effectiveness was accounted for by leadership practices. The regression equation appears to be useful for predicting school effectiveness based on the SSPs', HODs', and SSEBOs' opinions.

Table 10 Variable entered

Model	^a Variables entered	Variables removed	^b Method
1	DL, LSEA, TL, FM, FC, LF, PLP, CT, CE.		Enter

Note. Notation: DL = distributed leadership, TL = trained leadership, FM = financial management, FC = flow of communication, LF = laissez-faire, CT = credibility and trust, CE = community engagement, SETOT= school effectiveness total. ^aDependent variable: SETOT. ^bAll requested variables entered.

The dependent variable was school effectiveness. The result of the model summary is

presented in Table 11.

Table 11 Model summary

Model	R	R ²	Adjusted R ²	SE
1	.374 ^a	.140	.122	2.273

Note. ^aDependent variable: School effectiveness.

Table 12 ANOVA

Model	SS	df	MS	f	Significance (Sig.)
1 Regression	364.615	9	40.513	7.843	.000 ^a
Residual	2246.913	435	5.165		
Total	2611.528	444			

Note. ^aPredictors: (Constant), DL, LSEA, TL, FM, FC, LF, PLP, CT, CE.

Table 12 displays the *f*-test or ANOVA results. The finding shows that there was a significant amount of variation in school effectiveness between leadership and school effectiveness $p(9, 435) = 7.843, p(.00) < .05$. This

indicates that one or more of the predictors was or were useful for predicting school effectiveness. To determine the independent variable that was a significant predictor of school effectiveness, the coefficient result is presented in Table 13.

Table 13 Coefficient results

Model	Unstandardised coefficients		Standardised coefficients	<i>t</i>	Sig.	Collinearity statistics	
	B	SE	β			Tolerance	VIF
1 (Constant)	26.286	6.260		4.19	.000		
PLPTOT	.071	.052	.065	1.37	.169	.885	1.130
LSEATOT	.238	.069	.157	3.43	.001	.941	1.063
CETOT	.289	.087	.161	3.33	.001	.853	1.172
FCTOT	.112	.084	.062	1.34	.181	.933	1.072
CTTOT	.077	.090	.041	.86	.389	.858	1.166
FMTOT	.137	.076	.086	1.80	.072	.873	1.146
LFTOT	.094	.085	.052	1.10	.271	.904	1.106
TLTOT	.189	.081	.113	2.33	.020	.849	1.178
DLTOT	.277	.079	.165	3.52	.000	.902	1.109

Note. From Table 10, dependent variable: SETOT. PLPTOT = principals' leadership practices total, LSEATOT = level of school effectiveness activities total, CETOT = community engagement total, FCTOT = flow of communication total, CTTOT = credibility and trust total, FMTOT = financial management total, LFTOT = laissez-faire total, TLTOT = trained leadership total, DLTOT = distributed leadership total.

Table 13 shows that the *t*-value of distributed leadership contributes (16.5%) to school effectiveness ($\beta = 0.165, t = 3.52, p(.00) < .05$). The findings indicate that the standardised Beta coefficient for DLTOT is positive and statistically significant. This means that DL has the highest impact on school effectiveness (16.5%), in keeping other variables constant. The results also show that the *t*-value for community engagement contributes (16.1%) to school effectiveness ($B = 0.29, t = 3.33, p(.00) < .05$). The findings indicate that the standardised Beta coefficient for community engagement is positive and statistically significant. This means that community engagement has the second highest impact on school effectiveness (16.1%), keeping other variables constant.

The results also show that the *t*-value for levels of school effectiveness activities contributes (15.7%) to school effectiveness ($B = 0.157, t = 3.43, p(.00) < .05$). The findings indicate that the standardised Beta coefficient for LSEA is positive and statistically significant. This means that LSEA has the third highest impact on school effectiveness (15.7%), keeping other variables constant. The

results also show that the *t*-value for trained leadership contributes (11.3%) to school effectiveness ($\beta = 0.113, t = 2.33, p(.02) < .05$). The findings indicate that the standardised Beta coefficient for TLTOT is positive and statistically significant. This means that TL has the fourth highest impact on school effectiveness (11.3%), keeping other variables constant.

The results presented in Table 13 show that distributed leadership, community engagement, levels of school effectiveness activities, and trained school leadership are significant predictors of school effectiveness. Based on the comparison of standardised Beta coefficient, distributed leadership has the highest impact, followed by community engagement, levels of school effectiveness activities, and trained school leadership.

Discussion

The findings of this study show that principals' leadership practices contribute greatly towards school effectiveness in secondary schools in Niger State. It was revealed that the principals practised the concept of leadership through example,

improved relationships with outsiders (for instance, the PTA) to obtain support for the school to realise its vision and mission. The findings also show that the principals had great knowledge of their subject matter and were able to identify the knowledge and skills needed by staff. The results of this research agree with that of Thapa et al. (2013) who note that school principals are supposed to provide good ideas on how to strengthen and inspire the relationship between the staff and teachers to work as a team (rather than working independently) to realise the vision and mission of the schools. The mission of any school is to provide adequate teaching and learning for their students. The principal performs many professional and administrative functions to achieve his or her school's goals. One of the critical administrative functions of a school's administrator constitutes instructional supervision, which is overseeing and guiding the teaching and learning process in an academic institution (Thapa et al., 2013).

The findings of related research conducted by Uko (2015) reveal that school effectiveness is positively influenced by the principal's and the staff's experience and their respective values and norms. Good interaction between principal and teachers also improves school effectiveness. The findings of the research further reveal that identifying and promoting the professional development needs of teachers, providing good services by the school to the students to encourage parents to cooperate with the school, meetings with parents to discuss students' achievements and discipline, and allocating subjects and classes to teachers based on qualifications and competence are the school activities that can highly enhance school effectiveness. In line with this, Bush and Glover (2014) observe that identifying and promoting the professional development needs of teachers, clear vision and motivation to control both students and staff combined with the professional knowledge of how to sustain and manage a school constitutes the essential criteria for appointing someone as principal. Ogundele, Sambo and Bwoi (2015) further highlight that a principal lacking the relevant skills can result in poor administration. Therefore, skills such as discipline, assessment and evaluation, decision-making, negotiation, communication, conflict resolution, and the like are necessary. A number of criteria have been identified to determine the skills of effective school principals who can raise the performance level of the schools. Therefore, the changed conditions in secondary schools require principals to be trained and equipped with the necessary skills in school administration to make sound decisions that will bring about improvements in school effectiveness.

Conclusion

The findings show the positive and statistically significant correlations between community engagements, level of school effectiveness activities, trained leadership, distributed leadership and school effectiveness. Although principal leadership practices, laissez-faire, credibility and trust, and flow of communication had a positive effect on school effectiveness, they were not significantly determinants of school effectiveness. The findings further show that distributed leadership, community engagement, levels of school effectiveness activities, and trained school leadership are significant predictors of school effectiveness. Based on the comparison of the standardised beta coefficient, distributed leadership has the highest impact, followed by community engagement and levels of school effectiveness activities, while trained school leadership had the least impact. It can be concluded that principals should practice distributive leadership to improve their capacity in contributing to school effectiveness with less emphasis on trained school leadership. From this study we thus recommend as follows:

- 1) The Federal and State Ministries of Education in Nigeria should intensify training programmes for secondary schools' principals, HODs and secondary schools board officials on leadership to enhance the establishment of effective leadership practices among school principals and to equip them with the necessary skills in school administration to be able to make sound decisions that will bring about improvements in school effectiveness.
- 2) There is a need for SSPs, HODs and secondary school board officials to use the most appropriate secondary school effectiveness activities such as identifying and promoting the professional development needs of teachers and ensuring that teachers are effectively trained to develop secondary schools into centre of excellence.
- 3) This study contributes to the improvement of secondary school effectiveness and economic development to achieve excellence in academic institutions in Nigeria.

Authors' Contributions

Dr Ombughim Salman Umar wrote the manuscript and collected the data. Associate Professor Kazi Enamul Hoque designed the manuscript and assisted with the data analysis. Associate Professor Dr Husaina Banu Kenayathulla reviewed the final manuscript.

Notes

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