



Covid 19 Pandemic Calls For Distributed Leadership In Reengineering Nigeria's Educational System

Dr. Nnenna Karen BRANCH¹ & Dr. Godspower. O. AMELE²

**Department of Educational Management,
Faculty of Education,
Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Nigeria**

¹Email: nnenna.branch@yahoo.com/ 09079523377

²Email: godspoweramele@gmail.com/ 08037940465

ABSTRACT

Over the years, countries have witnessed different kinds of diseases. The recent disease which has set the whole world in distress with increasing death rate happens to be Coronavirus. This virus seems to be more advanced and keeps mutating and has become an international concern. Scientists all over the world have been on their toes, going deeper into more broadly based research on the agent, its prevention and control. This study is an opinion paper titled: COVID-19 pandemic calls for distributed leadership in reengineering Nigeria's educational system. The paper comprehensively reviewed the history and the current state of COVID-19 pandemic in Nigeria. Distributed leadership was seen as an emergent leadership model to be adopted in schools at this critical time. The study reviewed concepts such as; distributed leadership, reengineering educational system and the need for distributed leadership in schools as: It focuses on goals and facilitates team building, enhances distributed decision-making and quick achievement of results, and promotes professional development and understanding among school members. The paper concluded that as schools seek continuous changes and improvement, demands distributed leadership that can enable staff members to collaboratively function, use gadgets and to realize their full potentials in solving problems and increasing productivity. The paper suggested amongst others that school heads should return to teams to be able to utilize staff members' talents as schools compete for more effectiveness and efficiency. Government policy on school control should be relaxed a bit to allow school leaders and teachers to have free hands in applying their discretions, imaginations, motivation, creativity as well as their sense of prudence in decision-making as it concerns some key issues in education.

Keywords: COVID-19, Distributed Leadership, Reengineering, Nigeria's Educational System.

INTRODUCTION

The emergent, unprecedented crisis and momentous challenge facing schools globally is COVID-19 pandemic. COVID-19 has redefined the world's social, economic and mental health and has affected both the school system and the society greatly. It has opened a window for initiating critical thinking, redesigning, creative learning and leadership as well as various ways to combat this virus. Creating opportunity for school leaders to make improvement in the system of education especially, in developing countries like Nigeria. COVID-19 has exposed educational health system as a correlate of wellbeing of communities. Surrendering the task of making dynamic changes within and outside of schools for improvement and sustainable teaching and learning with little support or prior training to school leaders (Hartley, 2010 in Bush, 2018). Leadership demands school heads to be proactive in leading their institutions, staff and students effectively (Smylie & Hart, 2000). Not every school manager can face the world of constant change as they have seen that school management is not like a normal school

disturbance in an otherwise peaceful world. To a fearful school manager, change is threatening, to a hopeful school manager, change is encouraging because things will be improved and to a confident school manager, change is inspiring irrespective of the challenges that come with change, change make things better.

Leadership at this time demands a well- planned and organized approach of moving individuals, teams, and organizations from this current situation to a desired situation with the aim of empowering staff members to adopt and adapt to changes in the environment. This requires a planned innovation or alteration that can bring about positive changes for improvement in the existing status quo and it requires hard work (Agabi, 2002). Education demands change in practice, innovation or new methods, in understanding how changes work in the education institution, Fullan (2001) suggested that a shift in belief and assumptions as what people think or do are important for the expected result to be actualized. The importance of communication, effective planning and management, reflective thinking, networking, equity, collaboration and professional development becomes a responsive learning structure and dynamic leadership needed at this present call. As school leaders alone cannot tackle this present challenge. The school is a social system that has a connection of inputs from the external environment and can only survive through the transformation process in adapting to both internal and external forces. Management in educational institutions at this critical time is a very complicated issue that evolves to adapt to different circumstances as they surface according to the demand of time and pace. The basic thing is that the results meet the expectations of the society, if changes are not met, the society will then request for more changes (Okorie, 2012). Ability to maintain both internal and external transformations then means that leaders are to disentangle from old fashioned leadership belief and embrace a new set of leadership belief and competences that can ameliorate these challenges and direct the practice and development in school administration. Providing unlimited opportunities for the students and teachers to learn and develop so as to actualize school goals becomes their major focus. Distributed leadership seems to be able to provide remedy for this current situation as it concerns roles for easy and fast adaptability and high level responsiveness with regards to time and planning. Therefore, this study is on COVID -19 pandemic calls for distributed leadership in reengineering Nigeria's educational system.

History and the Current State of COVID-19 Pandemic in Nigeria

A significant amount of human Coronavirus was first categorized it in 1960's as upper respiratory tract infections in children. From 2003, five new human coronavirus have been identified including COVID-19, which has caused high increase in mortality and mobility rate (Yale University School of Medicine, 2000). NL63 represents group one Coronavirus which includes NL and the New Haven Coronavirus known globally. These viruses were identified as both upper and lower respiratory tract disease and very common in human pathogens. Group two Coronavirus HKU1 was established as Corona virology has greatly advanced in recent years.

Severe Acute Respiratory Syndrome (SARS) epidemic introduced animal Coronavirus. Human Coronavirus was identified in 1965 (Adachi et al., 2004). According to Khan (2005), Tyrell and Bynod discovered B814 which was found in human embryonic tracheal organ cultures extracted from the respiratory tract of an adult with a common cold. Tyrell and Bynoe could only inject the medium from these cultures intranasally in human volunteers who had cold and it resulted to a significant proportion of B814 but could not develop the agent in tissue culture. Hanre and Procknow in 1962 made a great improvement as they were able to develop the agent in tissue (kidney cell) culture almost at the same time using samples from medical students who had cold. Both two experiments, B814 and 229E were all sensitive and needed a lipid containing coat for Infectability and these viruses were not related to any identified myxo or paramyxo viruses (Monto et al., 2020). Robert Chanock at the National Institute of Health, McIntosh and his group of scientists reported the recovery of multiple strains of either sensitive agents from the human respiratory tract by using a technique close to that of Tyrell and Bynoe and the viruses were named "OC" to indicate that they were from an organ culture (Monto et al.,2020).

COVID-19 initially started as epidemic in mainland China, firstly reported in Wuhan China city in Hubei province, on 26th February, 2019. On 31st of December 2019, Chinese authorities identified and informed

World Health Organization (WHO) about a strange Pneumonia of unidentifiable origin as the cause of unknown cases of Pneumonia in Wuhan City, China. On 7th of January 2020, the director general of WHO, Dr. Tedros Adhanom Ghebreyesus raised alarm about Coronavirus outbreak which he declared as a Public Health Emergency of International Concern (WHO, 2020). Around 11th March 2020, as the number of cases increased and rapidly ravaged countries outside of China, Dr. Ghebreyesus further declared and characterized the outbreak as a pandemic. This virus was temporarily named “2019 novel corona virus” or “2019-nCoV”. The virus is characterized as roughly spherical and covered in particles of 120-160nm in diameter, with projections on the surface which is approximately 20nm long, giving it “crown” shape. That is why the name is derived from its characteristics. Novel Coronavirus is sensitive to heat and lipid solvent with distinct replicate strategy. Novel Coronavirus (nCoV) happens to be a new and difficult strain that has never happened to humans, this virus was then named COVID-19 (WHO, 2020b). In 2002, Beta coronavirus emerged from zoonotic reservoir in Southern China known as Severe Acute Respiratory Syndrome (SARS). COVID 19 is associated with the family of viruses as Acute Respiratory Syndrome (SARS) and some types of common cold. It is highly transmittable with symptoms such as; cough, shortness of breath or difficulty in breathing, fatigue, muscle or body pains, headaches, loss of taste or smell, vomiting and sore throat (WHO, 2021). Although, many health experts are of the view that the strain started from Bats, findings have not clearly shown either a natural spillover from an intermediate host. Over 118000 cases was reported and still counting in over 114 countries while 4291 deaths were recorded and the virus is still raging.

Around the middle of March 2020, the European region of WHO became the major center of the pandemic as over 40% of globally confirmed cases were reported with 63% of mortality rate being reported coming from the European region (WHO, 2021b). In Nigeria, index case of COVID-19 was on arrival at Murtala Muhammed International airport Lagos on 27th February, 2020. This was a year and five months, three weeks and one day from the first outbreak from Wuhan, Hubei China. Within one month, COVID-19 spread to other 17 West African countries. As a result of low testing rate, death tolls were unreliable since they may not include people who did not die in the hospitals and people who died before they could be tested (OECD, 2019).

Khan (2020) listed the different strains as:

1. Strain 229E
2. Strain OC43
3. Coronavirus
4. Human Respiratory Coronavirus
5. Severe Acute Respiratory Syndrome (COVID-19).

WHO has been working tirelessly from the time China reported the case and assisted countries in making necessary preparations as well as respond to the COVID-19 pandemic. Nigeria’s health workers together with COVID-19 response team did not do less as they have been working so hard and shown high competency and endeared great trust form Nigerians and the world at large in the manner in which they are tackling this pandemic. Just like the way in which Nigeria fought hard to eradicate Ebola which claimed over 8% of health workers in Liberia alone. Nigeria health workers have proven to the world that they have got what it takes to compete with their contemporaries in the global market. China showed great leadership, it set the pace in handling this pandemic within such a short period of time. China was proactive and quite pragmatic in managing her educational arrangement. As a result of this, different measures were put in place as strategies for fighting this pandemic in China such as: Schools were closed due to this pandemic as it had affected over 1.6 billion children around the world. Up until now, the battle to combat this virus is still on. Face to face teaching was limited. Assisting with online transition and distance delivery modes. Supporting employment and children abroad. Parents, teachers and students existed in a twilight education world as they waited for the return of normal service or the new normal. Data as at 23rd April, AFDB (2020) unveiled measures adopted by West African countries.

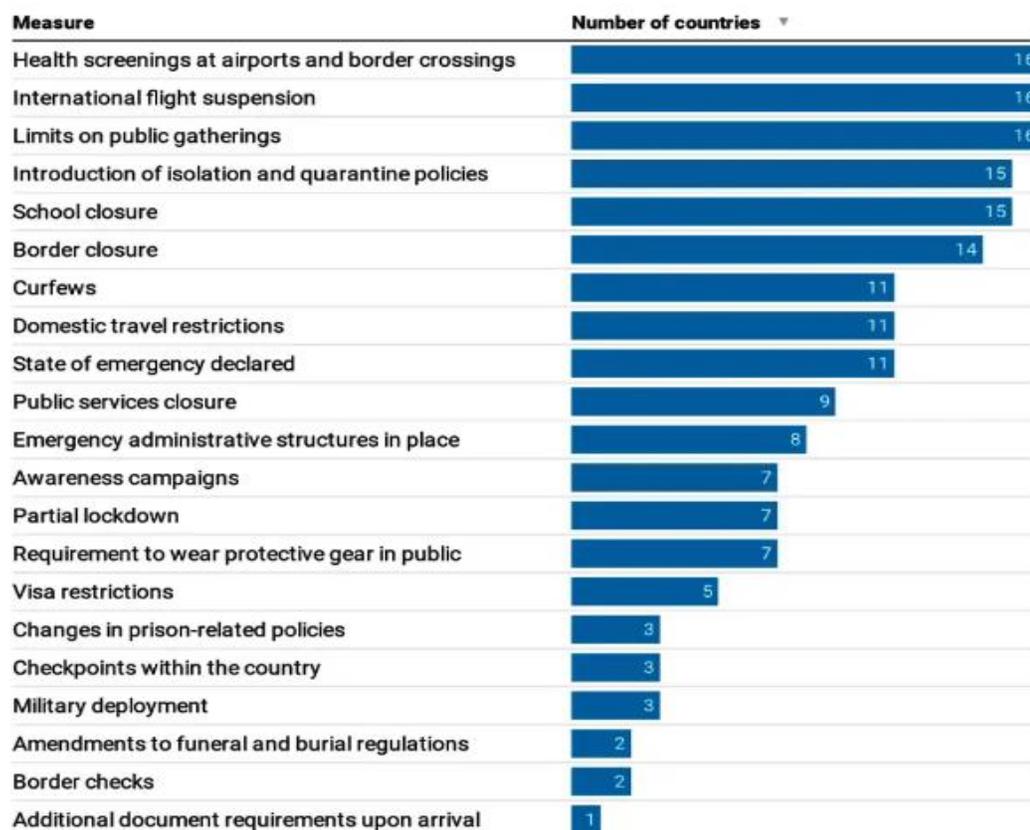


Fig. 1. Diagram showing a *selection of coronavirus (Covid-19) measures in West Africa*. Source: (ACAPS 2020; OECD 2020 in AFDB, 2020)

Dr. Chikwe Ikpeazu the executive director under the umbrella of Nigeria Centre for Disease Control (NCDC) put in place some non-pharmaceutical interventions in mitigating this COVID-19 pandemic as;

1. Constantly washing of hands with soap and water or the use of hand sanitizers.
2. Keeping a distance of 1metre which is equivalent to 3 feet or maintaining a social distance as it is called.
3. The avoidance of touching your eyes, nose, and mouth.
4. Always wearing of face mask especially, outside and when necessary.
5. Keeping to respiratory hygiene such as; covering your mouth and nose with tour elbow folded or using tissue when you cough or sneeze and disposing it immediately.
6. Adherence to advice or information on how to protect yourself and others from COVID-19 by your health care provider, national and local health authorities, employers, or school management.
7. Making sure that wherever you are is properly ventilated.
8. Eating right.

However, this disease has been mutating ever since it started, from Alpha to Beta and Nigeria is currently experiencing the 3rd wave known as Delta variant. Delta variant is characterized as not showing symptoms such as cough, fever but a lot of joint pain, headache, neck and upper back pain, general weakness, loss of appetite, pneumonia and is quite virulent. Sometimes without symptoms. The strain directly affect the lungs as it no longer live in the naso-pharyngeal region. Having 50% increased transmission and mortality rate than the original COVIN-19. Nasal swab tests now shows negative results for COVID-19. That means that almost everyone is asymptomatic.

Around July 13, Nigeria recorded 168,713 COVID-19 cases which included Delta Variant as described by

WHO and 2,124 facilities registered infections in the country. Nigeria received 41 million doses of Oxford Astrazeneca and Pfizer-Bio-N Tech/ Moderna COVID19 vaccines through the COVID-19 Vaccines Global Assess Facility (COVAX), and that includes 117, 600 Janssen (Johnson & Johnson) vaccine sent on August 12, 2021 by the African Union Commission to Abuja (Adebowale, 2021). Nigeria commenced COVID-19 vaccine on March 5, 2021 and 3,938,945 eligible persons across 36 states and Federal Capital Territory have been vaccinated, representing 98% utilization of the vaccine received. The vaccines have proven to be 88% effective against the Delta Variant. However, 14,550 cases showed mild to moderate adverse effects and only 148 cases were considered to be severe and no death was recorded as associated with COVID-19 vaccination. The country is in her second phase of vaccination plan. The Executive Director of the National Health Care Development Agency (NPHCDA) Dr. Faisal Shuaib stated that the arrival of these vaccines is a step in the battle against COVID-19.

So many Nigerians are still living in denial of its existence in Nigeria and many believe it is a scam that Nigerian leaders are using to receive grants from foreign countries while some base their resistance on their faith (religious perspective) that God is the one that gives protection and not all the protocols or the vaccination. While a wider majority are scared of the side effects of COVID-19 vaccines. Conspiracy theory and unfounded rumors are deeper widening the gap for the combating of the disease. This has resulted to so many Nigerians refusing to take the COVID-19 vaccines and neglecting all COVID-19 protocols. From the look of things, Nigeria still has a long way to go in fighting COVID-19 pandemic. More still needs to be done to convince and dispel these notions. School managers are currently facing challenges such as; fluid and changing staffing situations and having to do more with less. Crisis and change management has become the survival skills of school leaders. Distributed leadership is now the default leadership response in this present situation. Salemu (n.d) listed five major challenges facing school managers currently as: Implementing blended and distance learning, increasing students' equity gap, redefining what teachers and schools represent in the society, prioritizing mental health support and closing the gap between teachers and school managers.

Distributed Leadership

What makes great leadership is not in title or position but the courage in utilizing ones gifts in serving others. It demands going beyond normal call of duty and putting the gift to work and the reward is not just making a difference but the kind of individuals you develop into as a result of the pursuit (Senge, 2018). Leadership is simply actualizing set organizational goal through people. Distributed leadership is a conceptual and analytical approach to understanding how work of leadership takes place among the people in school context as it concerns school improvement. It is focused on practice of leadership instead of specific leadership roles or responsibilities. Bush and Glover (2014) as cited in Bush (2018) referred distributed leadership as uncoupling from traditional authority. Shava et al. (2018) stated that distributed leadership enable responsibilities and accountability to be shared by individuals with relevant skills and expertise instead of resting on roles. This basically means, employing leadership expertise at all levels in the educational system so as to create more opportunities for change that will facilitate improvement in schools. Bolden et al., (2009) in Bush (2018) view distributed leadership as a top-down process while Imoni (2018) in the same Bush (2018) sees distributed leadership as same with delegation. Distributed leadership gives leaders in schools ownership by empowering them to lead their teams for productivity. It promotes school members' full participation in key decision areas in the school. Shifting focus from leaders' behaviours to the whole school institution mission. Therefore, application of distributed leadership is quite necessary in schools to be able to sail through this COVID-19 trial period. Middles and Smart (2020) suggested some strategies that can be adopted to facilitate distributed leadership in schools such as; collaboration and multiple stakeholders as the struggle continues in fighting COVID-19.

Reengineering Educational Institutions

The word reengineering in this context is the application of distributed leadership in reviewing, recreating, modifying, or entirely changing existing school processes, systems and structure of activities with the aim of improving its output, quality of products and to reduce costs.

The Need for Distributed Leadership in School Management

It focuses on goals and facilitates team building: Distributed leadership promotes team building in the school. The need for collaboration is very much needed at this COVID-19 period. The primary vehicle around which work is done in most organizations is through teams. This is because teams outperform individuals especially when the tasks demands multiple skills, judgment, and experience. To enable effectiveness and efficiency, teachers' talents are utilized through teams. Teams are essential to retaining and sustaining teachers and enable them to learn from each other. Moreover, teams are flexible as they can be easily assembled, organized, refocused and disbanded. Teams can be used to provide advice and improve quality in the school, to manage or run things in the school and to make or do things in the school (administrative work). Teams are different from groups in that members are committed to a common purpose as a good team knows why it exists. They have positive, synergic, specified performance goals, adopting a common approach and are accountable for the teams result. Unlike groups that are made up people who occasionally interact but have no collective commitment that demands joint efforts. Effective team building according to Aguilar (2015) has to do with making clear objectives to the teams. The teams have to work hard to develop goals, roles and procedures. Team building is basically linked with increasing task accomplishment, meeting goals and actualizing results within the school and it results to better communication. That is why the coalition P21 (Partnership for 21st Century Learning) in Nwagwu et al. (2021) highlighted creativity, critical thinking, communication and collaboration as smart ways to succeed in today's educational system. As a team, the students, teachers and administrators and school managers move the same direction to reach goal.

The school managers are required to set a clear purpose and goals, facilitate teams to go for small wins. This means; (a) assisting the team recognize and set key goals so they can work together towards important achievement (b) enable the team to rotate and replace members until they have an efficient and effective meshing of a set of people (c) engage them in team building activities targeted at creating fun and comfortable ambiance (d) cut down overall goals into smaller ones which are easier to actualize. Develop mutual trust, assess each members performance based on the overall teams' performance which will be made a part of their overall performance assessment, provide the needed external support by making sure the team has adequate resources to accomplish set goals, provide team building training and change the team membership from time to time so that teams will not be trapped down in their own inertia or conflict by meshing and reforming teams for better combination of skills. A leader can emerge from these personalities incase the team is experiencing lack of leadership problem.

It enhances distributed decision-making and quick achievement of results: Distributed leadership is not in support of the antiquated and convoluted use of manipulation and control of leadership but requires multiple perspectives and contributions from other critical thinkers (think tanks) and network of responses including open schedule that gives opportunities for teachers to meet and work together, which will cumulate to making changes that will bring about innovations and improvement in the school system, using distributed decision-making. Sullivan (2013 p.1) in Suportiv, and Tognatta (2013) asserted that "distributed leadership enable school and community members to be given opportunities and mindset to make choices and contribute in decision-making that affect their lives too. They are encouraged to be able to lead and take the initiative to make policy decisions that distributes benefits equitably and effectively through collaborative efforts and actions". The school managers have more decision-making powers in school management. This reduces or paralyzes the school heads in bringing changes in the school. Where the school community work together for a common cause, collaborative decisions are to be taken by school community members for better actions, to bring about change instead of individual decision-making roles (Branch, 2018). This requires school leaders to engage senior teachers to be part of the decision-making roles and assisting them to do better in maintaining close relationship by giving progress report of the children in schools.

Suportiv, and Tognatta (2013) summarized the advantages of distributed decision-making as more information is gotten, school members jointly contribute to decisions made and it enables more diverse perspectives to inform on ideas deliberated and greater efficiency for implementation of decisions reached. Often times, it seems that distributed decision-making delays as a lot of arguments are involved

which time is consuming, it results to better and faster decisions in the end (Middles & Smart, 2020). Distributed leadership is a leadership of inclusion. Stakeholders, parents, community leaders, students and business partners are being included in school decision-making procedures in the school. Their various ideas, questions and approaches give a comprehensive view of policy, making them impact on the educational system. With collaboration and improved communication, difficulties can easily be tackled. Distributed leadership is a calculated, well planned and deliberated type of leadership. As such, it is time conscious. Time is being allotted to work in reaching goals. It requires assigning people to think and do things with focus about the future and utilizing the best hands and resources to be able to persevere the present situation. With collaboration and improved communication, difficulties can easily be tackled.

It promotes professional development and understanding among school members: Distributed leadership is concerned with assisting teachers to enhance their skills to enable them become more effective in rendering instructions to their students. It includes less formal approaches including teacher network. It has to do with training principals differently to become better in supporting new understandings and implementation of distributed leadership (Branch, 2006). In today's educational system, triumph goes to schools whose staff members can solve problems. Distributed leadership becomes very important in reaching this goal as it results to learning experiences that bring about permanent change in teachers that enhances their abilities to perform on the job and for future challenges including higher positions (Branch, 2006). Continuous learning, exploring, analyzing information, adapting behaviours and research findings are what educational professionals are to engage in. It requires changing skills, knowledge, attitudes even behavior. This involves extensive training to teachers and school heads to work in collaboration. Through stimulating training, apprenticeship, coaching, mentoring, job rotations, seminars and conferences.

Distributed leadership creates avenue for learning. Mistakes, risks and questions are utilized as lessons. Often times healthy conflicts arise, this is inevitable as disagreement about ideas ensues which may lead to conflicts. Constructive dialogue and critical thinking including dissent discussions serve as learning experience (Amele, 2020). When conflicts is managed properly, this builds understanding among school members as they listen to each other and agreements on how to treat each other is reached. There is always a person or a rotation of people among staff members who lead the way as a result of intentionality, planning and facilitation when needed for the school to be effective. Shava and Tlou (2018) suggested the following strategies for distributed leadership in schools to school managers as: Rotate leadership responsibilities, hire qualified teachers, do not micromanage, create opportunities for assessment and make success big or small visible and irresistible. Middles and Smart (2020) highlighted some strategies for distributed leadership. They are:

1. Encourage collaboration to build or update the school vision.
2. Transparency in communication and action will help build trust and understanding.
3. Share authority and disperse decision-making and responsibilities to team members.
4. Utilize highly skilled individuals throughout the school who can lead short term projects, host or sponsor conversations, enable agreements for improvement and innovative projects.
5. Develops future leaders both for future and current thinking; critical thinkers and individuals who can bulwark ambiguities.

Importance of Distributed Leadership in School Management

Distributed leadership fixes solutions to specific situations very fast: This involves the school managers responding to the problem through collaboration and distributed decision-making. Their approaches and responses proffers fast solution to the problem. It sees the school organization as a whole: The school managers are to consider the consequences of any decision they want to take as it affects the entire educational system. Their actions must always represent the school culture, they have to show a selfless commitment to school members` safety and well- being. Every problem they are to address has to be according to its immediate cause. All their focus and endeavors should first be on the school and the specifics of a problem demands the school managers to see the big picture as well as the small picture simultaneously.

Distributed leadership blend variety of inputs: School managers are able to identify multiple influences on a problem, evaluate varieties of inputs that may result to a problem and be able to make effective decisions that will assist in solving such problem (Branch, 2020). Distributed leadership will assist the school managers to bend or override a newly introduced policy in case there is a need for a new type of decision. The school managers will easily interpret policies at the same time maintain the educational values and school visions in every decision. It builds a high performance culture by ensuring that teachers are developed through mentoring and coaching at different levels, to promote performance improvement, encouraging them to make use of their skills. Distributed leadership enhances team building by assisting teachers and directing team members to make the best of their capabilities. Training is very important in teaching school managers on how to diagnose situations in which they operate and to make necessary adjustments.

CONCLUSION

In today's fast changing and rapid transformation of technologies, victory increasingly goes to educational system whose staff can face challenges resulting to solving problems through collaborations. As schools seek continuous changes and improvement, demands distributed leadership that can build effective teams, good decision-making and training of staff members to collaboratively function, use gadgets and other statistical tools to upgrade and alter their skills in order to allow new technologies, to realize full potential in solving problems and increasing productivity.

SUGGESTIONS

This study suggested the following:

1. School heads should return to distributed leadership to be able to utilize staff members' talents as schools compete for more effectiveness and efficiency.
2. Government policy on school control should be relaxed a bit to allow school leaders and teachers have free hands in applying their discretions, imaginations, motivation, creativity as well as their sense of prudence in decision-making as it concerns some key issues in education and in being flexible to judiciously lead schools, for effective administration that will result to quality education.
3. At the dawn of the new century, training is the reigning integral part of most jobs for high productivity and avoidance of obsolescence. Therefore, school managers should provide constant training to curb COVID-19 in schools and any other challenges that may pop up in the future.
4. Research in higher institutions should not end as academic activity but for improvements to impact on the practice of education.

REFERENCES

- Adachi, D. G., Johnson, R. Draker, M., Mazzili, T., Tailbot, P. J. & Telper, R. (2004). *Comprehensive detection and identification of human coronaviruses, including SARS associated coronavirus with single RT-PCR assay*. Division of microbiology, The Hospital for Sick Children.
- Adebowale, N. (2021). COVID-19: Nigeria to receive additional 41m doses of vaccines-official. Prime Times, July 13, 2021. <https://www.premiumtimesng.com/health/health-news/473502-covid-19-nigeria-to-receive-additional-41m-doses-of-vaccines-official.html>.
- AFDB (2020). *African development bank group unveils \$10 billion response facility to curb COVID-19*. 8 April. <https://www.afdb.org/en/news-and-events/pressrelease/african-development-bank-group-unveils-10-billion-response-facility-curb-covid-19-35174>.
- Agabi, O. C. (2002). Introduction to management of change to education: A book of readings. In O. G. Agabi & N. C. Okorie (Eds.), *Introduction to management of change: A book of readings*. Pam Unique Publishing.
- Aguilar, E. (2015). 5 characteristics of an effective team. *Journal of Administration and Leadership*. George Lucas Educational Foundation celebrating 50 years.

- Amele, G. O. (2020). Higher education leadership for peace education in tertiary institutions in Rivers State. An unpublished doctorate degree thesis of the department of Educational Management, faculty of Education, Ignatius Ajuru University of Education, Port Harcourt, Rivers State.
- Branch, N. K. (2006). Professional development and principals' administrative effectiveness in secondary schools in Port Harcourt and Obio/Akpor Local Government Areas. Unpublished dissertation of the department of Technical and Science Education, Rivers State University of Science and Technology, Port Harcourt.
- Branch, N. K. (2018). The role of decision-making in management of change in educational institutions. In N. P. Ololube (Eds.), *Encyclopedia of international leadership and policy management* (pp. 630-653). Pearl Publishers.
- Branch, N. K. (2020). Principals' leadership challenges and effective administration in public senior secondary schools in Rivers State. An unpublished doctorate degree thesis of the department of Educational Management, faculty of Education, Ignatius Ajuru University of Education, Port Harcourt, Rivers State.
- Bush, T. (2018). Prescribing distributed leadership: Is this a contradiction? *Educational Management, Administration and Leadership*. <https://doi.org/10.1177/1741143218768403>.
- Deklotz, P., Ziegenfuss, R., Rooney, T. & Stone, C. (2020). *Work for leading teams, training and support*. Dare to Lead Book Study Workbook Group.
- Fullan, M. (2001). *The new meaning of educational change* (4th Ed.). Teachers College Press.
- Khan, J. S. (2005). *History and recent advances in coronavirus discovery*. Public Health Magazine.
- Middles, R., & Smart, N. (2020). *Getting through distributed leadership*. Richard Bolden Centre for Leadership Studies.
- Monto, A. S., Crowling, B. J. & Peiris, M. J. S. (2020). *Viral infections of humans*. Nature Publishing Group.
- Nwagwu, L., Okere, C. O. P, & Branch, N. K. (2021). Challenges of the 21st century in a developing economy: Contemporary possible solutions. *International Journal of Innovative & Science Education Research*, 9(3):72-80.
- Okorie, N. C. (2012). *Organizational settings of leadership*. Totan.
- Salemu (n.d) Difficulties facing school leader in COVID-19 period
- Senge, P. M. (2018). *Developing leaders. The fifth discipline- The act and practice of learning organizations*. QAspire.
- Sheva, G. N., & Tlou, F. N. (2018). Distributed leadership in education. *African Journal*, 6(4):279-287.
- Smylie, M. A., & Hart, A. W. (2000). School leadership for teacher learning and change: A human and social capital development perspective. In J Murphy & K. S. Louis (Eds.), *Handbook of Research on Educational Administration*. Jossey-Bass.
- Suportiv, J. A., & Tognatta, N. (2013). The impact of distributed leadership on collaborative team decision-making. *Leadership and Policy in Schools*, 12(2): 101-121. <https://doi:10.1080/15700763.2013.810274>.
- World Health Organization, (2020, August 8). *Health emergency*. <https://www.who.int/en/health-topics/healthemergency/coronavirus>.
- World Health Organization. (2020b, August 11). *International classification of disease (ICD), 10-WHO*. <https://www.who.int/classification>.
- World Health Organization. (2021, September 28). *New CoVID-19 related ICD-10-cm codes takes effect*. <https://www.aapublicationsorg/coding011321>.
- World Health Organization. (2021b). *16 personal history of COVID-19*. Informational Diagnosis CPT/HCPCS codes code.
- Yale University School of Medicine, (2000). History of COVID-19. *The Pediatric Infection Disease Journal*, November, 24(11), S223-S227. <https://doi:10.1097/01.inf.0000188166.17324.60>.