Curbing Brain-Drain amongst Science Educators in Nigerian Universities

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Abstract

Nigeria is facing a critical challenge in its education sector, particularly in the sciences. The country is experiencing a serious brain-drain of science educators in her universities. Many Science Educators are leaving the profession or migrating to other countries in search of better opportunities. This scenario possesses an essential threat to the country's ability to produced skilled scientists with critical and problem solving skills, innovative workforce and leaders. it is a pressing issue that requires immediate attention. This paper presents the concept of brain drain, causes of brain drain amongst science educators in Nigerian universities, Impact of brain drain, and strategies for curbing Brain drain among science educators in Nigerian universities.

Keywords: Brain-drain, Science Educators, Nigerian, Universities

Introduction

In the recent years, many academics have withdrawn their services from the universities'. This is one of the major problems facing developing countries. The frequency of it varies from nation to nation (Anekwe, 2009). While it is extremely rare in the Western world, it is rampant in impoverished countries, particularly in Africa (Okwara, 2023). Over the years, there is increasing number of Nigerians traveling abroad in search for greener pastures. The migrants are usually skilled professionals mostly in the health and educational sectors. Today, the exodus of Nigerian professional abroad is becoming a source of concern to the Nigerian government as there is increasing shortage of educational personals in the country. According to Eise *et al.,* (2018), people with the greatest degrees of education or skill frequently migrate to industrialized nations where their services are appreciated. Legislation and institutional influences always promote this tendency because most nations seem to be more open to immigration from people who have a high degree of knowledge and training than from those lacking.

The phrase "brain drain" refers to the widespread exodus of people with specialized skills or knowledge, frequently as a result of unfavorable prospects, political unrest, armed conflict, health problems, and risk aversion (Terry *et al.,* 2017). It can also be seen as the phenomenon of exodus of manpower from developing countries to others, especially developed countries. However, in the education setting, NOUN (2009) describes brain drain as a situation whereby overseas institutions or equivalent institutions receive academic staff from other countries whom they offer better rewards for services rendered. Emeghara (2013)and Ngunjiri (2015) see brain drain to be human capital flight of top manpower from various developing countries to more developed countries. Statistically, it is recorded that an estimated 40% of the Africa's top professionals live abroad, costing the continent over US $4 million per year in consultancy and expatriate (Oduba, 2015). Baridam and Baridam (2020) lamented that while recipient countries improve in manpower base, victim countries suffer from manpower deficit and brain drain. Due this, quality academics needed for the training of high-level

manpower continues unabatedly to rob Nigerian universities because of brain drain syndrome to other sectors in Nigeria and institutions abroad (Ayuba, 2020; Itighise & Ezekiel, 2016). Premium Times of November 29th, 2015 hinted that 23,000 lecturers emigrate annually from Africa to other countries yearly. As noted by Schmid (2014), there are some benefits from brain drain because migrant workers send money home and might also transfer knowledge back to their countries. The question is, what knowledge can be transferred when they still live abroad? Are those incomes that do accrue to individual's families enough to justify the colossal loss of man power at the detriment of the development of the educational sector precisely the university system?

On the educational front, there is an increasing number of Professors and other high ranking academics who are leaving the country in search of better working conditions abroad. (Okwara, 2023). Several reasons have been adjudged to be responsible for brain drain. These reasons can be situated within the push and pull theory of migration otherwise called Raven stein law of migration first coined by Ernst Georg Raven stein of England 1885. This theory is most usually used to explain the concept of brain drain. It is a model that explains migration by identifying factors that drive individuals away from their home country (push factors) and those that attract them to a new location (pull factors). The push factors are considered to be factors that are internal to a country that necessitate the migration of its citizenry abroad such as low pay compensation, little educational options, unsatisfactory employment, political unpredictability, and understaffing. The pull factors are factors that are external to the citizens of a country but will entice them to migrate oversea. These factors include increased emolument, better working conditions and other fringe benefits, among others (Itighise, 2016; Sheval, 2019; Chiamaka *et al.,* 2020). In addition to the previously mentioned reasons, there are other reasons for the departure of individual, like lack of friendly atmosphere for studying and insufficient resources for professionals to practice. A secure and predicted work environment, a high standard of living, opportunities for career progress, greater money, employment versatility, and predicted workload. It is pertinent to note that everywhere in the world specifically Nigerian universities, there is a demand for trained science educators, yet, greater incomes, access to sophisticated technology, better living circumstances, and more stable political environments in developed nations draw professional science educators from developing nations (especially in Nigeria). Since the return of the country to democratic rule in 1999, when the expectations of Nigerians were high and that the democratic regimes will address the growing challenges facing the educational systems mostly, the university sector in the country. Universities are apogee of learning with academia of diverse areas of specialization.

Just as in human being the brain controls the activities and actions of the human being so are the lectures in the universities without these brains available for teaching, the Universities would be mere beautified empty buildings. This is why the challenge of brain drain is a recurrent topical discourse in university management (Akporehe, 2022). It is against this background that this paper seeks to address ways of curbing brain-drain amongst science educators in Nigerian universities.

The Concept of Brain Drain

The concept of brain drain is used interchangeably with capital flight. Alem (2016), states that the British Royal Society first used the phrase "Brain drain" to refer to the emigration of scientists, engineers, and other professionals beyond the United Kingdom to the United States of America. UNESCO (2008), brain drain is a peculiar kind of international scientific interaction that is characterized by a movement in one direction and inexorably flows to industrialized nations. However, it is clear that brain drain does not solely go in one

direction. It is a global concern involving several countries. David (2005) defines brain drain as the exodus of skilled and brilliant people to other countries throughout the world. Conflicts, a lack of opportunities, health risks, and political squabbles brought on by poor leadership, all of which are common in the nations where these human assets originated, are to blame for the threat David (2005). This shortcoming is addressed in Encyclopaedia Britannica defines brain drain, as the exodus of educated or professional individuals from one nation, economic sector, or field to wages or better living conditions.

However, it is clear that workers shift from one occupation to another inside a nation in every country in the globe. Any human resource who believes another organization would be a better fit for them transfers to that organization when the opportunity arises. This has no detrimental effects on the development of such civilizations, but the widespread transfer of human capital from developing to developed nations does. Human brains preserve technologies, scientific ideas, and design techniques. The person who is involved is the only one who can access them. Such people take their minds, which may be utilized to advance their nations, with them when they leave. Thus, their countries continue to be undeveloped. According to Cambridge Dictionary, brain drain is the process through which a significant percentage of exceptionally educated and competent people leave their native nation in quest of better living and employment opportunities abroad. According to Chimanikire (2005), brain drain is the movement of a specialist group of people, such as medical professionals, engineers, scientists, and academia, from one nation to another, typically in quest of higher wages or a higher quality of living. The term "brain drain" can also be referred to the exodus of the best-informed individuals and experience as a result of human capital moving to more advantageous environments, notably from developing to industrialized nations.

To move with this pace, Eise *et al.,* (2018), added that people with the greatest degrees of education or skill frequently migrate to industrialized nations because their services are appreciated. Legislation and institutional influences always promote this tendency because most nations seem to be more open to immigration from people who have a high degree of knowledge and training than from those lacking. A key feature of globalization is the movement of highly trained employees from poor countries to developed ones, which has both advantages and disadvantages. Brain drain, according to Stenman (2006), is the mass emigration of individuals with specialized abilities or expertise from one nation to another, frequently in quest of better economic prospects and a pleasant living. Man and his family are subject to these principles. The former offers a means of support, while the latter makes life simpler for him and his family. Using the pool ordinary least squares approach, Adeyemi*et al.,* (2018) look at the causes, effects, and implications of brain drain on the economic development of Africa with a particular emphasis on Ethiopia, Kenya, and Nigeria. Since the impacts of brain drain threaten to obstruct the continent's general progress, the state of affairs on the African continent is alarming, and the African authorities must act right now to address it. The study discovered a connection between remittance, economic growth, and brain drain. In Ethiopia, Kenya, and Nigeria, however, there is a strong correlation between the improvement of human resources and economic growth. This study identifies information in terms of the time period covered by prior study based on the literature evaluation mentioned above.

Causes of Brain Drain amongst Science Educators in Nigerian Universities

Brain drain phenomenon amongst science educators in Nigeria universities can be attributed to many factors that force skilled individuals to leave a country for greener pastures. These are the pull factors. The following pull factors are responsible for brain drain from Nigeria.

1. **Worsening economic conditions:** Nigeria has mismanaged her economy that boomed with petrol money in the 60s and 70s without recourse to the unforeseeable future. This was the time of Udoji when money was abundant and so planning for proper utilization of the money by investing on every sector of the economy was not done. Therefore, Nigeria lacks most basic necessity of life like electricity, good road, water and others. The harsh economic conditions could therefore push many professional to leave the country to make ends meet in their lives. Professionals living overseas would like to return to their countries as observed by Slawon (2018) but, he noted that many factors militate against their return.

2. **Lack of good will by government towards education.** It has been recognized that absence of good governance contributes to brain drain in developing countries (Physicians for Human Rights, 2014). Governance in developing countries has been assessed as not being as effective according to World Bank, UNDP and other bilateral donors (Das, 2018). University autonomy has been seriously undermined particularly financial autonomy (Okoroma, 2001) and academic freedom has eroded. Successive leadership fails to honour agreements on the demands of lecturers that would lead to improvement of universities. Bad governance led to 8 months Academic Staff Union of University (ASSU) strike that has grounded the educational system in the year 2022. On 21st of September 2022, as heard in TVC news, Nigeria National Industrial Court ordered the lecturers to go back to the classroom to work. No one wants a work environment where government overrides institutions of their right for union activities.

3. **Insecurity:** In security is a great challenge to Nigeria and education sector is not spared. Nowhere is safe from Southern, Western, Eastern and Northern parts of the country. Nigeria is engulfing in turmoil, terrorist, bandits, herdsmen attacks, militants, robbers and others (Gbamwuan and Agidi 2022 and Itighise 2022). Today, there are many refugees especially in Northern part and kidnapping is the order of the day with huge ransom being paid. Akporehe and Obielumani (2013) maintained that every fabric of our national life and corporate existence is ingrained in security of the national and so universities are not extricated from insecurity challenges currently ravaging the country. Many intellectuals who cannot bear this condition have no choice than to migrate.

4. **Lack of stability:** Lack of stability has in turn aggravated the rate of ''brain drain'' (Fadayomi, 2016). Sub Saharan African countries are characterized by low predictability of events, volatile and unstable political environments and corrupt legal practices (Soeters, 2015). Religious bigotry and ethnic conflict has also exacerbated the insecurity in the country. Political instability, thus increases the rate at which professionals migrate. Peace and stability are, thus, vital to attracting and retaining professionals. We live in a global economy and so no limit to trans-border migration (Baridam and Baridam, 2020), a reality that Nigeria must accept.

   Nigerians dig into the internet searching for information on opportunities to travel out. Recruitment are advertised on-line which makes Nigeria government unaware of academia intention to leave.

Government needs to improve on the wellbeing of the citizenry to dissuade them from leaving the country. Universities should also be made conducive for academia to stay. It is not uncommon seeing 2-3 lecturers sharing the same office. This often amounts to free and uninterrupted flow of students and visitors to the office. To worsen the situation, electricity supply is epileptics that one can be crippled from carrying out research apart from the unconducive environment arising from heat. There is little or no internet services in most universities, offices lack furniture, toilet facilities to the extent that 2-7 lecturers can share one. There is also problems of working policies, leadership highhandedness of running institutions, lack of accountability and transparency, administrative bureaucracy that could stiffen innovativeness, academic freedom infringement and others. Universities sometimes caused brain drain. They termed diaspora as experts who they accord Visiting Scholars. This could create agitations in home academia who would want to travel abroad and come back to become Visiting Scholars. This view is corroborated by (Baridam and Baridam, 2020) who alleged that Visiting Scholars who were sometime in the local universities are accorded privileges that were denied them while they were in the local university before travelling abroad for self-development.

5. **Inability to tap into agencies that can fund universities:** Many universities have poor management structure that have not attracted foreign aids, technical advice and donor agencies. Our own TetFund is not fully tapped. There agencies that deal on issues of diaspora in African universities such as Royal Association of Universities and Colleges of Canada, and International Development Research Centre Canada-Africa Research Exchange Grants; World Bank African Diaspora Programme, Migration for Development in Africa, UNESCO–HP Brain Gain Initiative; Carnegie African Diaspora Fellowship Programme and others which space will not permit to be discussed.

The Effects Brain Drain in Universities among science educators like any other industry require man power to efficiently carry out teaching, research and community development. A situation whereby the experienced and able academia leave the institutions will definitely tell on quality of output and also constitute stress on hands left behind giving them excess work load. This phenomenon can result in skill gap in Universities and the nation at large. Skill gaps describe the phenomena, whereby the skill levels of academia are insufficient to meet the requirements of lecturing. This has the potential to harm student achievement. The effect would also impact on the society. As noted by McGuinness & O'Connell (2015), the level of productivity as average worker is likely to be lowered in the presence of substantial skill gaps. It could be a herculean task searching for quality academics especially in critical areas yet the assurance that lecturers on ground would remain. Need assessment conducted in Universities in Nigeria in 2014 by International Organization for Migration indicated manpower shortage in the 74public universities. The situation would be worse now that the number of universities has risen astronomically to 214 (NUC, 2021) coupled with government not meeting the needs of the universities.

The Impact of Brain Drain on Nigerian Universities

Brain drain, the phenomenon of skilled professionals leaving their home country for better opportunities abroad, has profound and far-reaching effects on Nigerian universities. The consequences of this trend are not only felt within individual institutions but also reverberate throughout the national education system and the broader socio-economic landscape.

1. **Decline in Academic Quality:** One of the most immediate impacts of brain drain on Nigerian universities is the noticeable decline in academic quality. As experienced faculty members and researchers migrate to foreign institutions, Nigerian universities are left with a shortage of qualified personnel capable of delivering high-quality education. This depletion of academic talent directly affects the student experience, resulting in larger class sizes, reduced student-faculty interaction, and diminished academic support (Oyewole, 2019). Research by Salami and Obafemi (2021), indicates that the exodus of skilled academics has contributed to a decline in the quality of curricula and instructional methods, as fewer experienced educators remain to guide curricular development. Moreover, the loss of knowledgeable faculty who can engage in scholarly research further stifles the intellectual growth of both students and the institution itself. Consequently, graduates from Nigerian universities often find themselves inadequately prepared for the workforce, which can hinder their employability and career prospects.

2. **Limited Access to Expertise and Innovation:** The emigration of top-tier academics not only results in a shortage of educators but also leads to reduced access to expertise and innovation in Nigerian universities. With fewer experienced researchers and scholars, there is a significant decrease in the ability to conduct advanced research, publish scholarly articles, and engage in international collaborations (Itighise, 2016; Ezeh and Ojo2021). This limits the potential for academic institutions to contribute meaningfully to global knowledge production and innovation. As noted by Omobowale & Adebayo (2020) and Itighise &Wordu (2016), the decline in research output is particularly concerning in critical areas such as science, technology, engineering, and mathematics (STEM), where advancements are vital for national development. The lack of innovation restricts the capacity of Nigerian universities to address local challenges, such as public health issues and technological development. This creates a cycle of underdevelopment, as universities become less relevant in solving pressing societal problems and contribute less to the nation's economic growth.

3. **Increased Dependence on Foreign Institutions:** Another significant consequence of brain drain is the increased dependence of Nigerian universities on foreign institutions for knowledge transfer, collaboration, and capacity building. As the local academic workforce diminishes, universities increasingly rely on foreign experts to fill gaps in knowledge and teaching (Akindele, 2021). This dependence can lead to a one-sided flow of information and expertise, with Nigerian institutions often adopting foreign practices that may not align with local needs and contexts. Moreover, the reliance on foreign institutions for research collaboration and faculty exchange programs can divert attention from developing local capabilities. Ayo & Ajayi (2022) argue that this over-reliance can undermine efforts to build robust academic systems within Nigeria, as universities may prioritize foreign partnerships at the expense of nurturing local talent and fostering domestic research initiatives.

4. **Socio-Economic Consequences:** The implications of brain drain extend beyond the confines of academic institutions and into the broader socio-economic landscape of Nigeria. As skilled professionals leave, the country experiences a significant loss of human capital, which can negatively affect various sectors, including healthcare, technology, and education (Nwagwu, 2020). This exodus can hinder economic growth and development, as a diminished workforce lacks the necessary skills to drive innovation and productivity. Furthermore, the loss of potential leaders and innovators can stifle

the progress of key industries and lead to a cycle of underdevelopment. The negative impact on education quality and research capabilities can deter foreign investment, as potential investors may view the educational landscape as inadequate for developing a skilled workforce. Consequently, the effects of brain drain become a systemic issue that hampers Nigeria's ability to compete in the global economy.

Strategies for Curbing Brain Drain amongst Science Educators in Nigerian Universities

To counter the effects of brain drain and retain top talents, Nigerian universities must take proactive steps that address both the immediate and long-term concerns of their academic staff.

1. **Improving Working Conditions and Compensation:** A key strategy for retaining top talent is improving the working conditions within Nigerian universities. This can include infrastructural development, such as upgrading facilities, ensuring access to the internet, providing modern laboratories, and improving classrooms. Moreover, competitive salaries and timely payment of wages are essential in ensuring that academic staff feel valued. The implementation of competitive salary structures can help Nigerian universities compete with international offers (Ayo and Ajayi, 2022)

2. **Enhancing Research Opportunities:** To encourage academic staff to remain within the country, Nigerian universities must prioritize research funding and resources. Establishing more local research grants, collaborations with industries, and government-sponsored research programs can stimulate academic output. Institutions can also foster international collaborations without necessitating the emigration of scholars. By developing robust research centers and access to international journals, universities can support academics in producing high-quality work that gains global recognition (Ezeh and Ojo, 2021).

3. **Creating a Stable and Secure Academic Environment:** The unpredictability of Nigeria's academic calendar, often caused by strikes and industrial actions, can be mitigated by improved dialogue between the government, universities, and labor unions. Ensuring stability in the education sector will reduce disruptions and make universities more appealing workplaces. Additionally, addressing the broader security issues affecting the country, especially in the North, will help create a safe environment conducive to long-term academic pursuits (Nwagwu, 2020 and Atabang 2024).

4. **Providing Opportunities for Career Advancement:** Offering clear career progression paths is crucial for retaining academics. Nigerian universities can develop a system that allows for rapid promotions based on merit and academic achievements. This would involve offering postdoctoral fellowships, sabbaticals, and opportunities for further training, both within Nigeria and through international exchanges (Obasi and Olayinka, 2021). Recognizing and rewarding academic excellence is vital in fostering loyalty and commitment to Nigerian institutions.

5. **Leveraging Alumni Networks:** A significant portion of the Nigerian academic diaspora is willing to contribute to the development of their home institutions if given the opportunity. Universities should establish and strengthen alumni networks to engage these professionals, either through mentorship programs, visiting professorships, or collaborative research. As suggested by Ibidapo-Obe (2022), these efforts can bridge the gap between local academic staff and the expertise available abroad, without necessitating full-time relocation.

Conclusion

The treatise has looked at brain drain in relation to Science Educators in Nigerian universities. The Concept of brain drain, causes of brain drain amongst science educators in Nigerian Universities, Impact of brain drain, were explored as well strategies for curbing Brain drain Nigeria universities. These are management strategies which could turn the drains to gain for our universities. There are brain drain issues that university management can handle that bother on internal mechanism such as accountability, transparency and proper planning. The government on the other hand must finance universities so as to ensure attractive remuneration, provide facilities, engender academic freedom and autonomy as well as make Nigeria safe for her citizens. It was argued in this study that the push and pull factors to be responsible for the increasing rate of migration in the educational systems in Nigeria. Furthermore, this study argues that the implications of brain drain on Nigeria's educational systems are enormous, as Nigeria will continue to suffer from decline labour force in the educational system. Again, Nigeria will continue to suffer from declining economic growth and development as a result of the absence of the lost professionals in educational systems that would have contributed to the nation's Gross Domestic Product (GDP).

Recommendations

The following recommendations were made.

1. The Federal Government of Nigeria need to invest in the critical sector of the economy as it remains key to achieving long-term economic growth in the country.

2. Nigerian migrants and their families should be encouraged by the Nigerian government to invest their remittances in capital accumulation initiatives that would beneficial to the economy by putting in place the suitable incentives and processes that will encourage them.

3. Develop a national science education framework that outlines the goals, objectives, and standards for science educators in Nigerian universities.

4. Foster collaborations and partnerships between Nigerian universities and foreign institutions to provide opportunities for science educators to engage in joint research projects and exchange programs.

5. Offers incentives, such as reduced teaching loads or additional research funding, to science educators who return to Nigeria after completing their studies or working abroad.

References

Akindele, T. (2021). Political instability and its impact on Nigerian universities. *Journal of African Higher Education, 15(3), 45-63.*

Akporehe, Dorah A. (2022) From Drain to gain: managing brain drain in Nigerian Universities. *Rivers State University Journal of Education (RSUJOE), ISSN:2735-9840, 2022, Volume 25 (2):212-224* www.rsujoe.com.ng

Alem, A. (2016). Impact of brain drain on Sub-Saharan Africa. The reporter. Arthur, J.A. (2010). African diaspora identities: Negotiating culture in transnational migration. Plymouth, United Kingdom: *Lexington Books.*

Anekwe, C (2009). Brain drain: *The Nigerian Experience.*< http://www.niger deltacongress.com /barticles /brain _drain _the_nigerian_experie.htm.3>

Atabang, A. A. (2024). Integration of multimedia and interactive whiteboard for quality teaching and learning in Nigeria secondary schools system. *Unizik journal of STM Education vol 7 (1), 229-243*

Ayo, O., & Ajayi, M. (2022). Remuneration and academic staff retention in Nigerian universities: A comparative analysis. *International Journal of Human Resource Management, 24(2),* 78-95.

Ayuba, H. (2020). Working and living conditions of academic staff in Nigeria: strategies for survival at Ahmadu Bello University. In Y. Lebeau& M. Ogunsanya (Eds.), *The Dilemma of Post-Colonial Universities. (pp .209 240), Ibadan: IFRA-Nigeria. DOI 10.4000/books.ifra.992.*

Baridam, D. M. & Baridam, L. D. (2020). University administration and the challenges of brain drain in Nigeria. *Journal of Business and Management (IOSR-JBM). 22, (4) 57-65.*

Chiamaka, J. O. & Caleb, C. (2020). Brain drain among Nigerian nurses: implications to the migrating nurse and the home country. *International Journal of Research and Scientific Innovation, 7(1), 1-8.*

Eise, J. A., & Foster, K. A. (2018). How to feed the world: *Island Press?*

Emeghara, E. E. (2013). Brain drain as a clog in the wheel of Nigeria's development: The University education system in Focus. *International Journal of Development and Management Review (INJODEMAR) 8 (1), 110- 121.*

Ezeh, C., & Ojo, F. (2021). Boosting research funding in Nigerian universities: Strategies and challenges. *African Journal of Research and Development, 9(2), 34-50.*

Fadayomi, T. O. (2016). "Brain drain and brain gain in Africa: causes, dimensions, and consequences'', in A. Adepoju& T. Hammer (Eds.), International migration in and from Africa: dimensions, challenges, and prospects, population, human resources and development in Africa, Stockholm.

Gbamwuan, A & AguAgidi, A. P (2022). Insecurity and the escalation of brain drain in the Nigerian universities. *AIPGG Journal of Humanities and Peace Studies 3 (1)*https://ssrn.com/abstract=4108110

Ibidapo-Obe, O. (2022). Leveraging alumni networks for Nigerian higher education development. *Journal of University Advancement, 12(1), 55-70.*

Itighise, A. E (2016).Innovation in higher teachers education: An imperative for achievement of sustainable national development. *Journal of Educational Media and Technology,* 21(1), 264 - 273

Itighise A. E. (2022). Educational technology: An imperative for the achievement of Nigeria educational security and national development. *Journal on Education, 13(1):263-279*

Itighise, A. E. & Ezekiel, A. (2016). Science and vocational male teacher's retention in Akwa Ibom State: An antidote to threat to global peace and security. *International Journal for long life education,* 20 (1), 37 - 42

Itighise, A. E. & Wordu, N. C. (2016). Cloud computing technology and its applications by students in Akwa Ibom State University. *Journal of Educational Media and Technology,* 20(1), 184 – 194.

McGuinness, S., E. Kelly & P. O'Connell (2015). The impact of wage bargaining regime on firm-level competitiveness and wage inequality: the case of Ireland, Industrial relations, *Journal of Economy and Society, 49(4), 593 615.*

National University Commission (2021). List of 214 legitimate universities in Nigeria approved by NUC 2021. https://infomediang.com/legitimate universities-in-nigeria-approved-by-nuc/

Nwagwu, I. (2020). Insecurity and its effects on education in northern Nigeria. *Education and Conflict Review, 5(1), 101-112.*

Obasi, C., & Olayinka, A. (2021). Career progression and academic staff retention in Nigerian universities. *Journal of Education and Employment Studies, 6(3), 65-79.*

Oduba, V. (2015). Brain Drain- technology ushers in Brain Gain. Science in Africa. *OECD Working Papers DELSA/ELSA/WD/SEM(2011)6OECD).*

Okoroma, N. S (2001). University Autonomy: A case study of Nigerian tertiary institutions. *African Journal of Agricultural Teacher Education X (1/2),101-114.*

Okwara C. E (2023). A review of the implications of brain drain on Nigeria's health and educational systems. Mediterranean *Journal of Social Science. DOI:* https://doi.org/10.36941/mjss-2023-0028

Omobowale, M., & Adebayo, R. (2020). Challenges facing research development in Nigerian universities. *West African Academic Review, 11(4), 23-37.*

Oyewole, S. (2019). Brain drains and its impact on Nigerian higher education. *The African Education Monitor, 8(2), 88-97.*

Physicians for Human Rights (2014). An action plan to prevent brain drain: *building equitable health systems in Africa, Physicians for Human Rights: Boston*

Ravenstein, E. G. (1885). The laws of migration. *Journal of the Statistical Society of London, 48*(2), 167–235. https://doi.org/10.2307/2979181.

Salami, D., & Obafemi, O. (2021). Dependence on foreign institutions and the future of Nigerian universities. *Global Education Perspectives, 10(4), 60-75.*

Schmid, K. (2004). Strategies to Manage Migration of Health Professionals to Protect National Health Systems Will Be Successful Only If All Stakeholders Are Involved in the Process. *Bulletin of the World Health Organization, 82, 621.*

Sheval, M. (2019). An analysis of the factors affecting brain drain of young people from North Macedonia. *A thesis submitted to University of Ljublijana.* 1-82.

Soeters, J. (2015). Ethnic conflict and terrorism: origins and dynamics of civil wars, Routledge, Abingdon

Terry, F. & Zubair, H. (2017). Factors contributing bran drain in Malaysia. *International Journal of Education, Learning and Training, 2(2),* 1-18.