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BRAIN-DRAIN MANAGEMENT AND DEVELOPMENT OF UNIVERSITIES IN THE 21ST CENTURY

Dr. Nimota Jibola Kadir Abdullahi
Senior Lecturer
Department of Educational Management
Faculty of Education, University of Ilorin
Email: abdullahi.njk@unilorin.edu.ng

Abstract

The main objective of this research was to determine the relationship between brain-drain management and the development of universities in the 21st century. Poor quality of life, condition of service, and research facilities, each of these factors pose substantial challenges to the efficient administration and development of universities. A sample of 400 participants was purposively chosen from public universities in Nigeria. This study adopts a quantitative (descriptive) research design. The hypotheses were tested using the Pearson product-moment correlation coefficient and linear regression analysis. The findings revealed that poor quality of life, condition of service, and research facilities have a close and positive relationship with the development of universities. It was recommended that the Government should provide a good quality of life for academics and other employees to enhance the positive mental health and wellness of lecturers and students. Also, the government should provide good conditions of service for academics as this would play a crucial role in attracting and retaining highly qualified and experienced workers. Additionally, the government should provide adequate and appropriate research facilities to academics to enable academics to conduct cutting-edge research and engage students in meaningful learning experiences, promoting innovation, advancement of knowledge, and academic excellence.

Introduction

In Nigeria, the increasing phenomenon of *Japa* continues to rapidly propagate. The Yoruba term, signifying the pursuit of better prospects in foreign lands, remains prominently ingrained in the minds of numerous youthful Nigerians. This trend is evident in the escalating count of individuals who have recently opted to depart from Nigeria in favor of locations such as Brampton, Ontario, Canada. Predictably, the matter of *Japa* in Nigeria is becoming progressively worrisome. A recent survey undertaken by the Nigeria Social Cohesion Survey uncovered that seven out of every ten Nigerians express a readiness to relocate to foreign countries for diverse reasons, and a significant proportion have achieved success in these endeavors. This aspiration to depart from Nigeria persists across generations, motivating both the youth and the elderly to search for better opportunities abroad. Presently, Nigeria's net migration rate is recorded at -0.273 per 1000 individuals, indicating a noteworthy efflux of people (Tribune online, 2023).

The issue of brain-drain in the development of universities has significant consequences by depleting the pool of local talent available to universities, hindering the growth and progress of academic institutions. When highly skilled individuals leave, they take their knowledge, expertise,

and innovative ideas, which could have otherwise contributed to the advancement of their universities. The problem of brain-drain is where highly skilled individuals, such as professionals, scientists, and intellectuals, migrate from their home countries to other countries in search of better opportunities or conditions. This trend has both positive and negative implications. On the positive side, brain-drain can contribute to the growth and development of host countries. The influx of highly skilled individuals brings new ideas, knowledge, and expertise, which can lead to technological advancements and economic progress. Additionally, these individuals often fill critical roles and contribute to the host country's workforce, addressing skill shortages in certain sectors.

However, the negative consequences of brain-drain are significant, especially for the countries losing their skilled workforce. When talented individuals emigrate, it can lead to a depletion of human capital in their home countries. This can result in a shortage of key professionals and a loss of expertise and innovation potential. Moreover, brain-drain can exacerbate socio-economic inequalities in developing countries, as those with higher skills and education tend to have better opportunities to migrate. Additionally, brain-drain impacts the overall quality of education and research in the home country. Losing skilled faculty members and researchers can result in a decline in teaching standards, a decrease in collaborative opportunities, and a reduced ability to conduct cutting-edge research. This, in turn, can negatively affect the reputation and competitiveness of the home universities on a global scale. Moreover, brain-drain can perpetuate a cycle of underdevelopment. When talented individuals migrate, they often settle in countries that offer better opportunities, resources, and support for their research or academic careers. This creates a concentration of knowledge and expertise in certain regions, leaving behind a shortage of skilled professionals in their home countries. These countries then struggle to retain and attract high-quality educators, leading to a continuous drain of intellectual capital (Emeghara, 2013).

To address the issue of brain-drain in the development of universities, countries need to focus on creating an enabling environment that encourages the growth and retention of talented individuals. This can include improving funding and infrastructure for research and education, enhancing career opportunities, fostering strong academic networks, and implementing policies that incentivize talented individuals to remain in their home countries.

Without a doubt, brain-drain poses significant challenges to the development of universities. By understanding and addressing the underlying factors that contribute to brain-drain, the nation can work towards creating sustainable environments that support the growth and advancement of higher education institutions. In terms of the development of university education in the 21st century, it is essential to address the challenges posed by brain-drain. Governments and educational institutions need to focus on creating an environment that fosters innovation, provides better research opportunities, and offers competitive salaries and benefits for academics and researchers. This can help in retaining talent and attracting skilled individuals back to their home countries.

Additionally, universities should strengthen their collaborations and partnerships with international institutions to promote knowledge exchange and research collaborations. This can help in harnessing the potential of the global academic community and mitigating the effects of brain-drain. Moreover, it is crucial to invest in the education sector and create favorable policies that promote research and development. Via enhancing funding for universities, providing scholarships and grants for students and researchers, and promoting a culture of innovation,

countries can create an environment that retains talents and encourages the growth of university education.

The issue of brain-drain has grown to be a bottleneck that affects everyone. When it comes to studying brain-drain and the development of universities, several notable authors have made significant contributions in this field. Gibson and McKenzie (2012) researched the economic implications of brain-drain. His work focuses on the effects of skilled emigration from developing countries and how it affects education systems and human capital development. Ogunade and Ishaya (2022) treatise has a focus on the effect of brain-drain on higher education administration. Emmanuel, et al (2020) examined the Effect of Brain Drain driving factors on University Competitiveness among Universities in Burundi. The study explored how patterns of migration, connections, and networks shape the flow of talent and influence the growth and innovation of educational institutions. Abdulkareem et al (2021) carried out a study on the ways of curbing unemployment and brain-drain through Islamic financing instruments Alejandro (2021) studied the phenomenon of new trends in brain-drain and global sustainability. Particularly, the study explored how diaspora networks contribute to knowledge exchange and economic growth. Gwaradzimba and Shumba (2018) investigated the nature of brain-drain and its impact in Zimbabwe and South Africa. Meanwhile, Akpohere (2022) research delves into managing brain-drain, in universities. He analyzes how the movement of skilled individuals can lead to knowledge leakage, particularly in developing countries, and examines the strategies universities can employ to mitigate brain-drain while fostering innovation and development within their countries. Anokye, et al (2019) examines the impacts of brain drain on the retention of academic staff in higher education systems. Forthwith, Anokye, et al (2019) investigate how the loss of highly skilled individuals can affect the quality and capacity of universities in the home countries, as well as potential policy measures to address brain-drain and enhance domestic development. While these authors offer valuable insights, it is essential to acknowledge that there may be gaps and differing perspectives among them. Their research may focus on various aspects of brain-drain and university development, such as economic factors, policy implications, or knowledge transfer. Considering these diverse viewpoints can provide a more comprehensive understanding of the complex relationship between brain-drain and universities' development by using quality of life, good condition of service, and provision of research facilities as important factors to measure brain-drain. This study has been inspired by the significant differences in the area and region covered by previous studies compared to the current study. As such, this study aims to address those gaps that were neglected by earlier researchers.

Research Objectives

The specific objectives have been outlined to guide the progress of this study. Therefore, the study seeks to

1. Determine the relationship between quality of life and the development of universities in Nigeria.
2. Determine the relationship between the good condition of service and the development of universities in Nigeria.
3. Determine the relationship between the provision of research facilities and the development of universities in Nigeria.
4. Determine the relationship between quality of life, good condition of service, provision of research facilities, and development of universities in Nigeria.

Research Questions

The following questions were raised and subsequently addressed:

1. Does the quality of life enhance the development of universities in Nigeria?
2. Does the good condition of service improve the development of universities in Nigeria?
3. Does the provision of research facilities bring about the development of universities in Nigeria?

Literature Review

Brain-drain management

Brain-drain typically refers to the emigration or outflow of highly educated and skilled individuals from one country to another, often resulting in a depletion of intellectual and human capital in the home country. This phenomenon is usually studied within the context of socio-economic and educational factors, as it presents both benefits and challenges for the countries involved. Brain-drain has a specific meaning within scholarly discussions. It refers to the migration or loss of highly skilled and educated individuals from one country or region to another (Ogunade & Ishaya, 2022). This movement of talent often results in a significant loss of intellectual resources for the home country, as individuals with valuable skills and knowledge seek opportunities abroad. In academic research, brain-drain is studied to understand its causes, consequences, and potential policy implications. Scholars analyze factors such as economic disparities, political instability, educational opportunities, and quality of life to gain a deeper understanding of this phenomenon and propose strategies to address its impact on societies and economies.

Brain-drain refers to the phenomenon where a country or region experiences a significant outflow of its highly skilled and educated workforce to other countries or regions (Emeghara, 2013). This migration of talented individuals can occur for various reasons, such as better job prospects, higher salaries, enhanced career opportunities, political instability, or a more favorable living environment. The term "brain-drain" signifies the loss of intellectual capital and expertise from the home country, which can have adverse effects on its economic, social, and technological progress. It is an area of concern for policymakers and researchers who study the causes, consequences, and potential solutions to mitigate the impacts of brain-drain (Akporehe, 2022). The brain-drain can impact universities in many ways which can lead to a loss of talented and qualified faculty members, as they may choose to migrate to countries that offer better research opportunities, funding, and working conditions. This can result in a shortage of experienced professors and researchers, affecting the quality of education and research output. This can have significant implications for the development of universities and education in the 21st century.

Management refers to the process of planning, organizing, coordinating, and controlling resources to achieve specific goals and objectives within an organization. It involves making decisions, allocating resources, and directing and motivating individuals to accomplish tasks efficiently and effectively (Abdullahi & Abdulkareem, 2023; Osuji & Fekarurhobo, 2020). Brain-drain management refers to the strategies and measures taken to mitigate the adverse effects of brain-drain and maximize the potential benefits. This can involve policies aimed at retaining highly skilled individuals, creating attractive working conditions, providing opportunities for professional growth and development, and fostering a supportive environment that encourages talent retention (Akporehe, 2022). Effective brain-drain management entails understanding the factors that contribute to brain-drain, such as socioeconomic conditions, lack of opportunities, or political instability, and addressing them proactively. It may involve collaboration between different stakeholders, such as government bodies, educational institutions, and private sector organizations, to create a conducive environment that retains and utilizes talented individuals.

Quality of life refers to the overall well-being and satisfaction experienced by an individual or a community. It encompasses various aspects of life, including physical health, mental well-being, social relationships, economic stability, and environmental conditions (Akporehe & Osiobe, 2020). The concept of quality of life recognizes that life is not solely determined by material possessions or financial success, but also by the subjective experiences and opportunities available to individuals. Factors that contribute to a higher quality of life may include access to healthcare, education, safe living conditions, employment opportunities, social support networks, cultural and recreational activities, and a clean and sustainable environment. Enhancing the quality of life is a goal pursued by individuals, communities, and policymakers alike, as it seeks to promote happiness, satisfaction, and a fulfilling existence for all.

Good condition of service, also known as favorable terms of employment, refers to the overall package of benefits, working conditions, and provisions offered to employees by their employer Gwaradziima & Shumba, 2018). It encompasses various factors that contribute to a positive and rewarding work experience. A good condition of service typically includes fair compensation, which includes salary or wages, bonuses, and other monetary benefits. Additionally, it may extend to non-monetary benefits such as health insurance, retirement plans, paid time off, flexible working hours, opportunities for professional development, a safe and supportive work environment, and recognition for achievements. Good conditions of service are designed to enhance employee satisfaction, motivation, and well-being, promoting a positive work-life balance and fostering a productive and loyal workforce.

The provision of research facilities refers to the availability and access to resources and infrastructure that support academic or scientific investigations and experiments (Ogunade & Ishaya, 2022). Research facilities can include physical spaces such as laboratories, libraries, computer labs, or specialized equipment and tools needed for data collection and analysis. They can also involve access to databases, archives, and research materials, both physical and digital. Furthermore, the provision of research facilities encompasses the availability of funding or grants to support research projects, as well as opportunities for collaboration with other researchers or institutions. It is crucial for universities, research institutions, and other educational organizations to adequately invest in providing these facilities to promote and facilitate cutting-edge research, innovation, and discovery.

According to Maslow's (1943) theory of needs, also known as Maslow's hierarchy of needs, it provides a framework for understanding human motivation and the driving forces behind individual behavior. Taking cues from Maslow, individuals have hierarchical needs that must be fulfilled in a specific order for personal growth and self-actualization. Relating this to brain drain and the development of universities, it is very crucial to understand how the satisfaction of different needs influences the flow of talent and the advancement of educational institutions.

University Development

University development typically refers to the growth, progress, and improvement of a university or educational institution (Akporehe, 2020). It encompasses various aspects such as the expansion of academic programs, the enhancement of faculty and staff, the improvement of infrastructure and facilities, the advancement of research and scholarship, and the promotion of a vibrant learning environment. University development aims to enhance the overall quality and reputation of the institution, strengthen its educational offerings, and provide students with a well-rounded education that prepares them for their chosen careers. University development also refers to the continuous efforts made by a university to grow, evolve, and improve in various areas. It

encompasses a range of activities that contribute to enhancing the institution's quality, reputation, and effectiveness (Abdulkareem et al, 2021). These activities include expanding academic programs, building state-of-the-art facilities, recruiting and retaining highly qualified faculty, fostering research and innovation, strengthening community partnerships, and engaging in strategic planning to align with changing educational needs and priorities. University development is driven by a commitment to academic excellence, student success, and the overall advancement of knowledge and society.

According to Abdullahi (2023), university development refers to the process of growth, progress, and improvement within a university or higher education institution. It involves various initiatives and strategies aimed at enhancing the institution's educational mission, research capabilities, infrastructure, and overall effectiveness. University development activities may include expanding academic programs, establishing new research centers, attracting and retaining talented faculty members, improving campus facilities, fostering student engagement, strengthening partnerships with industry and community organizations, and implementing innovative teaching and learning methods. The ultimate goal of university development is to create an environment conducive to academic excellence, student success, and societal impact. University development in this study refers to teaching quality, student success, and engagement as well as research output.

Teaching quality refers to the overall effectiveness and excellence displayed by educators in their instructional practices. It encompasses various aspects, including the teacher's knowledge and expertise in the subject matter, their ability to engage and communicate with students, their instructional strategies and techniques, as well as their commitment to fostering a positive and inclusive learning environment (Abdullahi, 2022). A high-quality teacher possesses strong content knowledge, pedagogical skills, and the ability to adapt their teaching methods to meet the diverse needs of their students. Additionally, effective classroom management, timely and constructive feedback, and the utilization of various assessment methods are also important components of teaching quality. Overall, teaching quality is aimed at promoting meaningful learning experiences and ensuring that students acquire the knowledge and skills necessary for their academic and personal success.

Student success refers to the attainment of desired academic, personal, and developmental outcomes by students. It goes beyond academic achievements and encompasses various aspects of a student's growth, including their cognitive, social, emotional, and physical well-being. Student success is not solely measured by grades or test scores, but also by indicators such as critical thinking, problem-solving skills, creativity, effective communication, and the ability to collaborate with others. It involves the development of a growth mindset, resilience, and a passion for learning (Abdullahi, 2022). Student engagement, on the other hand, refers to the level of interest, motivation, and participation displayed by students in their learning experiences (Stacey, et al. 2021). Engaged students are actively involved in the learning process, demonstrating a genuine curiosity and enthusiasm for acquiring knowledge and skills. They are focused, attentive, and take ownership of their learning. Engaged students also tend to be more self-directed, ask questions, seek clarification, and make connections between new information and prior knowledge. They actively contribute to class discussions, collaborate with peers, and apply their learning to real-world contexts.

Both student success and engagement are interconnected and mutually reinforcing. When students are engaged in their learning, they are more likely to achieve success, and when they experience success, their engagement and motivation increase. As educators, it is important to

create a supportive and stimulating learning environment that promotes student success and fosters active engagement in the pursuit of knowledge and personal growth. Student success refers to the accomplishment and positive outcomes achieved by students in their academic journey. It extends beyond mere grades or test scores and encompasses various aspects of their personal and educational development. Student success can be measured by their ability to set and achieve goals, acquire knowledge and skills, and develop a love for learning. In summary, student success and engagement are closely intertwined. When students are engaged in their learning, they are more likely to experience success in their academic endeavors. Conversely, when students are successful, it often leads to increased engagement and a positive attitude toward learning.

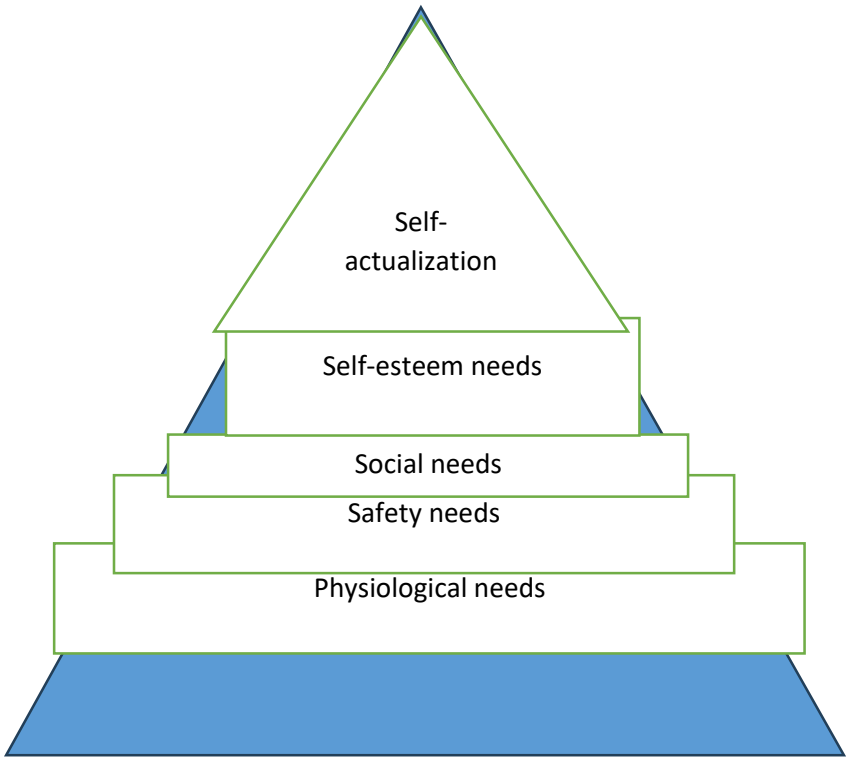
Research output refers to the tangible outcomes and results generated from a research study or project. It encompasses the various forms in which research findings are disseminated, shared, and made accessible to the wider academic community and beyond (Abdullahi, 2020). Research output can take different forms, including Scholarly Publications, Presentations and Conference Papers, Reports and Technical Papers, Data and Datasets, and Patents and Innovations. Overall, research output plays a crucial role in advancing knowledge, fostering collaboration, and contributing to the overall progress of a particular field of study. It enables researchers to communicate their discoveries, promote transparency, and facilitate further exploration and development.

Research output also refers to the outcomes or results produced from a research endeavor. It encompasses the various forms that research findings can take, including but not limited to published papers, articles, conference presentations, books, patents, experimental data, software, and other outputs that contribute to the knowledge and understanding of a specific research area (Ogunade & Agwor, 2021). Research output plays a crucial role in sharing new knowledge, insights, and discoveries with the academic community and society as a whole. It serves as evidence of scholarly contributions and helps advance the field by providing a foundation for further research, discussions, and developments.

Theoretical Framework

The theoretical foundation of this study is based on Maslow's (1943) theory, as cited in Abdullahi (2020) claims that Abraham Maslow's theory, known as Maslow's Hierarchy of Needs, proposes that individuals have a hierarchy of five basic needs that drive their behavior and development. These needs, arranged in a pyramid, include physiological needs, safety needs, belongingness and love needs, esteem needs, and self-actualization needs. The hierarchy consists of five levels: (1) Physiological Needs: These are the basic needs for survival, such as food, water, shelter, and healthcare. (2) Safety Needs: Once physiological needs are met, individuals seek safety and security, including physical safety, employment stability, and a stable social environment. (3) Love and Belonging: Once safety needs are fulfilled, individuals desire love, belongingness, and meaningful relationships with others. (4) Esteem Needs: Once a sense of belonging is established, individuals seek recognition, respect, and a positive self-image. (5) Self-Actualization: At the pinnacle of the hierarchy, individuals strive for personal growth, self-fulfillment, and the realization of their full potential.

Figure 1: *Theoretical Framework (adapted from Abdullahi, 2020)*



Maslow's theory can be related to brain-drain and the development of universities. Brain-drain refers to the emigration or loss of highly educated and skilled individuals from one country to another. This phenomenon often occurs when individuals seek better opportunities, resources, and environments, usually in more developed countries. In the context of Maslow's theory, brain-drain can be associated with the satisfaction of higher-level needs. Individuals who experience brain-drain may be driven by the pursuit of self-actualization needs, which involve fulfilling one's potential and achieving personal growth. They seek environments where they can fully develop their talents, engage in cutting-edge research, and contribute to their respective fields. These individuals often migrate to universities and research institutions that provide the necessary resources, collaborations, and intellectual stimulation.

To mitigate brain-drain and promote the development of universities, countries can focus on addressing factors related to Maslow's lower-level needs. This includes ensuring access to quality education, offering competitive salaries and benefits, creating a safe and conducive environment, and establishing a sense of belonging and recognition within the academic community. By fulfilling these needs, universities can attract and retain talented individuals, fostering a positive environment for research, innovation, and overall development.

This study anchored on Maslow's theory of needs such that, it provides insights into understanding the factors influencing brain-drain and the development of universities. By addressing the various needs identified in the hierarchy, government can create an environment

that attracts and retains talented individuals, thereby fostering their personal growth and contributing to the institution's advancement.

Methodology

Research Design

This study employed a quantitative research strategy (descriptive) to investigate the connection between brain-drain management and university development. It was selected because, using a single source of data to categorize qualities and build a statistical model to interpret the data collection that is measurable, objective, and statistically valid, it facilitates the discovery of social facts (Gay et al., 2009)

Population and Sampling Procedure

All academic staff from the universities in Nigeria made up the study's population. 400 lecturers from the universities in Nigeria are the study's target population. A sample of 400 academics was purposefully chosen by the researcher in order to increase the study's viability. To give all types of lecturers an equal probability of selection, the stratified random sampling technique was employed to choose lecturers from the sample universities (Mayer, 2014).

Instrumentation

The research tool for this study was a self-designed questionnaire called the "Brain-drain Management Questionnaire (BMQ)" and an adapted questionnaire called the "Development of University Questionnaire" (DUQ). The sub-constructs of quality of life (6 items), good condition of service (7 items), and provision of research facilities (7 items) make a total of 20 items used to measure brain-drain management. Abdullahi (2022) on quality teaching with (6 items), Stacey, et al. (2021) on student success and engagement with (6 items), and Abdullahi (2023) on quality research output with (5 items) comprises questionnaire items used to measure the development of universities. The four-point Likert scale was used by participants to express their opinions, with 1 denoting "Strongly Disagree" and 4 denoting "Strongly Agree." Any things that fall below the criterion mean value are shown to be disagreed by the criterion. According to Deilliman et al. (2014), responding on a 4-point Likert scale was quicker and simpler than responding on a 5- to 7-point scale.

Validity and Reliability

Copies of the instrument were shared with two professionals who specialized in test and measurement, along with two experts in educational management. Their input regarding the pertinence and practicality of the instrument was utilized to establish its validity. The survey was subsequently refined and modified based on the guidance and viewpoints provided by these professionals. Furthermore, 30 questionnaires were sent to a subset of participants to assess their comprehension of question instructions, wording, and rating scale, and to identify any challenges they encountered while responding. After this process, several suggestions that were given were incorporated before preparing the final survey copies. The reliability of the instrument was evaluated using Cronbach's alpha, as specified in Table 2.
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Table 1
Reliability Test of BMQ and DUQ

Variable	Sub-construct	N	Cronbach's Alpha	Decision
Brain-drain management	Quality of life	6	0.920	All items are suitable and reliable
	Good condition of service	7	0.906	All items are suitable and reliable
	Provision of research facilities	7	0.922	All items are suitable and reliable
Development of university	Quality teaching	5	0.888	All items suitable and reliable
	Student success and engagement	6	0.906	All items are suitable and reliable
	Research output	5	0.862	All items are suitable and reliable

To assess the consistency of items within the Likert scale questionnaire, Cronbach's alpha, a measure indicating internal reliability was utilized. Cronbach's alpha evaluates the internal consistency of items, with different ranges indicating their strength: $\alpha \geq 0.9$ (Excellent), $0.9 > \alpha \geq 0.8$ (Good), $0.8 > \alpha \geq 0.7$ (Acceptable), $0.7 > \alpha \geq 0.6$ (Questionable), $0.6 > \alpha \geq 0.5$ (Poor), and $\alpha < 0.5$ (Unacceptable). For evaluating the reliability of quality of life, good condition of service, and provision of research facilities reliability tests for BMQ survey. the corresponding Cronbach's alpha values are presented in Table 2. The sub-constructs Cronbach's alpha values for quality of life with (5 items), good condition of service with (6 items), and research output with (5 items). Also, for quality of life with a Cronbach's alpha of 0.922, good condition of service of 0.920, and research output with 0.904. Similarly, in the context of university development variables, Cronbach's alpha values for sub-constructs stand at 0.886 for teaching quality, 0.920 for student success and engagement, and 0.882 for research output. According to Bell et al. (2007), values exceeding 0.70 are deemed suitable and reliable.

Data Collection Procedure

Data was collected by distributing an electronic survey. The consent section of the survey was designed so that each participant had the choice to take part in the research or not. Those involved in the study willingly chose to participate, and they were always free to withdraw without facing any negative consequences. Additionally, a total of 462 fully answered surveys were gathered. This number represents the participants who were selected, with 400 questionnaires being utilized in the actual analysis. The survey did not include any participant identifiers, preventing any possibility of tracing or identifying individuals. This approach was adopted to ensure the safety and privacy of the participants, in line with the principles outlined by Dianantopoulos et al. (2014).

Data Analysis

To determine the study's objective, the data underwent examination employing the mean and standard deviation. Statistical techniques involving inferential analysis, including Pearson's product-moment correlation and multiple linear regression, were employed to evaluate the hypotheses and ascertain their acceptance or rejection at a significant threshold of (0.5), as outlined in Hesse-Biber and Leavy (2011).

Findings

Quality of life

RQ 1: Does the quality of life enhance the development of universities in Nigeria?

The mean and standard deviation responses of participants on quality of life are shown in Table 2

Table 2

Mean and Standard Deviation of Items on Quality of Life

S/N	Quality of Life	Mean	Standard Deviation
1	Enhances positive mental health and wellness of lecturers and students	2.94	0.986
2	Gives room for a sense of belonging and inclusivity.	2.82	0.964
3	Promotes tolerance and support services.	2.96	0.924
4	Creates opportunities for social and extracurricular activities.	2.86	0.962
5	allows for independence in choosing the institution's administrative leaders.	2.88	0.971
6	promotes administrative independence free from political and administrative interference from the government.	2.64	0.988
	overall mean	2.85	0.966

The overall perception of quality of life among the participants is indicated as "Agreed" (Mean = 2.85, Standard Deviation = 0.966), as shown in Table 2. This illustrates that the participants believed that quality of life contributes positively to the progress of universities in Nigeria. Moreover, each response yielded an average score higher than 2.50, the specified threshold. Furthermore, there is consensus among the participants that quality of life i) enhances positive mental health and wellness of lecturers and students (M = 2.94, SD = 0.986), ii) gives room for a sense of belonging and inclusivity (M = 2.82, SD = 0.964), iii) promotes tolerance and support services (M = 2.62, SD = 0.924), iv) creates opportunities for social and extracurricular activities (M = 2.86, SD = 0.962), v) enhances learning experience, promote personal growth and contribute to the holistic development of students (M = 2.88, SD = 0.971)., vi) enhances safe and secure campus environment for both staff and students (M = 2.64, SD = 0.988).

Good condition of service

RQ 2: Does good condition of service bring about development of universities in Nigeria?

Table 3 shows the participants responses on good condition of service

Table 3

Mean and Standard Deviation of Items on Good Condition of Service

S/N	Good Condition of Service	Mean	Standard Deviation
7	Plays a crucial role in attracting and retaining highly qualified and experienced workers.	2.88	0.966
8	Help universities to compete with other institutions and attract top talent.	2.64	0.968

9	Contributes to the overall learning environment and enhances the university's reputation.	2.86	0.988
10	Gives room for a supportive work culture and professional development opportunities.	3.20	0.956
11	Enhances lecturers' skills and knowledge and fosters growth and innovation.	2.84	0.958
12	Makes lecturers more committed and dedicated to their roles	3.26	0.985
13	Contributes to the development and success of universities	2.98	0.966
	Grand mean	2.95	0.969

Based on Table 3 (Mean = 2.95, Standard Deviation = 0.969), participants generally agree on the favorable state of service conditions. This signifies unanimous agreement among participants that effective development of universities hinges on favorable service conditions. Additionally, all responses garnered mean scores surpassing 2.50, the specified benchmark. This shows that participants believed good condition of service is i) Plays a crucial role in attracting and retaining highly qualified and experienced workers (M = 2.88, SD = 0.966), ii) Helps universities to compete with other institutions and attract top talent (M = 2.64, SD = 0.968), iii) Contributes to the overall learning environment and enhances the university's reputation (M = 2.86, SD = 0.988), iv) Gives room for supportive work culture and professional development opportunities (M = 3.20, SD = 0.956), v) Enhances lecturers' skills and knowledge that fosters growth and innovation (M = 2.84, SD = 0.958)., vi) Makes lecturers more committed and dedicated to their roles (M = 3.26, SD = 0.985), vii) Contributes to the development and success of universities (M = 2.98, SD = 0.966)..

Provision of research facilities

RQ 3: Does the provision of research facilities improve the development of universities in Nigeria?

Table 4 presents participants' responses on the provision of research facilities

Table 4

Mean and Standard Deviation of Items on Provision of Research Facilities

S/N	Provision of Research Facilities	Mean	Standard Deviation
14	Enables academics to conduct cutting-edge research and engage students in meaningful learning experiences.	2.84	0.952
15	Promotes innovation, advancement of knowledge, and academic excellence.	2.92	0.956
16	Helps universities to conduct groundbreaking research in various fields	2.90	0.966
17	Gives room for discoveries, advancement, and solutions to pressing issues	3.24	0.948
18	Helps students gain hands-on experience, develop critical thinking skills, and deepen their understanding of theoretical concepts.	2.86	0.986

19	Enhances the university's reputation and attracts funding opportunities.	3.28	0.968
20	Offers valuable learning experience for students and fosters collaboration	2.82	0.946
	Overall Mean	2.98	0.961

The overall perception of the participants regarding the provision of research amenities is labeled as "Agreed" (Mean = 2.98, Standard Deviation = 0.961), as indicated in Table 4. This signifies that the participants unanimously concurred that the presence of research facilities contributes to the advancement of Nigerian universities. Moreover, all responses obtained an average score exceeding 2.50, the specified threshold. This underscores the participants' belief in the positive impact of research facility provision. i) Enables academics to conduct cutting-edge research and engage students in meaningful learning experience (M = 2.84, SD = 0.952), ii) Promotes innovation, advancement of knowledge and academic excellence (M = 2.92, SD = 0.956), iii) Helps universities to conduct groundbreaking research in various fields (M = 2.90, SD = 0.966), iv) Gives room for discoveries, advancement and solutions to pressing issues (M = 3.24, SD = 0.948), v) Helps students gain hands-on experience, develop critical thinking skills and deepen their understanding of theoretical concepts (M = 2.86, SD = 0.986), vi) Enhances university's reputation and attract funding opportunities (M = 2.28, SD = 0.968), vii) Offers valuable learning experience for students and foster collaboration (M = 2.82, SD = 0.966).

Hypotheses

The following hypotheses were developed and tested:

1) There is no significant relationship between quality of life and the development of universities in Nigeria.
2) There is no significant relationship between the good condition of service and the development of universities in Nigeria.
3) There is no significant relationship between the provision of research facilities and the development of universities in Nigeria.
4) There is no significant relationship between brain-drain management and development of universities in Nigeria.

H_01: There is no significant relationship between quality of life and the development of universities in Nigeria.

Table 5

Pearson Correlation of Quality of Life and Development of universities

		Quality of life	Development of universities
Quality of life	Pearson correlation	1	.880**
	Sig. (2-tailed)		.000
	N	400	400
Development of Universities	Pearson Correlation	.880**	1
	Sig. (2-tailed)	.000	
	N	400	400

Based on the Pearson correlation (displayed in Table 5), a robust and positive connection exists between quality of life and the development of universities (correlation coefficient r = 0.880, sample size n = 400, p-value = .000). As emphasized by Choy (2014) and Neuman (2013), the exceptionally significant p-value of 0.01 underscores a substantial degree of linkage and endorsement. This outcome instills a high level of confidence in the observed association.

$H_0$2: There is no significant relationship between the good condition of service and the development of universities in Nigeria. s

Table 6

Pearson Correlation of Good Condition of Service and Development of Universities

		Good condition of service	Development of Universities
Good condition of service	Pearson Correlation	1	.920
	Sig. (2-tailed)		.000
	N	400	400
Development of Universities	Pearson Correlation	.920	1
	Sig. (2-tailed)	.000	
	N	400	400

A significant positive relationship between the good condition of service and the development of universities is evident, as indicated by the Pearson correlation (refer to Table 6) (correlation coefficient r = 0.920, sample size n = 400, p-value = .000). As supported by the highly noteworthy p-value of 0.01, there exists a strong connection and substantial evidence pointing to the interconnection between good conditions of service and the progress of universities (Mugenda & Mugenda, 2013; Creswell, 2015; Miller et al., 2011).

$H_0$3: There is no significant relationship between the provision of research facilities and the development of universities in Nigeria

Table 7

Pearson Correlation of Provision of Research Facilities and Development of Universities

		Provision of research facilities	Development of universities
Provision of research facilities	Pearson Correlation	1	.912**
	Sig. (2-tailed.		.000
	N	400	400
Development of Universities	Pearson Correlation	912.**	1
	Sig. (2-tailed)	.000	
	N	400	400

The presence of a robust and positive connection between the Provision of research facilities and university development is evidenced by the Pearson correlation as shown in Table 7, (correlation coefficient r = 0.912, sample size n = 400, p-value = .000). The remarkably significant

p-value of 0.01 further signifies a substantial level of connection and endorsement, thereby indicating a high degree of confidence in the observed association (Yilma, 2013; Patton, 2002; Creswell & Creswell, 2017).

Linear Regression Analysis

Objective 4: **Examine the relationship between quality of life, good condition of service, provision of research facilities, and development of universities in Nigeria**

This section displays the results of a linear regression study on the brain-drain management and development of universities in Nigeria.

Table 8

Linear Regression of Brain-drain Management and Development of Universities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837	0.701	.713	.391

a. Predictors: (constants), quality of life, good condition of service, and provision of research facilities.

Table 8 reveals that brain-drain management has a positive impact on the effective development of universities with 0.701 of R square value.

Table 9

Linear Regression Coefficient for Brain-drain Management and Development of Universities

Model		Unstandardized coefficient B	Std. Error	Standardized coefficient Beta	T	Sig.
	(Constant)	.4.24	.106		4.123	.000
	Quality of life	0.298	.038	.0325	5.624	.000
	Good condition of service	0.325	.036	.0343	2.652	.000
	Provision of research facilities	0.312	.046	.323	2.663	.000

a. Dependent Variable: Development of Universities

An investigation into the effectiveness of university development was conducted through linear regression analysis to ascertain the potential significance of predicting quality of life, favorable employment conditions, and provision of research facilities. As per the interpretation of the outcomes from the linear regression model presented in Table 9, the beta coefficients associated with brain-drain management exhibited a standardized regression weight of 0.424, thereby indicating that effective brain-drain management fosters the development of universities. This underscores the evident correlation between the development of universities and the brain-drain management. The associated p-value of 0.000, along with a satisfactory T-test result of 4.123, lends support to this notion. In this relational context, the most influential factor is the good condition of service (Beta = 0.325), followed by the provision of research facilities (Beta = 0.312), and quality of life (Beta = 0.298). In summation, the results derived from this study employing multiple linear regression revealed a positive relationship between quality of life, good condition of service, and the provision of research facilities in driving effective university development in Nigeria.

Discussion

The findings in Table 2 show that quality of life improves the effective development of universities in Nigeria, consequently enhancing positive mental health and wellness of lecturers and students, giving room for a sense of belonging and inclusivity, promoting tolerance and support services, creating opportunities for social and extracurricular activities, enhances the learning experience, promote personal growth and contribute to the holistic development of students as well as enhances safe and secure campus environment for both staff and students. Results from hypothesis one reveal that there is a positive and close relationship between quality of life and the development of universities. The finding taking cues from Ayse and Baris (2019) that the quality of life of workers is essential for the development of universities. The finding concurred with Cengel (2017) that to make a university an appropriate place to live or work in, quality of life must be paramount. The finding agreed with Abdullahi and Abdulkareem (2023) that quality of life is a subjective measure that considers both tangible and intangible factors that contribute to one's overall happiness and contentment. Important components of quality of life may include physical and mental health, social connections and relationships, work-life balance, access to basic needs like food and shelter, educational opportunities, recreational activities, and a safe and supportive environment

The findings Table 3 shows that good conditions of service bring about effective development of universities in Nigeria. As a result, it plays a crucial role in attracting and retaining highly qualified and experienced workers, helps universities to compete with other institutions and attract top talent, contributes to the overall learning environment and enhances the university's reputation, gives room for a supportive work culture and professional development opportunities, enhances lecturers' skills and knowledge that fosters growth and innovation, makes lecturers more committed and dedicated to their roles as well as contributes to the development and success of universities. The result from hypothesis two reveals that there is a significant and positive relationship between good conditions of service and the development of universities in Nigeria. The finding lends credence to Owata and Sibiri (2022) that the condition of service has become a significant tool for the nation's development, progress, and upliftment. The finding is in line with Kabari (2021) and Abiodun (2018) that good conditions of service such as leave bonuses, training allowance, positive work environment all have a significant impact on employee attitude which will in turn enhance organizational development.

The findings in Table 4 reveal that the provision of research facilities enhances the development of universities in Nigeria. consequently, enables academics to conduct cutting-edge research and engage students in meaningful learning experiences, promotes innovation, advancement of knowledge and academic excellence, helps universities to conduct groundbreaking research in various fields, gives room for discoveries, advancement, and solutions to pressing issues, helps students gain hands-on experience, develop critical thinking skills and deepen their understanding of theoretical concepts, enhances university's reputation and attract funding opportunities as well as offers a valuable learning experience for students and foster collaboration. Results from hypothesis three show that there is a significant and positive relationship between the provision of research facilities and the development of universities in Nigeria. The finding concurred with Ogunade and Agwor (2021) that the provision of research facilities enables lecturers to deliver lessons effectively.

Regression analysis reveals that there is a positive and robust relationship between brain-drain management and the development of universities in Nigeria. The finding concurred with (Akporehe and Osiobe 2022; Abdulkareem et al, 2021; Baridam & Baridam, 2020) that the

management of brain-drain requires a multi-faceted approach, including creating supportive and collaborative academic environments, offering competitive incentives and opportunities for growth, and fostering an ecosystem that encourages skilled individuals to contribute to the development of universities and their home countries.

Furthermore, the results supported Maslow's hierarchy of needs (1943), assertion that brain-drain management provides a framework for understanding human motivation and the driving forces behind individual behavior. According to Maslow, individuals have hierarchical needs that must be fulfilled in a specific order for personal growth and self-actualization. Also, to address the brain drain and promote university development, it is crucial to address the underlying needs identified by Maslow's theory. This includes providing competitive salaries, ensuring job security, offering opportunities for career advancement and recognition, fostering a supportive and inclusive work environment, and promoting a sense of belonging and meaningful connections within the institution. By satisfying these needs, universities can create an environment that not only attracts and retains talented individuals but also fosters their personal and professional growth. This, in turn, enhances the institution's academic reputation, research output, and overall development.

Limitation and Consequence of The Study

Although this research elucidated the impact of brain-drain management on the advancement and effectiveness of universities, it also unveiled certain research limitations that necessitate attention in subsequent inquiries. Supplementary criteria beyond those examined in this study can be employed to assess brain-drain management. Similarly, there is potential to conduct similar investigations at different higher education establishments beyond universities. These findings can aid governmental bodies and educational authorities in demonstrating their commitment to university development while addressing the challenge of brain-drain within the nation. Furthermore, this revelation can serve as a foundational step for forthcoming educational studies.

Conclusion

Derived from the outcomes, the present research has formulated the connection between quality of life, good condition of service, and provision of research facilities as key factors with the potential to encourage the prosperous advancement of universities. Throughout the analysis of the findings, all objectives and questions of the study were affirmed. Brain-drain can have significant implications for the development of university education in the 21st century. Addressing this issue requires a multi-faceted approach, including the provision of better research opportunities, attractive working conditions, and collaboration with international institutions. By doing so, we can maximize the potential of universities and ensure the growth and development of education in the 21st century.

Recommendations

Government should provide good quality of life for academics and other employees by providing supportive work culture and professional development opportunities in order to enhances positive mental health and wellness of lecturers and students, gives room for a sense of belonging and inclusivity, promotes tolerance and support services, creates opportunities for social and extracurricular activities, enhances learning experience, promote personal growth and contribute to the holistic development of students as well as enhances safe and secure campus

environment for both staff and students. Also, the government is advised to take resolute measures and foster an effective good condition of service that encourages professionals to remain and contribute to the nation's growth, helps universities to compete with other institutions and attract top talent, contributes to the overall learning environment and enhances the university's reputation, gives room for supportive work culture and professional development opportunities, enhances lecturers' skills and knowledge that fosters growth and innovation, makes lecturers more committed and dedicated to their roles as well as contributes to the development and success of universities. Additionally, the government should provide adequate and appropriate research facilities to academics to enable academics to conduct cutting-edge research and engage students in meaningful learning experiences, promote innovation, advancement knowledge, and academic excellence, help universities to conduct groundbreaking research in various fields, give room for discoveries, advancement and solutions to pressing issues, helps students gain hands-on experience, develop critical thinking skills and deepen their understanding of theoretical concepts, enhances university's reputation and attract funding opportunities as well as offers valuable learning experience for students and foster collaboration.

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