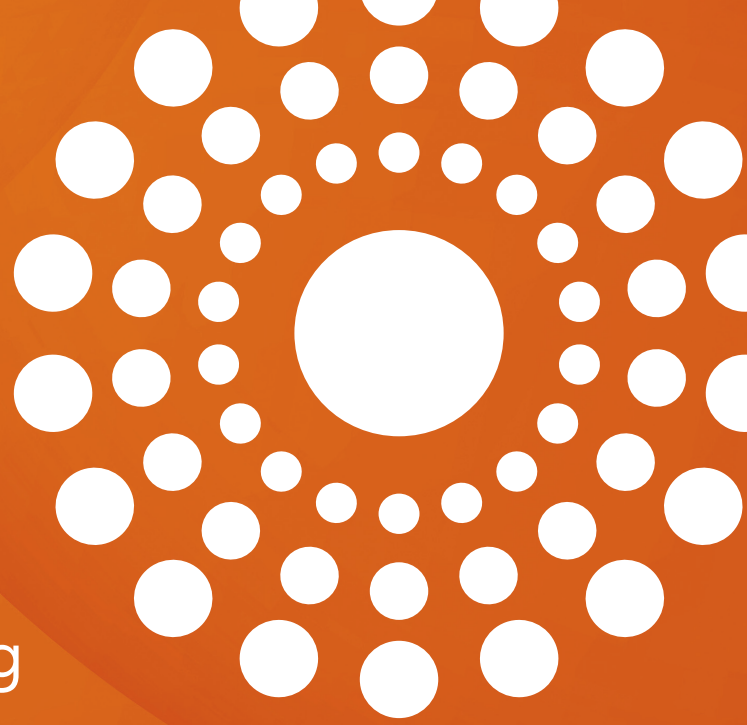


Carnegie African
Diaspora Fellowship
Program Alumni Convening

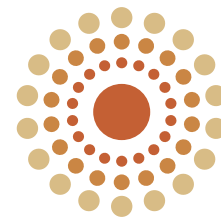


A Vision for the Future

Building and Enhancing Research,
Teaching and Service Capacity of
Host Universities: What Works?



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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Building Sustainable Partnerships Between Historically Black Colleges and Universities (HBCUs) and African Universities (AUs): The Case of Virginia State University and University of Lagos

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ABSTRACT

The Carnegie African Diaspora Fellowship Program (CADFP) has provided enormous growth opportunities for select African universities (AUs) by midwifing a two-way partnership between them and American and Canadian universities, in the last several years. By all accounts, the CADFP has been adjudged as being fairly successful. The laid out qualifying criteria for participating in the program are, in part, that a fellow from a sending university should have been born in Africa and must hold a faculty position in their home university. As to be expected, faculty from Historically Black Colleges and Universities (HBCUs) were engaged in the program, whereby they contributed their quota to the development of AUs. This paper proposes a model that draws essentially from the CADFP experience by prescribing a one-to-one matching between HBCUs and AUs, to be sponsored by the Institute for International Education (IIE) or its designee. It is our considered opinion that the “Carnegie” in the original appellation should be superseded by “H,” with the resultant name of HADFP. Given that people of the African diaspora at HBCUs have always shown interest in AUs’ affairs, it is reasonable to assert that the proposed engagement between HBCUs and AUs is long overdue. The potential dividends to be derived by AUs will be timely and fill real needs that several AUs are grappling with.

Introduction

The leadership role HBCUs have played and continue to play in the overall growth and development of the education of African-Americans and other American minorities has never been in question. What is not clear is whether these historically Black institutions can also serve as necessary incubators and as agents of change for a sustainable and firm foundation for academic partnerships with African universities (AUs). Through a time-honored CADFP grant, a fellow from Virginia State University (VSU) won a traveling grant to visit University of Lagos (UNILAG) thrice; much has been achieved that could serve as a model for developing future sustainable academic partnerships across the Atlantic.

This paper examines and proposes how AUs through the sponsorship of IIE can draw on the gains of the VSU and UNILAG collaboration to primarily impact their research, teaching, co-curriculum development and tackle other teething problems facing their institutions. Moreover, other areas of campus life that hitherto have been neglected can be looked into and given the serious attention they deserve. It is envisaged that IIE fellows from HBCUs can create a coaching community focused on sharing lessons learned, best practices, techniques, and resources with their African counterparts, and ultimately, assist in establishing bold, transformative partnerships with AUs.

This paper addresses the challenges and problems facing AUs in today’s higher education space, exacerbated by the COVID-19 pandemic. It is envisaged that CADFP would be

replicated in part, in shape and form, to form a new entity to be known as HADFP. Some evidence-based solutions to the identified problems are explored. The strategic importance of long-range planning to be implemented and the thorough reengineering of AUs cannot be overemphasized.

Current Higher Education Issues in Africa

Higher education in Africa at this time is faced with a slew of problems that have sufficiently been discussed in the literature (Igwe et al., 2021; Singh, 2010; Maringe & Ojo, 2017; Katundu, 2020; Samoff & Carrol, 2004; Aina, 2010). As with many other human endeavors, the current educational enterprise—particularly in the majority world—is contending with modern-day realities at this time. These issues that have prompted a rethinking of how the educational enterprise should be reorganized and managed in the developing communities of the world, particularly in Africa, include but are not limited to:

- Limited human and financial resources
- Lack of necessary physical infrastructure
- Lack of robust IT infrastructure
- Lack of adequate access to academic programs by regular and non-traditional students
- Inadequate access to information, library resources
- Shifting student demographics
- Explosive growth and advances in information and communication technologies

Also of relevance is the observation made by Nakazwe-Masiya et al. (2021), who interviewed 15 African biomedical scientists from around the world. The research delved into pertinent questions such as: (a) What is preventing African biomedical scientists based abroad from increasing their involvement with African research institutes and local African scientific talent? (b) What are the potential solutions to overcoming these barriers? (c) What roles can the UK Medical Research Council (MRC) and other funders play in removing these barriers? It is not hard to suppose that these questions could be extrapolated to almost every academic discipline in Africa. Connecting HBCUs and relevant think-tanks could provide ready answers to these thorny questions. The overarching question that readily comes to mind is this: If HBCUs cannot come to the rescue of their sister universities in Africa, then who will?

Level of Participation of HBCUs in CADFP

There exist roughly 100 HBCUs in the continental United States, representing 3% of the 3,500 higher education institutions in the country. About two dozen of this number have participated in CADFP since its inception in 2015. It is difficult to estimate exactly how many CADFP fellows from HBCUs have actually participated. The subject expertise of these fellows is rich, wide, and divergent, including the Humanities, Pure and Applied Sciences, Human and Natural Sciences, and Business. The academic offerings of HBCUs fellows follow similar patterns.

Anecdotal evidence suggests that HBCUs have contributed in no small way to the vision and purpose that informed the establishment of CADFP. It is therefore intuitively obvious that HBCUs have added and can continue to add value to the development of AUs; hence, this proposal to substitute CADFP with HACFP. For African-born HBCU professors to offer assistance to AUs is an idea whose time has come. Drawing a parallel to the Jewish diaspora academics is apt here, as they have assisted and continue to support Israel in a variety of ways, including providing knowledge expertise and more at various tertiary institutions.

VSU/University of Lagos Partnership Experience: A Model

The evolution of international engagement at VSU started serendipitously when a Fulbright scholar named Professor Abdurafioye Omotosho of the University of Ilorin (UNILORIN) visited VSU in the 2005-06 academic year. It was a successful visit that laid a solid foundation for the VSU/UNILORIN future academic partnership. That relationship endured and led to the signing of our respective MoUs in 2010 and 2012. Many more MoUs were subsequently signed, including VSU and University of Lagos (UNILAG) MoUs. This marked the beginning of a formal academic relationship between VSU and UNILAG in 2012. I became

the first VSU faculty member to visit UNILAG (my alma mater), under the auspices of CADFP.

Like myself, there exist other African-born professors at HBCUs who have shown similar interest in their alma maters in Africa. The Provost at VSU and the Office of International Education were on top of the application process. Not only did they support the idea with vigor, but they did everything possible to bring the process to fruition, as well. Similarly, the leadership at UNILAG has been very encouraging of my travel fellowships. In short, management support turns out to be a major factor in promoting VSU/UNILAG ongoing academic collaboration.

The monetary endowment by Dr. George H. Bennet to establish the Office of International Education at VSU in 2005 helped to lay a good and sustainable foundation for all the great things that occurred at the university. Since alliances are the backbone of academic partnerships, it became fairly easy for VSU to enter into partnerships with a lot of institutions of higher learning abroad. It must be pointed out that at the last count, VSU had signed more than 100 MoUs with international universities and colleges. Moreover, the American Council on Education's (ACE) "Creating Global Citizens: Exploring Internationalization at HBCUs" project grant in 2011 was helpful. It helped to advance internationalization on our campus. Not only did the grant make it possible for us to audit our campus international activities, but we also used data gathered to develop strategic comprehensive internationalization plans. Ultimately, our students benefitted tremendously by being exposed not only to the need to embrace an international perspective, but also to become internationally astute. All in all, forming friendships and elements of social interaction have been critical to the successful implementation of our internationalization efforts.

A Fellow's Experience at the University of Lagos

I am a three-time participant, starting in 2017, then 2018 and most recently, in 2021. Three of my colleagues from VSU have also been selected as CADFP fellows in the recent past. For me personally, forming friendships and networking prior to the application process made a world of difference to the successful outcomes of our joint application to CADFP. As I had kept in constant touch with my graduate school classmate at the university, Professor C.O. Uwadia, he knew my work and research, and I knew his. Moreover, we kept the progress of the department close to our hearts. It was therefore, an easy match for us to collaborate on cybersecurity projects ab initio! Visiting UNILAG for me has been a very fruitful endeavor. The last three CADFP site-visits at the Department of Computer Sciences, in the summers of 2017, 2018, and 2021 were, overall, resounding successes, impactful, and truly transformative, as adjudged by the

host institution, my home institution, and myself. Anecdotal comments by the Computer Science faculty and students support this conclusion. For example, the chair of the department remarked, “There is no way we could have been able to accomplish this so quickly, but for your assistance and leadership on cybersecurity.”

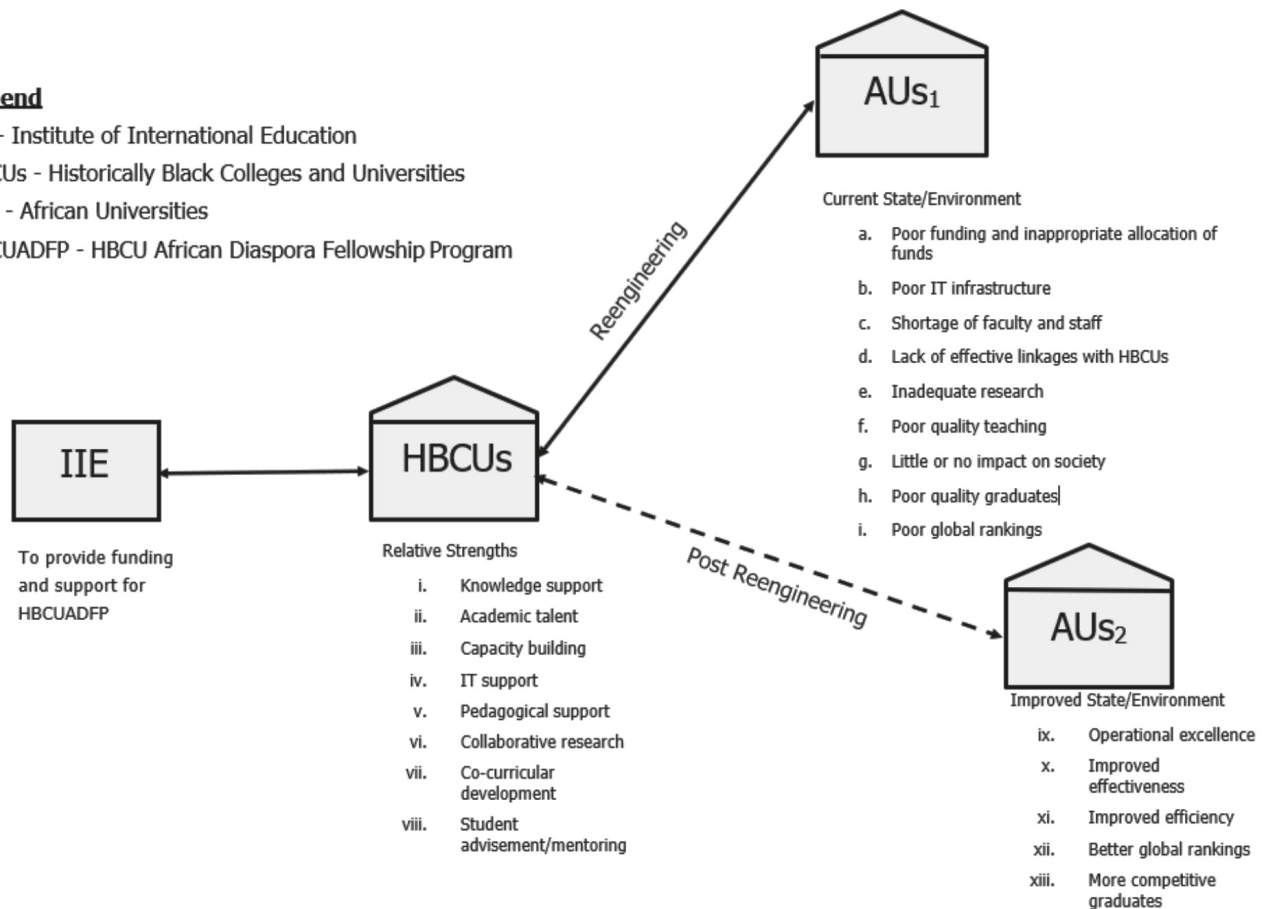
Much was achieved aside from the prescribed co-curricular development, graduate students’ teaching, training and mentoring, as well as collaborative research. More specifically, this fellow was able to publish two journal articles that were co-authored with faculty at the site university, submit a comprehensive report on the establishment of a Master’s degree in Cybersecurity, and assist in graduating the first PhD in Cybersecurity. Through my personal experience and supported by published research, the institutionalization of information/cybersecurity education, governance and practices can only become a reality through social integration of routines and systemic integration of relevant technologies (Nasution, 2012). Our understanding is that factors such as habitualized security routines, information stewardship, and institutional

relationship in the information-security context guided our approach to introducing the subject matter at UNILAG.

Different strategies have been advanced to ameliorate these thorny problems, as enumerated in the literature (Igwe, 2021), including a call to internationalization that encourages the strengthening of local capacity and the discouragement of long-standing asymmetries of power in international partnerships. Some authors have rightly pointed out that there is a deep-seated cultural imperative at the heart of the internationalization agenda. The debate on reengineering African higher education is gaining momentum among observers of the declining state of AUs in the first quarter of the 21st century (Maringe & Ojo, 2017). Reengineering is defined as “the rethinking and “redoing” of processes of an organization to simplify organizational complexity, that is, to optimally deploy resources including information infrastructure to reduce many steps, documents, and redundant personnel that clutter up many aspects of organizational and institutional life.” All things considered, reengineering appears to be the

FIGURE 1

Schematic showing the dynamics between IIE, HBCUs, and AUs in the proposed HBCUADFP



most appropriate and suitable strategy for the resolution of present-day challenges facing several AUs.

It must be pointed out that while reengineering was developed in the business arena, it has since migrated to other spaces of human endeavor. There is no reason for it not to be applicable in the case of AUs. Therefore, its application to the AUs' transformation agenda is expected to be a game-changer. The proposal to involve HBCUs in the rescue of AUs seems to satisfy all the criteria laid out as panacea to the prevailing malaise. This paper will therefore, emphasize this approach.

The need for International Linkages in AUs and Higher Education

IIE over the last several years (circa 2015) birthed a vision and embarked on a rescue mission of AUs. The CADFP was charged with the responsibility to help AUs avail of African-born faculty from American and Canadian universities, to serve as frontline stakeholders in the resolution of identified problems. Unlike CADFP, we are proposing a much scaled-back program to be made exclusively available to African-born HBCU faculty.

The emergence of much-improved AUs of the future, as depicted in Figure 1 below, is the goal. A timely intervention by HBCUs in the affairs of AUs can herald significant outcomes reflective of truly transformed 21st century institutions of higher education.

To continue to partner with AUs given the prevalent challenges is not incontrovertible. However, a new day is dawning on the subject. As stated by Teferra (2021), "a new discourse and approach to mobilize intellectual diaspora communities to enhance the continent's social, economic, and intellectual progress without relocating them physically is gathering momentum."

Teferra goes further, making the point "that the need to mobilize this potentially powerful force goes beyond the oft-cited economic benefits as it plays a considerable role in stimulating and catalyzing home-based academic and scholarly institutions."

The main thrust of this paper is a call for HBCU/AU engagement through IIE sponsorship. The rationale is fairly simple and straightforward. According to the simple laws of human social interaction, humans tend to gravitate toward and are more likely to interact with their own kind. One would, therefore, expect African-born fellows from HBCUs to want to readily go back to their roots, and more so, to their alma maters, for this time-honored assignment. Commitment to countries where the fellows originated should rise to the top over other considerations. The dividends of such an arrangement and engagement for both parties can only be imagined, and then experienced. We share a common future, and we have a common responsibility to work together to achieve our goals. We are confident that with HBCUs and

AUs working together in a collegial spirit and a shared vision, we will ensure the success of our common efforts. Ultimately, HBCUs individually and collectively can through this endeavor become true champions of change.

COVID-19 and its Impact on AUs: The "New Normal"

Dictionary.com defines a "new normal" as a "current situation, social custom, etc. that is different from what has been experienced or done before but is expected to become usual or typical." Thesaurus.com gives the synonyms for a "new normal" as: "strange routine," "unusual standard," and "an unfamiliar order." In the context of this paper, the new normal comes with enormous challenges and requires a paradigm shift for all stakeholders in the education system. This cannot be truer for AUs. It must be pointed out however, that the post-COVID-19 pandemic era has offered new and unique opportunities for universities to attain the expected status of a "global communities of scholars," with faculty and students drawn from various parts of the world.

Improvements in virtual interaction occasioned by the lock-down and travel restrictions of COVID-19 have created opportunities for global linkages that can strengthen research collaborations, improve teaching, and attract sponsorships and major grants. Now that "geography is history," it is possible for faculty to teach and make other contributions from any part of the world. Universities, particularly those in Africa, must therefore review and strengthen their strategies for attracting foreign faculty, students, and renowned researchers from HBCUs. It is incontrovertible that faculty from HBCUs, particularly those of African ancestry, have the will and capacity to positively impact AUs. Many African-born academics at HBCUs have individually and collectively expressed their willingness to give back to their alma maters.

It is therefore not surprising that the remark below was made during the just-concluded UNDP Africa and CPG-OHBCUD side event at the 76th session of the United Nations General Assembly:

"... a significant proportion of Africa's diaspora is hosted in over 200 Historically Black Colleges and Universities (HBCUs) and Predominantly Black Institutions (PBIs) of higher education in the United States, alone. Scholarly research in the HBCUs and PBIs has contributed to creative approaches to address the massive pandemic-related financing gap. This landmark and international collaboration will provide a platform to consider a wide range of innovative ideas from national leaders, noted scholars, leading entrepreneurs and civil society representatives, thereby creating unparalleled synergies for the achievement of the 3 SDGs, particularly advancing innovative financing mechanism solutions for all persons of African descent."

Conclusion

This paper uniquely identifies HBCUs as potential catalysts in the effort to literally give AUs a new lease on life. The proposed program would also be invaluable to HBCUs. AUs that wish to be active participants can easily enroll, to their own advantage. The charge to faculty and students alike at AUs is challenging them—in spite of seemingly unsurmountable obstacles—to pursue their professional paths, continue to develop their talents, and strengthen their programs within a dynamic and ever-changing global academic world. In order to realize the best elements of the vision described above, we must make careful decision about our partnerships, as we press for a steady evolution toward the future. Again, HBCUs now have a singular opportunity—indeed, a responsibility—to come to the rescue, lifting AUs from their current deplorable academic hiatus.

For me, personally, to be a part of this initiative would not only be fulfilling but will allow me to work alongside people who are engaged in a life's work devoted to scholarship, creativity, the love of learning and praxis. Moreover, putting such a program in place will be a part of assisting in solving the problems of today as well as of tomorrow. The bold and transformative impact that HBCUs could have by properly intervening in the affairs of AUs will definitely rewrite the history of AUs, and indeed, of education in the African continent. My CADFP experience goes a long way toward substantiating the saying that one's destination in life is never a place, but a new way of seeing things!

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Reflections on Carnegie African Diaspora Fellowship Program (CADFP) Sponsorship to Enhance Geospatial Technologies for Social Science Research in Africa

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Introduction

Application of geospatial technologies to social, human, and associated science programs in African universities is hampered by unavailability of academic professionals experienced in the field of geographic information science, or what is commonly referred to as geo-informatics. The use of cutting-edge and state-of-the-art technologies to teach and conduct research in issues pertaining to human-environment interaction are lacking in most African universities. Lately, research in the social and human sciences is being strengthened by using geographic information systems (GIS), remote sensing of the environment, and associated technologies (Asami & Longley, 2012; Janell & Goodchild, 2011; National Research Council, 2008). The availability of geospatial data, enhanced visualization tools, and advanced spatiotemporal methods has led to the promotion of innumerable applications in human and social science research (Janell & Goodchild, 2011; Cromley & McLafferty, 2011; Longley et al., 2011). Undoubtedly, geospatial technologies provide a unique and powerful lens through which to understand human, social, and environmental relationships. Institutions of higher education that deliver geospatial technology and related courses are often ill-equipped in terms of curricula and faculty to deal with the swift change in GIS science, technologies, and analysis techniques (Prager, 2012; DiBiase et al., 2006).

Despite unpreparedness in faculty and staff, courses involving the analysis of spatial information continue to grow in number and diversity at universities (Wikle & Fagin, 2014), and African universities are no exception. Researchers have expressed the need for capacity building in GIS, remote sensing of the environment, global positioning, and surveying techniques (i.e., geospatial technologies) in Africa (Taylor, 2004). Notwithstanding the fact that GIS and related analyses may not be a panacea, the integrative nature of GIS's links with spatial, temporal, and spatiotemporal analyses offer important means of better understanding the most pressing problems of our generation. GIS, remote sensing, and spatiotemporal analyses provide valuable tools for researchers and policy makers (Matthews et al., 2009). Research indicates that spatiotemporal perspective can be an incubator for interdisciplinary research (Goodchild & Janelle, 2004; Adu-Prah et al., 2019). The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) promotes the development and use of global geographic information to address key global challenges (United Nations Committee of Experts on Global Geospatial Information Management, 2015). African universities' capacities to use geospatial technologies at a higher-level need improvement. According to Okafor (2011), there are positive reports about geospatial technologies education in several African universities. Research conducted by Coetzee

and Eksteen (2012) indicates that geospatial technology education at tertiary institutions in Africa is cloudy; they suggested capacity building to meet its application in current and future challenges.

The Carnegie African Diaspora Fellowship Program (CADFP) is designed to increase Africa's skilled labor, build capacity at the host institutions, and develop long-term, mutually beneficial collaborations between universities in Africa and the United States and Canada. The program is funded by Carnegie Corporation of New York and managed by the Institute of International Education in collaboration with United States International University-Africa in Nairobi, Kenya, which coordinates the activities of the program's Advisory Council. With its many natural resources, quickly increasing population, and accelerating economic development (Williams, 2008; Davies, 2010), Africa needs academics in the diaspora to strengthen and bridge the knowledge gap between universities in the diaspora and African universities. Geospatial technology programs continue to expand both in teaching and research in African universities. The challenge for faculty is to maintain currency and significance of the curricula to meet the changing needs and demands of the industries and governments in respective countries. Research in African universities using GIS, remote sensing, and related spatial technologies continues to be hampered due to lack of capacity.

At the core of the CADFP-sponsored project between Texas fellow Sam Houston State University and host university Kwame Nkrumah University of Science & Technology (KNUST), Ghana are training, curriculum development, and enhancement in geospatial technologies to support social science teaching and research. The project used curriculum design and improvement techniques along with summer workshop offerings to achieve the project objectives. The project to date has created avenues for master's and doctoral students' supervision, a signed memorandum of understanding (MOU), a new geospatial computer laboratory, a shared database for faculty and students, an online geospatial technology workshop, and publication opportunities through the *International Journal for Applied Geospatial Research*, *African Geographical Review*, and related journals. The shared experiences and challenges in meeting the project objectives and outcomes included: (1) fitting programs into already busy academic schedules of the host university, (2) incentives for host faculty to participate in programs, and (3) lack of state-of-the-art geospatial technology computer labs to support teaching and research. Most African universities face these challenges, but the methodology and lessons learned from this project can serve as a model for African universities pursuing programs in geospatial technologies to support social science teaching and research.

Project Initiative and Objective

The project initiative emanated from the need to fill the gaps and strengthen faculty and staff in research, teaching, and student supervision at the host university, KNUST. It was envisioned that the project initiative would provide a conduit for a long-term partnership between the diaspora university, the Department of Environmental and Geosciences at Sam Houston State University in the United States, and the Department of Geography and Rural Development at the host university, KNUST in Ghana. To address the knowledge gap in faculty and the capability to teach and supervise the increasing number of students at master's and doctoral levels in the field of geospatial technologies at KNUST in Ghana, the project sought to address the following integrated objectives: (1) enhance the geospatial technology curriculum in the Department of Geography and Rural Development at the host university; (2) organize and teach a six-week summer course for graduate students and faculty in geospatial applications for social science research; (3) identify potential faculty to collaborate on applied geospatial technologies research.

Methods and Approach

The Department of Geography and Rural Development at KNUST offers Bachelor of Arts programs in Geography and Rural Development, and Culture and Tourism. At the postgraduate level, the department offers Master of Philosophy and PhD degrees in Geography and Rural Development. GIS and remote sensing courses are offered to support the degree courses. At the core of this project is training and enhancing curriculum in geospatial technologies to support social science research in the host university. The project used curriculum design and improvement techniques and summer classes to achieve the objectives. A virtual meeting with faculty responsible for teaching related courses was held to discuss possible improvement and enhancement in the curriculum. The instructional approach was used to provide a four- to six-week course at KNUST. Lectures, hands-on computer laboratory exercises, and group projects were used for the summer training workshop. Faculty with research foci related to the application of geospatial technologies were identified through face-to-face discussion and dialogue.



FIGURE 1

CADFP Fellow Dr. Samuel Adu-Prah (third from left) meets with the current vice chancellor of the Kwame Nkrumah University of Science and Technology, Professor Rita Akosua Dickson (right).

The areas identified for potential application included rural community development and sustainability, urban studies, social vulnerability and hazards, land use and land cover change, climate change, public health, and tourism.

Project Outcomes

Figure 1 shows a meeting of CADFP Fellow Dr. Samuel Adu-Prah with the vice chancellor of the host university, KNUST, Professor Rita Akosua Dickson. During the meeting, the vice chancellor was briefed about the CADFP initiative in enhancing higher education, specifically at KNUST. Professor Dickson was excited to learn about the ways Africans in the diaspora are contributing to the growth of African universities. She promised to assist in all capacities to see to the long-term success of the collaboration.

Figure 2a shows the host collaborator and the CADFP Fellow in front of the KNUST Department of Geography and Rural Development, Faculty of Social Sciences, College of Humanities and Social Studies building. Figure 2b is a picture of the resource persons for the training workshop with the identified key geospacial technology faculty, Dr. Gift Dumedah. A series of intensive, four- to six-week training workshops in geospacial technologies was organized for faculty and graduate students (PhD and master's) during the project periods. As part of the project outcome, a thorough review of the GIS and remote sensing courses offered at KNUST was conducted with the faculty responsible for teaching the courses. It was also agreed that all geospacial technology-related courses will have accompanied computer lab exercises to provide students the needed skills for research and the job market.

Figure 3 shows one of the presentations during the workshop. The participants came from diverse disciplines, including geography, tourism, history, architecture and planning, information technology, and electrical engineering. To support the teaching of the courses, I agreed to provide the requisite hands-on materials currently used in teaching similar courses in the diaspora institution. Recently published textbooks on geospacial technologies were provided to KNUST. Topics covered in the training workshop included: Introduction to ArcGIS Software; GIS: A Unique Way of Understanding, Visualizing, and Exploring Our World; GIS Data Collection and Model; GIS Workflow and Major GIS Operations; Creating and Maintaining Geographic Databases; Cartography and Map Production; and the Remote Sensing Process. In addition to the lecture materials, each topic covered had associated hands-on exercises. A fully functional, one-year student version of Environmental Systems Research Institute (ESRI) ArcGIS 10.x software was given to all workshop participants. This was made possible through the collaboration of ESRI in California and Sam Houston State University in Texas. Workshop participants also were awarded certificates for completing the training (Figure 4).



FIGURE 2a

Host collaborator Dr. Divine Odame Appiah of KNUST and CADFP Fellow Dr. Samuel Adu-Prah of Sam Houston State University in Texas stand in front of the Department of Geography and Rural Development at KNUST.



FIGURE 2b

Summer workshop resource persons, including the key GIS remote sensing faculty, Dr. Gift Dumedah (second from left).



FIGURE 3

Dr. Samuel Adu-Prah (standing) leads one of the training workshops.



FIGURE 4

Summer workshop participants hold their geospatial technology certificates after completing a six-week workshop.



FIGURE 5

CADFP Fellow Dr. Samuel Adu-Prah (left) gives a closing remark to workshop participants (right) during a visit to the host university, KNUST.

Figure 5 shows a closing remark presentation attended by students and faculty of the College of Humanities and Social Studies at KNUST. The faculty who participated in the workshop promised to use geospatial technologies in their respective research areas. Among the faculty research areas identified included, land use and land cover change; environmental hazards; environment, water and sanitation; climate, agriculture and food security, health and development, and tourism.

Reflections on Outcomes: Lessons Learned

The projects sponsored by CADFP have created avenues for master's and doctoral students' supervision and a gateway for collaboration. I continue to review master's and doctoral dissertations for students from the host university, KNUST. Some of the students have also had the opportunity to pursue further studies in related geospatial technologies through my recommendation and facilitation. KNUST's Department of Geography and Rural Development now has a dedicated GIS remote sensing computer laboratory with donated computers to be upgraded by the university. The MOU between the two universities is strengthened through the exchange of ideas and the possibility that the KNUST vice chancellor will visit Sam Houston State University in Texas. A shared database has been created to be

accessed by host faculty and students for research articles to support research at the host university. The workshop participants continue to have access to the one-year ESRI ArcGIS software license, which can be renewed annually, in collaboration with ESRI and Sam Houston State University. Faculty continue to publish in the *International Journal for Applied Geospatial Research* and the *African Geographical Review Journal*. Both academic and professional networks have expanded through the fellowship.

The geospatial technology curriculum at KNUST has been improved and enhanced. A new master's program—GIS and Remote Sensing—has been added to the university curriculum. This was achieved by bringing together key faculty involved in teaching geospatial technology-related courses and allowing them to have input in the curriculum design. With the recent visit to the host university, an online version of the geospatial technology workshop has been developed to be fully functional on an open-source learning management system. This will be implemented by the host university and the department and will run quarterly during the year, supported by the fellow.

Some challenges were encountered in executing the project objectives at the host university. Among the key challenges were: (1) fitting the project activities into already busy department schedules, (2) the need for incentives

for host faculty to participate in programs, (3) lack of GIS computer laboratory and network issues, and 4) finding the key faculty to collaborate with. Some of these challenges are often reminiscent of African universities collaborating with diaspora scholars and developing geospatial and related programs. The challenge of fitting the project activities into department schedules was overcome by crafting the project with input from the department chair and the key resource person—in this instance, Dr. Gift Dumedah, a geospatial faculty member in the host department. In addition, challenges related to host faculty participation can be resolved by keeping them well informed of the project's objectives and the mutual benefits. Finding the key faculty to work with on the project and having the department chair provide administrative oversight is often the best approach.

Despite the challenges, the outcomes and lessons learned for this project can be duplicated in other African universities pursuing programs in geospatial technologies and related applications. The continued summer training workshops with CADFP sponsorship is helping to close the gap that exists in Africa higher education and in this case sustaining the initiatives started at KNUST. As a continuing effort, the host university is setting up a university-wide Center for Geospatial Technology in collaboration with Sam Houston State University. The center will serve as an incubator for teaching, research, and community outreach in geospatial technologies.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Advancing Faculty and Clinical Preceptor Skills: Opportunity for African Diaspora Skill-Transfer

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Background

Preceptors are experienced clinical practitioners who teach and role-model clinical skills to students, novice practitioners, or new graduates and new employees. Preceptors help students and new practitioners transition from novice to expert practitioner (Benner, 1982; Ebu Enyan et al., 2021). Preceptorship is an evidence-based strategy to enhance clinical learning and clinical competencies for faculty and preceptors are crucial to a positive pedagogical environment. With growing globalization of the health workforce, competent and confident preceptors are in high demand, and the need for professional development for clinical preceptors remains crucial to ensure effective transfer of knowledge and skills to students (Bengtsson & Carlson, 2015). In the past decade, the growing complexity of healthcare delivery has given rise to an increased demand for graduates of health professional institutions to be practice-ready when entering the job market (AlMekawi & El Khalil, 2020). In Nigeria, the Nursing and Midwifery Council requires nursing and midwifery schools to develop strategies to strengthen clinical preceptors' capacity to effectively supervise students (Suleiman, 2020). The ability to implement the required strategies differs between institutions. In 2019 and 2020, the Nursing and Midwifery Council of Nigeria launched a regional and zonal clinical preceptor capacity program (Suleiman, 2020). Even with these steps, there is a tremendous gap to fill to ensure wide and rapid coverage. While professional health institutions must comply, they have to invest in sustainable strategies to ensure that students receive effective support and supervision to achieve clinical learning outcomes and objectives. The current need is an excellent opportunity for African health professionals in the Diaspora to engage with schools for skills transfer. It is a known fact that inadequate preparation and support for

preceptors undermines the effectiveness of clinical learning environments (Ebu Enyan et al., 2021).

The purpose of this paper is to discuss strategies used through the Carnegie African Diaspora Fellowship Program to develop and pilot a clinical faculty and preceptor competency program at a nursing institution in Imo state, Nigeria. The curriculum objective was to strengthen the preceptorship and clinical teaching partnership to maximize learning outcomes for students. An overview of the gaps, challenges, and lessons learned will be presented, and possible solutions will be proffered. This project is an exemplary opportunity (among many others) for future diaspora clinical and educational research collaboration.

Method

Prior to project submission, an initial needs assessment conducted by the host institution's department of nursing revealed gaps in coordination of clinical rotations and concerns about inadequate supervision of students. Once the project was approved, the fellows identified a curriculum for local adaptation. The fellows completed an initial language adaptation while the final adaptation was conducted with a core group of clinical faculty from the host institution to ensure contextual appropriateness for Nigeria. The faculty adopted six out of the original seven modules of the curriculum. They covered: (a) Preceptor Roles and Responsibilities, (b) Assessing Learner Needs and Learning Styles, (c) Clinical Teaching Strategies, (d) Facilitating Critical Thinking and Clinical Decision-Making, (e) Managing Learning Experiences with Culturally and Generationally Diverse Students, and (f) Communication and Conflict Resolution. The hosting school administrator and CADFP fellows conducted advocacy visits to the university and clinical site administrators to facilitate buy-in and increase staff participation. The fellows also conducted



two focus groups with the clinical preceptors and clinical faculty at the school of nursing for further needs assessment. Using the preceptorship and clinical teaching partnership models (Atakro & Gross, 2016; Billings & Halstead, 2009), the curriculum was implemented by incorporating a Train-the-Trainer (TOT) strategy over seven weeks from July through August, 2017.

Analysis

The focus group recording was transcribed verbatim and analyzed using an iterative process to identify common themes and subthemes.

Findings

Several gaps were identified at university, department, and hospital levels. These were similar to those reported in the literature (Ebu Enyan et al., 2021; Ball et al., 2021) and included:

- (a) There was leadership and academic politicking that negatively affected teamwork at the school.
- (b) There was no memorandum of understanding or policy guiding clinical placement.
- (c) Clinical evaluation tools were unavailable.
- (d) There was little or no communication between clinical faculty and preceptors, hence learning objectives and expectations were not communicated.
- (e) Scheduling and preceptor notification were inconsistent; the preceptors did not have enough time to plan clinical experiences because “students just showed up.”
- (f) Poor working relationships were reported by the hospital staff.
- (g) Both faculty and preceptors reported lack of preparation for their roles; the “clinical instructors were not visible,” therefore student supervision by faculty was minimal and sometimes missing.
- (h) Preceptors lacked support from the faculty and felt disempowered. “Most infractions reported to the school were not followed up; there [was] no outcome or feedback,” so the preceptors lacked control over the students. They also reported that “the students dictated their own schedules and assignments,” “they come and go,” and “[a] majority of the students are not serious.”
- (i) Both school and hospital teams reported that inadequate staffing hampered their roles. These gaps highlighted the importance of clinical faculty and preceptor role development, as well as the need for structured clinical rotation plans.

Project Outcome

The participants expressed better understanding of the preceptor concept; roles and responsibilities of both the faculty and clinical preceptors; importance of better communication with students; and need to plan for precepting before students’ arrival. They expressed full comprehension of the need to plan daily activities when precepting. They became more aware of the required competencies of good preceptors and understood the need for preceptors to have teaching skills. They expressed improved understanding of evaluation methodologies (i.e., formative and summative assessments) and how to use alternative learning strategies. They appreciated the need for student orientation to the unit, resources, and policies. The participants identified strategies to address some of the gaps, including plans to institute new faculty orientation and annual refresher courses for faculty and preceptors. They planned to discuss nonfinancial incentives to motivate preceptors and to continue advocacy with school and hospital management to mitigate infrastructural challenges.

Recommendation Conclusion

This project was identified as “timely and enlightening” by the participants and was well received in Nigeria. The TOT strategy promulgates knowledge/skills and facilitates sustainability. This is an opportunity for skills transfer by African health professionals in the diaspora. Partnership with Nursing and Midwifery Councils will enhance scale-up of the curriculum to more states. Its adoption, and encouraging schools to implement the curriculum over a given period of time as part of accreditation requirements, will further ensure sustainability. This project is suitable for collaborative implementation research to measure its effects on nursing and midwifery education. Incorporating a leadership workshop as part of advocacy may help minimize the negative effects of institutional politics.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Enhancing Research Productivity Through Institutional Culture and Internal Policy Changes in Sub-Saharan African Universities

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ABSTRACT

Universities in sub-Saharan Africa face challenges in enhancing research output for faculty and doctoral students. Some of these challenges are rooted in the colonial legacy (in which most universities were established), brain drain, and institutional cultures and internal policies. These challenges are roadblocks to innovation and sustainable practices that have the potential to boost productivity among faculty members and provide a competitive edge for doctoral students in the job market. This paper proposes institutional culture and internal policy changes that sub-Saharan universities can adopt to increase research productivity for their faculty and doctoral students without undue stress to available resources. These changes include (a) moving away from the traditional five-chapter monograph as the only assessment tool in doctoral education to manuscript embedded dissertations. Producing at least three publishable manuscripts under the mentorship of a committee not only gives an edge to the doctoral students in the job market, but increases research output for the institution; (b) developing a publication writing course as part of faculty workload, with a culminating activity of a manuscript submission to a peer-reviewed journal; (c) institutionalizing writing as part of responsibilities apportioned to faculty by designating writing time within working hours; and (d) providing incentives for collaborative writing teams; for example, valuing collaboration more in personnel decisions.

Research Productivity in Sub-Saharan Africa Universities

In summer 2018, I was awarded the Carnegie African Diaspora Fellowship Program (CADFP) award to teach qualitative methods and mentor doctoral students in dissertation writing at a private university in Kenya. I learned during this visit that doctoral students were mandated to publish at least three peer-reviewed articles in academic journals in addition to their dissertation before graduation, as recommended by the Commission of University Education, Kenya. I witnessed firsthand the pressure these doctoral students felt as they struggled to write for publication even though they worked full time, had young families, and endured long commutes to and from the college. Yet there was no support system in place to assist the students with obtaining the skills to write for publications. The consequence was that most manuscripts they submitted were rejected, even though the data produced may have had significant implications for policy development that would improve the livelihood of the local population. Inability to publish in academic journals made the doctoral students stagnate in their career trajectory, increased their time to graduation, or caused them to eventually drop out of the program (Wairungu & Maina, 2021). Some had fallen victim to predatory journals that charge exorbitant publication fees, even though the work was not peer-reviewed. A more serious consequence was

that Kenya is unable to produce enough PhD holders to work in the 70-plus institutions of higher learning.

The challenge of writing for publication in refereed journals is not limited to doctoral students in Kenya. During a visit in 2011 as a Fulbright scholar in a public university, I had witnessed similar struggles experienced by early-career professionals in writing research for academic journals. These young professionals were pressured to publish a certain number of papers in peer-reviewed journals before they could seek promotion or merit pay, yet the institution offered little or no support to facilitate academic writing. The consequence was that few early-career professionals, especially women, published in academic journals, and even when some eventually got published, their research was already dated. Most manuscripts were rejected. The young academics stagnated professionally, with a more serious consequence that Kenya not only becomes a nation of knowledge consumers but undermines its ability to be a producer of knowledge.

The story of two Kenyan universities mirrors that of many universities across sub-Saharan Africa. Research output coming from universities in sub-Saharan Africa is extremely low and the continent remains largely a consumer of knowledge, “depending on others (usually west) for knowledge production, appropriation and dissemination: a situation that undermines the continent’s ability to maximize its democratic potential and development agenda”

(Mbadlanyana, et al 2011, p. 78). As in most universities around the globe, publication in peer-reviewed journals is an index used to measure a scholar's productivity for determining promotion and merit pay. Collectively, it is used for institutional rankings, as well as citations for impact value. Unfortunately, highly developed countries top all the rankings, with developing countries occupying the lowest ranks. Indeed, sub-Saharan Africa ranks lowest in knowledge economy, studies of academic publications, patents, citations, and innovation systems (Ojanperä et al., 2017). Similarly, the number of academic articles, which offers a relatively uniform measure of knowledge-intensive output as the "process of peer-reviewed publishing and the way in which it constitutes permanent scientific record" (Ojanperä et al., 2017, p. 37), is low.

According to Okemwa (2016), scholarly publishing is generally associated with "scholars that teach and/or conduct research in institutions of higher learning and other research institutions" (p. 3). Since a university education is critical for the generation of knowledge, scholarly publishing should be expected to serve the purpose of disseminating knowledge. Scholars seeking promotion are evaluated on the number of scholarly articles they have published and the reputations of the journals in which they are published. Journal rankings are regularly used by university authorities to gauge the progress of the individual faculty and the impact the knowledge is making in the field. World university rankings also consider the number of articles each faculty has produced. It is, therefore, in the best interest of sub-Saharan Africa universities to boost capacity for knowledge production and research output if it is to remain relevant and a player in the global market.

A few organizations have tried to boost sub-Saharan Africa research output. For instance, in an effort to strengthen the institutional basis of scholarly publishing and knowledge production, the Council for the Development of Social Science Research in Africa (CODESRIA) posits that "publishing is an economic activity capable of contributing to a country's wealth" (Bgoya & Jay, 2013, p. 33). CODESRIA has provided opportunities for African scholars to publish in scholarly journals, increasing "citations of articles in African published journals" (Bgoya & Jay, 2013, p. 27). Likewise, CADFP has, in the past few years, linked African academics in the diaspora and those on the continent in an effort to enhance sustainable knowledge production (Fongwa, 2018). But even with these interventions, research productivity in sub-Saharan African universities has remained low, contributing the smallest share of academic articles globally (only 1.1%) even though Africa has 12% of the world's population (Ojanperä et al., 2017). The question to ask, then, is "What barriers are the sub-Saharan Africa universities facing in regard to research output in scholarly publishing, and how can those barriers be removed?"

Barriers to Research Output and Scholarly Publishing in Sub-Saharan Africa

There is no doubt that sub-Saharan Africa universities face enormous challenges in research output as measured through academic publishing. Those challenges include (a) colonial legacy, (b) brain drain, and (c) institutional cultures and policies.

Colonial Legacy: According to Assié-Lumumba (2011), the "African university in the 21st century reflects essentially a colonial legacy and ongoing channels of skewed relations at the global level" (p. 179). Many sub-Saharan Africa universities were established to produce knowledge to entrench the colonial powers, and as Nel (2015) argues, much of the knowledge produced "entrenched White supremacy" (p. 137). While sub-Saharan Africa universities in the recent past have struggled for self-determination with a public mission in the production of relevant knowledge, proxies of colonialism such as the World Bank, World Trade Organization, Structural Adjustment Programs, and General Agreement on Trade Services have crippled productivity in universities and visibly destroyed "Africa's intellectual community" (Assié-Lumumba, 2011, p. 186). Much of the research funding coming from these institutions has stringent conditions, so the knowledge produced reflects the values of the funders rather than knowledge that can inform policies for improving the livelihoods of the African people. Consequently, the sub-Saharan Africa universities' ability to unlock solutions for the continent is largely diminished, even though universities are the key vehicles through which knowledge is produced and disseminated and articles published serve as the manifestation of knowledge diffusion. Indeed, "African governments have been dependent on policy solutions that are not rooted on and are not informed by African realities" (Mbadlanyana, et al 2011, p. 81). This practice has continued to be a major challenge in unlocking post-independence growth, international development, sustainability, and innovation across the continent. Indeed, a change of mindset in the colonial mentality in regard to indigenous knowledge production is needed for the scholarly and literacy output in Africa to increase. A question in some scholars' minds is whether European languages, in particular English, should be the only languages of publishing (Assié-Lumumba, 2011; Mbadlanyana, et al 2011; Nel, 2015).

This is not to say that sub-Saharan Africa universities have avoided attempts to "eradicate the spirit of perpetual servitude and replace it with spirit of self-respect" (Assié-Lumumba, 2011, p. 186). Our failure to develop indigenous modes of theory to meet the needs of the African people has "robbed us of the opportunity to engage African partners in [problem solving], not [just] recipients of

solutions" (Mavhunga, 2018, p. 39). The sub-Saharan African universities should, therefore, seek transformative autonomy as a "condition of knowledge production and dissemination" (Nel, 2015, p. 143). Knowledge produced should be in the service of "societal improvement with explicit transformative aims" (Nel, 2015, p. 143). Sub-Saharan Africa must decolonize by strengthening and empowering universities to produce enough doctoral students, equipping them with adequate training to comprehend challenges facing the African people, and responding to them appropriately so they may build the knowledge economy. To accomplish this task, the doctoral students must be supported by strong innovative systems and knowledge production infrastructure geared toward unlocking the potential of Africa's knowledge economy. Therefore, revitalization of African higher education to produce knowledge and high-quality graduates requires a paradigm shift away from "reliance and importation of ideas and development models towards endogenous knowledge production" (Mbadlanyana, et al 2011, p. 81). Mavhunga (2018) argues for revamping doctoral program designs so students understand how to "reflect local condition [and] use local resources in response to local problems" (p. 42). The dissertations should reflect real-life situations and graduates capable of solving regional problems.

Brain Drain: There is no doubt that sub-Saharan Africa has suffered "brain drain," defined as a loss of advanced professional and technical skills (Langa, 2018). Unlike other continents that have sought partnerships with their diaspora as a means of "brain circulation," many sub-Saharan African countries have had dysfunctional relationships with their diaspora. Some of that dysfunction comes from the unfounded beliefs that migrants are unpatriotic and are viewed as a "political threat to the status quo" (Langa, 2018, p. 58). Fongwa (2018) argues that many African diasporas have established vibrant, albeit informal, engagement with individuals and institutions across Africa. The challenge facing these partnerships is that they are often lopsided, such as when the African diaspora comes with a donor mentality or the partnership is coerced so there are no benefits for the African partner. The diaspora partner may also not fully comprehend the local conditions for which they are seeking solutions. Based on that premise, sub-Saharan African universities should devise "systematic methods to attract the skills and human capital of [the country's] diaspora" and challenge "certain traditions and practices in academic management" (Langa, 2018, p. 61). The engagement of the African diaspora results in intellectual and academic remittances, which can increase publication output. While many sub-Saharan Africa countries, such as Kenya, have effectively harnessed diaspora financial remittances, little has been done to understand and harness the equally important

human and intellectual capital that the diaspora possesses (Otiso & Maina, 2018).

Institutional Cultures and Policies: The organizational culture in sub-Saharan Africa universities has emerged as one of the biggest impediments to effective knowledge production. Like other universities across the globe, many sub-Saharan Africa universities peg personnel decisions regarding promotion and merit pay on the number of publications in peer-reviewed journals. The publications are subjected to another hierarchy based on authorship, with single-authored publications given the highest premium in remuneration and recognition. This hierarchy is often followed by first author in a co-authored publication, which sends a clear signal that individualism and competition are the only acceptable norms at these institutions of higher learning. This leads to a culture in which researchers are reluctant to share knowledge for fear of being penalized when personnel decisions are made.

Muzondo (2015) argues that most of the knowledge produced in sub-Saharan Africa universities is not shared even though "knowledge sharing is the most important part of effective knowledge production" (p. 10). Further, Muzondo (2015) posits that intellectual products produced and consumed in research-oriented institutions owe their legitimacy to institutional standards and academic values such as peer review. However, many sub-Saharan Africa universities have a "silo mentality" (Muzondo, 2015, p. 15) and few incentives for sharing knowledge, "useful internal knowledge that people could benefit from" (p. 16). Another reason for lack of sharing, Muzondo (2015) posits, could be the fear of scrutiny in the way university academics write, produce, and present knowledge, "a tradition which has taught people to hoard knowledge in order to advance" (p. 17).

Second, many researchers in sub-Saharan Africa universities are well grounded in the quantitative research paradigm, which claims objectivity and neutrality and researchers are not fully equipped to use qualitative approaches in data collection. This often limits them in accessing quality data and contributes to situations where most research findings end up on library shelves because the language of dissemination excludes the sensibilities of the intended beneficiaries. In addition, Grobbelaar and Harber (2016) argue that many sub-Saharan Africa universities lack intermediary structures to encourage dissemination of research for the benefit of local consumption. This problem is exacerbated by the "lack of trust in local researchers" (Grobbelaar & Harber, 2016, p. 158), especially where international partners are involved. Moreover, "career structures and incentive mechanisms do not support research uptake activities" (Grobbelaar & Harber, 2016, p. 178). It is therefore important for the sub-Saharan African universities to harmonize research policies

so co-production of knowledge between researchers and target consumers is encouraged, as is “development of stakeholders’ engagement and communication skills of the researcher” (Grobbelaar & Harber, 2016, p. 161).

Removing Barriers to Research Output and Scholarly Publishing in Sub-Saharan Africa

Despite these barriers, sub-Saharan Africa universities have the potential to contribute to world knowledge and establish new standards of reference and knowledge to improve the livelihood of the African people; indeed, the key to Africa’s development lies in knowledge production (Langa & Fongwa, 2018). However, researchers in this region often face many challenges exacerbated by institutional culture and internal policies, including inadequate motivation and time, insufficient research funding, lack of incentives, heavy teaching loads, and lack of strong research cultures with little community engagement and outreach. To address some of these challenges, some institutional culture and internal policy changes could boost knowledge productivity and dissemination without undue stress on the available resources. These changes include (a) moving away from the traditional five-chapter monograph as the only assessment tool in doctoral education to manuscript embedded dissertations; (b) developing a publication writing course as part of faculty workload, with a culminating activity of a manuscript submission to a peer-reviewed journal; (c) institutionalizing writing as part of responsibilities apportioned to faculty by designating writing time within working hours; and (d) providing incentives for collaborative writing teams.

Publication-Based Dissertations: Doctoral programs around the globe are increasingly embracing the publication-based dissertation as a way to give their doctoral candidates a competitive edge in the academic job market (Jackson, 2013; Kamler, 2008). Publication-based dissertations consist of several articles the student publishes in refereed journals before or right after graduation. Thus, they become a clear indicator to prospective employers that new PhDs have significantly contributed new knowledge to the field and are proof that the researcher is independent (Horta & Santos, 2016). This approach has many benefits. Because the doctoral candidate is still under the mentorship of faculty, they enjoy feedback from their committee members as they develop and work on their manuscripts in a safe and supportive environment. They are able to transition from being a student to being an independent researcher, developing a healthy balance of confidence and perseverance during the dissertation process (Mason & Merga, 2018). The doctoral candidates who complete a publication-based dissertation rather than a traditional

single-monograph dissertation disseminate their results more rapidly; the peer review process provides them with impartial feedback; and the candidates build their scholarly reputation. The added benefit of the publication-based dissertation is that the committee members gain authorship of the published papers, boosting their own productivity portfolio.

Peer Writing Groups: Many universities are entrenched in a culture that views the problem of writing as remedial, “propositioned as an individual skills deficit” (Aitchison, 2009, p. 906) and far removed from institutional responsibility. However, research has shown that the pedagogy of writing groups offers powerful opportunities for learning, as it embraces a broader range of literacy practices and understanding pertaining to the academic environment, including speaking, reading, critiquing, and writing (Aitchison, 2009). Pedagogies that embed learning to write within a relevant scholarly context are more effective, especially because talking provides an opportunity for group members to engage in a “reflexive practice that connects reading and writing for the building of meaning” (Aitchison, 2009, p. 907). Writing groups can be a particularly valuable means for institutionalizing writing as a legitimate component of research education and for encouraging the development of a writing culture by providing rewarding opportunities for engagement and participation (Aitchison, 2009). For a sub-Saharan Africa university with scarce resources, writing groups would be beneficial because peers give and receive feedback, a “valuable tool for learning” (Aitchison, 2009, p. 912). The key is to provide designated times for group members to meet and write as part of their duties within normal working hours, similar to how department meetings are conducted. For the past four years, I have been a facilitator for a writing group on my campus. The writing group was proposed by a group of women faculty and was supported by the university administration in recognition that women faculty bear more responsibility in service duties than their male counterparts. Specifically, the university president urged department heads to release women faculty from teaching and service duties for at least three hours a week. This designated time allows groups of women (maximum of 10 per group) to meet in a designated space where they write and support each other. The women’s productivity has increased exponentially since the program was started.

Writing for Publication Course: Many doctoral programs, especially in the social sciences, have developed writing courses with the primary purpose of supporting PhD students in preparing and submitting publishable papers (Mandell et al., 2015). These courses are designed to offer support “in an environment conducive to their learning

and productivity” (Mandell et al., 2015, p. 211). Having students complete a writing for publication course has several advantages. It equips the students with writing skills pertinent to academic publishing. They gain a competitive edge in the job market, given the high expectations for job candidates by hiring committees in research institutions. Most importantly, it sends a strong signal to the PhD student that publication in peer-reviewed journals is part of their responsibility if they pursue a career in academia. The papers published raise the profile of the institution. As a Fulbright scholar in 2011, I taught a course in “Research, Writing & Dissemination for Academics & Professionals” to 15 early-career professionals. The course addressed topic selection and conceptual frameworks, data sources and methods of analysis, and dissemination of findings. When this course ended, 11 participants had each produced a full-length manuscript, which we published in an edited volume (Maina, 2014). Similarly, I have regularly taught a writing publication course for my department as part of my regular load assigned.

Collaborative Research/Writing Teams: Collaborative research teams are necessary and desirable components of any discipline (Cheruvilil et al., 2014) and according to Coffey et al. (2017), “benefits of collaboration are broadly recognized” (p. 148). In collaborative research and writing teams, members produce drafts with direct support from the team, starting with idea formation, conceptualization, and general outline, providing opportunities for discussion, motivation, and feedback as a pedagogical tool (Coffey et al., 2017). Sub-Saharan Africa universities can institutionalize incentive structures for promotion and assessment criteria to include collaboration in research and writing. According to Langa (2018), “academic collaboration involves a free sharing of ideas and the possibility of co-production of new knowledge of mutual benefits” (p. 67). It is therefore necessary that a cultural shift be established to create a knowledge base of common interests, a process of sharing information and experiences with the group that other members of the profession can learn from, and an opportunity to develop personally and professionally with clear incentives for collaborative writing (Muzondo, 2015).

For example, faculty should be encouraged to seek membership in a research group and actively participate in international networks, which will enhance publication productivity and the quality of research (Langa, 2018). This will lead to increased collaboration with colleagues, and the ability to give informed advice to peers in different departments, research institutes, and industry, as well as establishments in other countries. Fongwa (2018) advocates for an increased knowledge producing capacity by “adopting a reflexive approach to partnerships between academics in diaspora and those in developed

economies” (p. 116). Therefore, collaboration and partnering in knowledge producing efforts become a vital avenue for developing global solutions (Fongwa, 2018). Accordingly, “[the] African diaspora has a significant role to play in supporting and promoting development through knowledge generation and application” (Fongwa, 2018, p. 117). However, for the partnership to work, it must be structured efficiently and sustainably so that it generates research and teaching capacity, “empowering universities as economic drivers and agents of knowledge transfer” (Fongwa, 2018, p. 122). In short, the African diaspora can be a possible player in enhancing knowledge production in sub-Saharan Africa, increasing quantity and quality of knowledge production through sustainable collaboration.

Conclusion

The state of scholarly publishing and research dissemination in sub-Saharan Africa is complex, spanning a myriad of sociopolitical, economic, and cultural issues, and unique in every country. The issue emanates from the colonial legacy and the subsequent proxies of colonialism, brain drain, and the inability to tap intellectual remittances from the diaspora as a way of knowledge circulation. Needless to say, institutional cultures and policies have become the biggest impediments to knowledge production and research output. This paper has offered ideas that could reverse the trend of low productivity without undue pressure on available resources. First, including a manuscript-based dissertation, especially in the social sciences, as an acceptable assessment tool has the potential to boost productivity for the doctoral student, faculty mentors, and the institution. Second, developing a writing for publication course to support doctoral students in a conducive environment sends a clear signal that research productivity is expected from those who pursue academic careers. Third, institutionalizing writing as part of faculty responsibility and providing support through writing groups would increase productivity and send a clear message that writing is valued, that institutions have a responsibility to support it, and that writing is not an addendum, but integrated into the faculty workload. Finally, like in many organizations, collaborative team research and writing have the potential to change the cut-throat, individual competition mindset to incentivize co-operative partnerships and become a catalyst for sustainable research productivity and increased output.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Capacity Building at the Federal University of Technology, Minna, Nigeria: Enhancing the Chemistry Undergraduate and Postgraduate Curricula, and Improving Research Capabilities

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ABSTRACT

Many universities in Nigeria lack state-of-the-art instrumentation and laboratory facilities for conducting teaching and research. This paper will discuss the outcome of two visits made by the presenter to engage in capacity-building efforts at the Federal University of Technology, Minna (FUTM), Nigeria. The thrust of the visits was two-fold: to incorporate computational chemistry into the undergraduate and postgraduate curriculum, and to improve the research capability of the academic staff. Computational chemistry was introduced into the undergraduate and postgraduate curricula because it is now an essential and integral component of the curricula. WebMO, a web-based interface that allows students and non-specialists to run state-of-the-art computational chemistry programs from the web browser on their computer, was introduced. The research capabilities of the academic staff were enhanced by workshops on proposal and manuscript writing. Collaborative linkages, which have resulted in publications, were developed between the academic staff at FUTM and faculty at the presenter's institution to analyze samples on instruments that were not available at FUTM.

Introduction

Chemistry is defined as the study of matter. It is a central science interwoven with other fields of science. It has contributed immensely to many areas of human development and advances in knowledge (Jones & Mulvaney, 2019). It is one of the programs of studies accredited by the Nigerian National Universities Commission (NUC) on Nigerian university campuses. NUC has prescribed a series of requirements that must be satisfied for programs to be accredited. Among the benchmark and minimum academic standards are admission and graduation requirements, learning outcomes, course structure, and resources requirements for teaching and learning (NUC, 2007). The chemistry program at the Federal University of Technology, Minna (FUTM), Nigeria, is accredited by NUC, having met all the benchmark minimum academic standards.

FUTM is one of 45 universities controlled by the national government of Nigeria, as of August 2021. It was established as a specialized university on February 1st, 1983 to offer degree programs in science, engineering, and technology. Currently, the university offers 100 bachelor's, master's, and doctoral degree programs in science, technology, engineering, and mathematics (STEM) fields with applications to agriculture, the environment, entrepreneurship, and education. FUTM occupies the top position among Nigerian Universities of Technology, based on a NUC ranking.

The Department of Chemistry at FUTM was established in 1983 as one of the pioneering departments of the university. Students in the department enroll in two five-year Bachelor of Technology (B. Tech) degree programs: (1) chemistry with polymer and (2) industrial chemistry. Enrollment in both

programs over the past five years averages 450 students. The department also provides foundation chemistry courses to students in other STEM degree programs such as biology, biochemistry, education, and engineering. During every academic year, about 3,000 students take ancillary chemistry courses in the department.

Currently, the department is in a one-story block of buildings on the old campus. There are 10 offices, which are shared by 21 full-time faculty and 5 laboratory/technical staff. There are two 60-seat laboratories. These labs are used in rotation by the 500 students who take general chemistry labs every semester, and they are also used by students conducting experiments for the required undergraduate project. There is a central laboratory dedicated to research where advanced experiments for master's and doctoral students take place. The department is equipped with the following working instruments: Shimadzu UV-Vis Spectrophotometer, Nicolet FTIR Spectrometer, PG Atomic Absorption Spectrometer, Ostwald Viscometers, and a host of others. These instruments are housed in the instrument rooms attached to the two 60-seater labs.

The five-year curriculum plan for students in the two bachelor's programs at FUTM comprises 183 units of courses in chemistry, science, and general education. It includes 107 units of chemistry courses and 6 units of industrial training. Students take most of their general education and basic science and math courses in the first two years of the program. The chemistry courses cover all the traditional areas of chemistry including analytical, biochemistry, inorganic, organic, and physical chemistry.

Teaching and Learning

During the summers of 2017 and 2019, Professor Abdul K. Mohammed visited FUTM as a participant in the Carnegie African Diaspora Fellow Program (CADFP) to work on curriculum development related to mentorship and training in student-centered active learning. This included the consolidative development of a curriculum in key areas of molecular modeling, as well as a computational and forensic chemistry curriculum. He also worked with FUTM academic staff on the incorporation of Process-Oriented Guided Inquiry Learning (POGIL) into the chemistry curriculum.

To boost the performance of students, an approach of student-centered active learning pedagogy has been proposed. POGIL is effective: It has been shown that in the POGIL classroom, students are actively engaged in developing their understanding. They are required to take responsibility for their understanding and feel less intimidated about telling their peers that they do not understand something.

In the typical lecture classroom where there are some active learning components, the students may still be passive and isolated from one another. They merely watch the “expert” at the front of the room, with a limited understanding of the concept and ideas because they have not processed the ideas in their minds.

One of the reasons cited for the diminishing interest in chemistry is the teaching methodologies that rely on passive learning, in which lecturers dictate lecture notes (Nkiko, 2021). However, many teaching activities can be classified as active learning. Prince (2004) defined all of these activities as “any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing.” Some student-centered active learning strategies have been proposed to arrest this reduced interest in chemistry. These strategies include POGIL, Peer-Led Team Learning (PLTL), and Problem-Based Learning (PBL), among others.

POGIL was introduced in a seminar presented to lecturers in the Department of Chemistry at FUTM. By using POGIL in classes in which he served as a guest lecturer, Professor Mohammed demonstrated how he has implemented this approach in teaching chemistry. The talk was well-received by faculty, who were keen on implementing such an approach in their classes. In particular, while he was a guest lecturer in CHM 223, Structures and Bonding, for the entire six weeks of his visit in 2017, during which he had the opportunity to show how he has implemented this approach over the years.

Computational Chemistry

Professor Mohammed worked with colleagues at FUTM on the course content for a new course on computational chemistry, “Introduction to Computer-Aided Chemistry, Nano Chemistry, and Forensic Chemistry.” As a new course must go through an extensive approval process, it was decided that key computational chemistry concepts could be introduced into the undergraduate and postgraduate curriculum before the development of a standalone course. The major concepts that were introduced include an introduction to computational software, computational techniques, molecular modeling, computing spectroscopic and thermochemical properties, and simulations. The long-term goal is to make computational chemistry an essential and integral component of curricula of both undergraduate and post-graduate chemistry studies. Many recent scientific publications employ data analyzed with computational models that are often ancillary to the main thrust of a paper. Thus, computational chemistry has moved into the mainstream as an analytical method to interpret data. Students graduating from a chemistry undergraduate or postgraduate program should be equipped with the expertise in computational chemistry to remain current and relevant in modern-day research and industry needs. Therefore, it is of the utmost importance that the training of the next generation of scientists be enhanced, with greater exposure to computational chemistry (Alam et al., 2010).

WebMO, a web-based interface that allows students and non-specialists to run state-of-the-art computational chemistry programs from their computer web browser, was introduced to the academic staff and students at FUTM. This is a convenient way to introduce computational chemistry because it eliminates the need for the university to install and maintain computational chemistry software on local computers. Users can also access WebMO on their mobile phones and tablets. This ease of access should make the use of the software accessible very widely, as a majority of the users have mobile phones, even if they do not have access to computers.

To introduce the academic staff at FUTM and other neighboring institutions to computational chemistry and molecular modeling that can be implemented in their undergraduate and postgraduate chemistry courses, a training workshop was organized as a one-day pre-conference workshop on 24 June 2019, before the official opening of the second Biennial International Conference of the School of Physical Sciences of FUTM. By arranging the workshop to coincide with the conference, we had a satisfactory level of participation.

The workshop emphasized hands-on, simple computational molecular modeling and calculations. Freeware available online as web-based software and

standalone software that is important for incorporating computational chemistry into the undergraduate chemistry curriculum was also introduced. The workshop was well-received by the participants. The 37 participants at the workshop included postgraduate students as well as academic instructional and technical staff at FUTM and other institutions. A pre-workshop survey was administered to the participants to gauge their interest in new teaching methodologies and computational chemistry. The survey is shown below in Table 1.

The results of the pre-workshop survey indicated that the majority of the participants are willing to implement new teaching strategies in their classes. They are also open to implementing computational exercises learned from the workshop. Some of the comments made by participants are the following: "There is need for periodic training on simulations and computational chemistry," and "Important skills needed are the ability to tailor computational chemistry to different disciplines."

FIGURE 1

The author at an Introduction to Computational Chemistry workshop

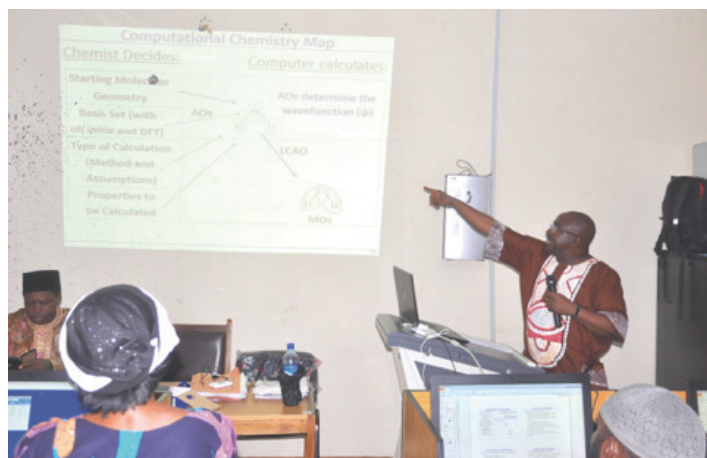


TABLE 1

Introduction to Computational Chemistry — Pre-workshop Survey

Please rate various aspects of the workshop by circling the appropriate number from 1 through 5.

RATING SCALE	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1. Teaching with new instructional methods takes more preparation time than lecturing.	5	4	3	2	1
2. I am interested in learning new approaches for explaining difficult concepts in my courses.	5	4	3	2	1
3. Well-designed group work is an effective way for students to learn.	5	4	3	2	1
4. I am interested in implementing other strategies than lecturing in my class.	5	4	3	2	1
5. I plan to implement the computational exercises that I learn in this workshop in my courses.	5	4	3	2	1

OTHER SUGGESTIONS & COMMENTS

TABLE 2

Introduction to Computational Chemistry — Post-workshop Survey

Please rate various aspects of the workshop by circling the appropriate number from 1 through 5.

RATING SCALE	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1. The objectives of the workshop were clearly stated at the beginning of the workshop.	5	4	3	2	1
2. The objectives were achieved at the end of the workshop.	5	4	3	2	1
3. The instructor(s) was/were responsive to participant needs.	5	4	3	2	1
4. Appropriate opportunities for discussion were provided during the workshop.	5	4	3	2	1
5. The workshop materials were informative.	5	4	3	2	1
6. Demonstrations or hands-on experiences were organized effectively.	5	4	3	2	1
7. Demonstrations or hands-on experiences can be easily implemented in my courses.	5	4	3	2	1
8. This workshop covered topics that were up to date.	5	4	3	2	1
9. I plan to implement what I have learned in this workshop in my courses.	5	4	3	2	1
10. The time duration for this workshop is appropriate.	5	4	3	2	1
11. As a result of this workshop, I am inspired to use computational exercises as a teaching tool to explain concepts.	5	4	3	2	1
12. This workshop has motivated me to begin/continue research in the area of computational chemistry/molecular modeling.	5	4	3	2	1
13. The interdisciplinary interactions at this workshop have encouraged me to work with others outside of my perspective on projects.	5	4	3	2	1
14. Overall, I found this workshop useful and beneficial to my future professional development.	5	4	3	2	1

OTHER SUGGESTIONS & COMMENTS

Results of the post-workshop survey showed that participants found the workshop to be beneficial for how to implement computational activities in their courses. Many of the participants commented that they would like to attend more workshops to deepen their knowledge of computational chemistry. One of the participants commented, "More workshops should be organized for better understanding of the topic."

The major weakness, per the post-workshop survey, was that there was not enough time allotted for the workshop. Many of the respondents indicated that a one-day workshop is not sufficient to impart the knowledge required for a better understanding of computational chemistry. After the workshop, one of the participants invited Professor Mohammed to facilitate the computational chemistry workshop at another institution.

The outcome of the workshop showed that there is room for the introduction of computational chemistry into the curriculum. The majority of the participants were very enthusiastic about the workshop and demonstrated interest in implementing the demonstrated exercises in their courses. A train the trainer model could be adapted to widely disseminate information about infusing chemistry courses with computational chemistry topics.

The introduction of computational chemistry will be done as a supplement to help increase student understanding of materials already covered in various courses. Students will learn the basics of computational chemistry and how to choose the appropriate tools for their needs. For example, in organic chemistry, students will be introduced to software for drawing and viewing organic compounds. In physical chemistry, students will learn how to compute spectroscopic and thermochemical properties. Several courses that could be infused with computational chemistry were identified. Among these courses are the following undergraduate courses: Physical Chemistry I (3 Units); Inorganic Chemistry (2 Units); Organic Chemistry I (3 Units); Physical Chemistry II (2 Units); Inorganic Chemistry II (2 Units); Organic Chemistry II (2 Units); Structures and Bonding (2 Units); and a postgraduate course on the Use of Computers in Chemistry & Research (3 Units).

Through supplemental funding from the Carnegie African Diaspora Program, single-user licenses for Solo Chemometric software and Spartan Computational Chemistry software were purchased by Professor Mohammed for installation on computers in the Department of Chemistry at FUTM to allow students to have access to these software programs for classwork and research.

Capacity Building and Research Collaboration

There were several research focus areas that the academic staff of FUTM was working on, including natural products elucidation and phytochemical analysis, analytical/environmental chemistry research as it relates to the deleterious effects of gold mining, and water contamination in certain areas of Niger State in Nigeria. Professor Mohammed engaged with faculty conducting ongoing research in zinc-titanium nanocomposites in the treatment of wastewater as well as photocatalysis. This was in addition to the collaboration on consolidative research in Chemometrics applications, especially on food nutrient analysis.

In 2017 during his first visit to the university, Professor Mohammed and several academic staff and post-graduate students discussed the collection of data for their research. This has resulted in many students sending samples to Professor Mohammed in the U.S., and he has assisted in collecting data for many of these students who have completed their thesis and graduated. Most of the samples analyzed were those of nanocomposite materials for the removal of pollutants from wastewater and natural products compounds that were extracted from plants with medicinal properties. The samples were analyzed on Fourier Transform Infrared (FT-IR) Spectrometer, Ultraviolet/Visible (UV-Vis) Spectrophotometer, Nuclear Magnetic Resonance (NMR) Spectrometer, High-Performance Liquid Chromatograph, Gas-Chromatograph/Mass Spectrometer (GC-MS), and Scanning Electron Microscope (SEM).

These collaborations have continued during Professor Mohammed's second visit to FUTM, during which his host Dr. Rasaq B. Salau arranged a series of meetings with various research groups in the department to discuss progress on current collaborations and future research activities. These research collaborations have resulted in the publication of eight papers in peer-reviewed journals on which Professor Mohammed is a co-author. The papers are listed below:

Mustapha, S., Jimoh, T., Ndamitso, M., Abdulkareem, S. A., Shuaib, D. T., Mohammed, A. K., & Amigun, A. T. (2021). The occurrence of N-nitrosodimethylamine (NDMA) in swimming pools: An overview. *Environmental Health Insights*, 15, 1–12. <https://doi.org/10.1177/11786302211036520>

Mustapha, S., Tijani, J. O., Ndamitso, M. M., Abdulkareem, S. A., Shuaib, D. T., & Mohammed, A. K. (2021). A critical review on geosmin and 2-methylisoborneol in water: Sources, effects, detection, and removal techniques. *Environmental Monitoring and Assessment*, 193, 204–237. <https://doi.org/10.1007/s10661-021-08980-9>

Mustapha, S., Tijani, J. O., Ndamitso, M. M., Abdulkareem, S. A., Ajala, A. O., Mohammed, A. K., & Oke, O. (2021). Fabrication of porous ceramic pot filters for adsorptive removal of pollutants in tannery wastewater. *Scientific African*, 11, e00705. <https://doi.org/10.1016/j.sciaf.2021.e00705>

Mustapha, S., Tijani, J. O., Ndamitso, M. M., Abdulkareem, S. A., Shuaib, D. T., Mohammed, A. K., & Sumaila, A. (2020). The role of kaolin and kaolin/ZnO nanoadsorbents in adsorption studies for tannery wastewater treatment. *Scientific Reports*, 10, 13068. <https://doi.org/10.1038/s41598-020-69808-z>

Mustapha, S., Ndamitso, M. M., Abdulkareem, A. S., Tijani, J. O., Shuaib, D. T., Ajala, A. O., & Mohammed, A. K. (2020). Application of TiO₂ and ZnO nanoparticles immobilized on clay in wastewater treatment: A review. *Applied Water Science*, 10, 49. <https://doi.org/10.1007/s13201-019-1138-y>

National Universities Commission. (2007). Benchmark minimum academic standards for undergraduate science programmes in Nigerian universities.

Mustapha, S., Ndamitso, M. M., Abdulkareem, A. S., Tijani, J. O., Mohammed, A. K., & Shuaib, D. T. (2019). Potential of using kaolin as a natural adsorbent for the removal of pollutants from tannery wastewater. *Heliyon*, 5, e02923. <https://doi.org/10.1016/j.heliyon.2019.e02923>

Mustapha, S., Ndamitso, M. M., Abdulkareem, A. S., Tijani, J. O., Shuaib, D. T., Mohammed, A. K., & Sumaila, A. (2019). Comparative study of crystallite size using Williamson-Hall and Debye-Scherrer plots for ZnO nanoparticles. *Advances in Natural Sciences: Nanoscience and Nanotechnology*, 10, 045013. <https://doi.org/10.1088/2043-6254/ab52f7>

Salau, R. B., Bisiriyu, M. T., Zalihat, A., Alheri, A., Aremu, M. O., Olushola, I. O., & Mohammed, A. K. (2020). Evaluation and chemometric analysis of the mineral profile of locally prepared soups in Minna, Niger State, Nigeria. *Journal of Chemical Society of Nigeria*, 45(1), 21–28.

Professional Development Activities

The author, Professor Mohammed, also served as a resource person to assist in the university's quest to develop the department's capacity to write successful research grant proposals. He delivered a presentation attended by approximately 100 faculty, staff, and postgraduate students of the School of Physical Sciences. The presentation covered identifying sources of funding, the importance of following requirements in the Request for Proposal document, formatting of the proposal, and budget. At the end of the presentation, there was an informative question and answer session during which additional information was provided to the participants. Aspects of post-award administration and the implementation of the grant were also addressed,

FIGURES 2 & 3

The author gives a presentation on "Collaborative Approach to Writing Award-Winning Grant Proposals"



as the receipt of renewal or future awards depends on past performance. It is therefore important for the award recipient to endeavor to deliver on the promises made in the proposal. The deliverables may include publications in peer-reviewed journals, training of students, or the delivery of a report. Many grants also expect periodic reports to be made on time.

Related to success on proposals is developing skills to write manuscripts of research results for publications international peer-reviewed journals. In the future, if the opportunity arises, Professor Mohammed would deliver seminars or workshops on writing manuscripts. During his last two visits to FUTM, he reviewed and edited several manuscripts that were to be submitted for publication.

Summary and Conclusions

The two summer visits to FUTM were successful because many of the intended outcomes of the visits were achieved. A framework was developed for revision of the undergraduate and postgraduate curriculum to incorporate active learning and computational chemistry into selected courses. Professional development activities for academic staff and postgraduate students on the introduction of computational chemistry into the chemistry curriculum provided a strong basis and improved comfort level for lecturers to consider implementing computational exercises in their classes. The long-term goal of the project, which is ongoing, is the development of a standalone course on Introduction to Computational Chemistry and Chemometrics. Dr. Rasaan B. Salau of FUTM, who was Professor Mohammed's host, is still working on this project.

Research collaborations that center around providing assistance for samples analysis for postgraduate students and academic staff was very successful because it has led to several students acquiring the necessary data to write their master's and doctoral theses and complete their degree programs. It has also resulted in the publication of eight manuscripts. This type of research collaboration involving assisting with sample analysis is currently ongoing and will likely continue for the foreseeable future.

There are other types of linkages that have resulted from the two visits to FUTM under the CADFP. The author, Professor Mohammed, delivered a keynote speech at an international conference held at a neighboring institution to FUTM, Ibrahim Badamasi Babangida University, Lapai, Nigeria: the 1st International Chemistry Conference IBBUL-CHEM 2021 on June 8, 2021. Professor Mohammed is also scheduled to deliver another address at the 3rd FUTM School of Physical Sciences Biennial International Conference taking place from October 25 to 28, 2021.

Dr. Ruth Araga-Lafia, a Senior Lecturer at FUTM, was a Visiting Fulbright Scholar at Michigan State University in 2019, and she was invited by the author to deliver two

presentations at North Carolina Central University. This visit has resulted in an ongoing conversation with one of Professor Mohammed's colleagues at NCCU to develop a joint project on polymer chemistry research that would involve student and faculty exchange between the two universities. A long-term goal of this collaboration will be the establishment of a Memorandum of Understanding between FUTM and North Carolina Central University.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Promoting an Infrastructure of Trust among Trainers: Implications on Academic Best Practices in Nigerian Universities

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ABSTRACT

In many public and privately owned Nigerian universities, a great disconnection in academic best practices and standards persists. The lingering challenges bedeviling academic integrity are not exclusively restricted to classroom conduct and lecturer–student relationships. They stretch to the horizons of researchers, academic and non-academic staff, and the entire university community. Although economic and noneconomic incentives can motivate people to join the teaching profession, lecturers are service providers, while students are the clients. Not many lecturers are cognizant of this reality. Thus, in some universities, the teaching, learning, and research environments are overtly fraught with intimidation, harassment, exploitation, extortion, and physical abuse of students. In addition, misappropriation of research grants, academic dishonesty, and mistrust between academic and non-academic staff are common practices.

This paper analyzes the challenges associated with inadequate infrastructure for encouraging academic best practices and quality service delivery in Nigerian universities. Scoping literature review, participant observation, and narratives captured in six training of the trainer (ToT) workshop sessions organized at two different universities in Nigeria as part of the Carnegie African Diaspora Fellowship Program (CADFP) are adopted in this paper. This paper aims to highlight some challenges affecting academic best practices in Nigerian universities and suggests an alternative approach for promoting academic integrity and best practices, which is a huge issue in the Nigerian higher education system.

To better equip graduate students who will later take up the teaching profession, most universities in the Western world continue to implement strategic policies and programs that foster academic best practices and research integrity. They periodically review and update these programs and policies to reflect current realities in a dynamic world. For instance, graduate programs in higher education teaching, designed to highlight innovative teaching techniques and a better teachable point of view, are available for graduate students in various Canadian universities.

Contrariwise, most lecturers in Nigerian universities neither pass through higher education teaching programs nor engage in periodic training to sharpen their skills. Apart from local or international academic conferences and workshops, other infrastructures to enhance innovative service delivery in the classroom and the research environment are visibly absent. In some other professions, policies, and programs are often implemented to promote constant retraining, performance evaluation, reassessment, quality assurance training, and feedback. These are periodically conducted to enhance best practices. Most Nigerian universities have not implemented periodic student evaluation feedback at the end of the semester to account for improvement on trainers' service delivery.

This paper suggests that higher education regulatory bodies like the National Universities Commission should introduce programs and policies mandating that Nigerian universities focus on promoting academic best practices. Furthermore, each university should develop internal structures, mechanisms, and policies that enhance academic and research integrity. Infrastructure to support and encourage students and staff to reject academic misconduct and report such without attracting any form of backlash should be promoted.

“Destroying any nation does not require the use of atomic bombs or the use of long-range missiles. It only requires lowering the quality of education and allowing cheating in the examinations by the students.” — NELSON MANDELA

Introduction

Education is among the fundamental basic rights of every human being and is one of the criteria for measuring the human development index (HDI). As a component of human capital development, education is a considerable indicator for determining socioeconomic development and the well-being of individuals and societies (Habib & Nauman, 2021). Education and educational institutions contribute substantially to the gross domestic product (GDP) of nations (Goczek et al., 2021). As a significant public good (du Plessis, 2014), education is crucial to global sustainable development in a world fraught with several predicaments and needing meaningful solutions (Golub, 2015).

The importance of education in reducing socioeconomic inequalities and poverty and creating stable opportunities for individuals to reach their potentials informed the declaration of January 24 as International Day of Education by UNESCO. Developed countries with higher percentages of educated people and better infrastructure for quality education delivery processes and standardization are known to have increased human capital accumulation, greater productivity per capita, better standards of living, lower mortality rates, and other subcategories of the HDI that contribute to a healthy economy (du Plessis, 2014; Sulisworo, 2016; Botev et al., 2019; Bruneau & Girard, 2021; Ziberi et al., 2022; Bartak, et al., 2023; Friderichs et al., 2023). The centrality of education to the development of other sectors of any economy, including environmental sustainability and democratic processes, is undeniably evident.

The neoclassical economics concept of human capital supports the view that education improves human capital stock and hence productivity and well-being of individuals and societies (Ranis et al., 2000; Sulisworo, 2016; Bruneau, 2020, Amin et al., 2023). Bruneau (2020) reasoned that increasing the level of education among the labor force will have a positive impact on labor productivity. Friderichs et al. (2023) revealed the connection between income inequality reduction and increasing quality educational attainments, while Amin et al. (2023), in decomposing labor productivity between firms in upper income and high income countries, suggests that the gap in labor productivity among the two categories is linked to structural effect which included educational attainment. Quality education reduces skill mismatch, often affecting labor wage, job satisfaction, and productivity (Ziberi et al., 2022).

The United Nations Sustainable Development Goals (SDGs),

rectified in 2015 by the 193 member states, prioritized education as number four on the list of conditionalities for achieving sustainable development by 2030. The focus, however, is on not just education but quality education. By incorporating the adjective quality to envision the type of education that will propel sustainable development globally, the United Nations SDGs draw attention to the distinction in educational systems across nations (Van den Bor & Shute, 1991; Damon et al., 2016; Suresh & Kumaravelu, 2017; Zaki Ewis, 2020). The SDGs' emphasis on quality education also underscores the need to prioritize academic excellence to accelerate socioeconomic development and reduce global poverty and inequality (United Nations, 2020).

Quality education provides the requisite skill sets for improved human capital development, which drives higher GDP (Sulisworo, 2016). As drivers of a nation's competitiveness, Sulisworo (2016) emphasized not only quality education but also an excellent education system, a rigorous training environment, robust school management principles, research integrity, and better training facilities as incentives for quality education. A culture of academic integrity is crucial for better performance of the education system so that it has more positive effects on sustainable development.

Is Systemic Public Sector Corruption Stalling the Benefits of Increased Investment in the Educational Sector?

Increasing investment in quality education correlates with higher GDP and other indicators of socioeconomic development based on available evidence (Bloom et al., 2006; Otieno, 2016; Hanushek & Woessmann, 2010; Goczek et al., 2021). The perception that education is significant to individual and societal development has provided:

- The impetus for governments of different countries to invest in education,
- Heightened anticipation that better education can inspire innovative approaches to several problems and challenges faced by any society, and
- Concerted and specific attention and efforts in addressing the local challenges in the host community.
- Strategic planning and consultation initiatives to improve education service by some institutions.

Although available evidence in the literature suggests a strong association between sustained investment in education and economic growth (Organization for Economic Co-operation and Development [OECD], 2006; Hanushek & Woessmann, 2010; Liao et al., 2019; Oketch, 2016; Shobande & Asongu, 2022; Esen et al., 2023), some developing countries especially in sub-Saharan Africa have witnessed an uneven relationship between investment in education and economic growth (Van den Bor & Shute, 1991; Konadu-Agyemang, 2000; Mashamba et al., 2022). Such disparity is attributed to fundamental structural challenges relating to the paucity of stable and robust national educational policy and weak institutions (Van den Bor & Shute, 1991; Konadu-Agyemang, 2000), warranting suggestions to revamping the educational policy and curricula in some African countries (Mashamba et al., 2022). The suggestion to revamp the education policy and curricula in some African countries is critical in positioning the education sector to provide the requisite cognitive skills and knowledge relevant to specific employment requirements (Ziberi et al., 2022).

The submission about institutional weakness does not suggest fragility but rather indicates that enforcement of policy instruments to guarantee quality education is often flawed. This reasoning is evident where corruption is prevalent at the institutional and government levels (du Plessis, 2014; Dridi, 2014; Senadjki et al., 2021; Fomba et al., 2022). Many developing countries are saddled with corruption challenges (Transparency International, 2013) that trickle down from the top echelon of the society, the public sector, and public or private educational institutions to the average person and the way the society at large functions (Rumyantseva, 2005; Heineman et al., 2008; Nadeem et al., 2021; Xu et al., 2021).

Theoretical and empirical proofs indicate that in every society where corruption is prevalent at the institutional (governmental) level, economic performance, and sustainable growth face drawbacks. Such drawbacks negatively affect school enrollment, the institutional infrastructure that promotes quality education, human capital growth, innovative approaches to school administration, confidence in the education system, and overall national development (Dridi, 2014; du Plessis, 2014; Page, 2018; Nadeem et al., 2021; Mthiyane & Mudadigwa, 2021; Jansen, 2023). Endemic systemic corruption in the public sector of any nation implies that resources necessary for promoting quality and efficient educational services will be compromised, thereby eroding public confidence in the educational sectors (Mumuni & Sweeney, 2013; du Plessis, 2014).

The Nigerian government, like the governments of many other developing countries, especially in sub-Saharan Africa, has been heavily criticized for high-level endemic systemic corruption, which continues to jeopardize the country's desire to maximize its human and material resources' potentials for

socioeconomic development and greatness (Agbiboa, 2012; Makpor & Akpede, 2014; Page, 2018; Igiebor, 2019). Nigeria's Independent Corrupt Practices and Other Related Offences Commission (ICPC) investigated the level of corrupt practices in the education sector.

The outcome revealed that between 2005 and 2006, more than USD 21 million was squandered through the "illegal and unauthorized utilization of funds." The net effect of this fraudulent embezzlement of public funds meant for infrastructural investment in the education sector is that millions of children were denied access to basic education (Mumuni & Sweeney, 2013, p. 307). This dishonest practice and other reasons explain why more than 54% of Nigerians believe that the education sector is heavily corrupt and is probably the reason why the Nigerian government was indicted for "contributing to the denial of education" access to children (Mumuni & Sweeney, 2013, p. 307).

Complete Autonomy Is Often Absent, Especially In Appointments and Award of Contracts

Appointment of university vice-chancellors and council members for federal universities in Nigeria is heavily influenced by the Minister of Education or even the presidency (a partisan position controlled by the ruling party in power). Similarly, the appointment of vice-chancellors for state-owned universities is overly influenced by the governor of such state and other influential stakeholders, rendering the universities and higher education institutions not entirely autonomous. Levy (1979, p. 113) previously revealed how a military administrator "showed a university vice-chancellor a gun" to intimidate him into resignation.

In such scenarios, the preferred candidate is appointed not meritoriously but on the degree connectedness, loyalty to the power brokers, and or monetary inducement on the selection committee members (Omotola, 2013; Akpakwu & Ojowo, 2014; Alabi, 2016; Afolabi et al., 2020; Olukoju, 2021; Celik & Razi, 2023). The multiplier effects of such flawed interference in the administration of the university system in Nigeria are also felt in the hiring and appointment process of academic and non-academic staff, including professors.

The controversial professorial appointment of a serving Federal Minister of Communication and Digital Economy by the governing council of the Federal University of Technology Owerri, Nigeria, in 2021 generated a lot of tension and controversies (Alabi, 2021).¹

Some stakeholders in the education sector regard this shoddy appointment as one among numerous testaments of

¹ The Federal University of Technology Owerri, Nigeria appointed Isa Ibrahim as the Vice Chancellor of the institution though he was a serving Minister of Communication and Digital Economy. His appointment generated several controversies and conflicting alignments.

how undue government and institutional dysfunctions affect academic integrity and best practices (Jansen, 2023). Like other service sectors, certain infrastructure or policies, tools, skills, ethical conducts, best practices, periodic training, and evaluation are necessary assets to be a successful service provider. Infrastructure can be categorized into physical, ethical, and nonphysical. In some professions, skilled experts are required to undergo periodic training, performance evaluation tests, recertification, and reassessment to retain their license to practice or serve their clients.

The Nigeria Federal Ministry of Education has been pushing to implement guidelines that will require trainers in higher education to at least undergo some teaching training programs to equip them with skills and pedagogical ethics for effective and efficient teaching. These guidelines are scarcely implemented, and only a few universities in Nigeria allow student evaluation of professors at the end of any course.² To enhance confidence and build trust in the Nigerian university system, it is necessary to promote relevant infrastructure and enforceable policies that can guarantee research and academic integrity.

According to the updated OECD (2013) Program for International Student Assessment (PISA) 2021, a school with greater operational autonomy that has implemented the guidelines for feedback from students tends to have better quality assurance and performance improvement. Lack of complete autonomy affects resource allocation and unhindered decision-making on how the institution is run. The few universities in Nigeria with foreign affiliations, such as Nile University of Nigeria, African University of Science and Technology, and American University of Nigeria, tend to perform better because they enjoy more autonomy in contrast to universities with no foreign affiliations. Nevertheless, some private universities still score low in terms of academic integrity because they exhibit high-level academic misconduct and corrupt practices or deviant behaviors (Obalade & Arogundade, 2019).

In this paper, we present the challenges of academic best practices in Nigerian universities attributable to the dearth of appropriate infrastructure that can promote academic and research integrity.

This paper used the ethnographic design method of participant observation and focused group discussions during ToT workshops organized in two universities in Nigeria as part of the CADFP between 2015 and 2019. The ToT workshops formed part of the continuum of the CADFP project titled “ValueCabS: Strengthening Capacity for Promoting and Facilitating Value Chains in the Agri-food Sector to Reduce Food Insecurity and Low Income.”

The first section of this paper is devoted to introducing the problem statement and challenges. In the second section, we conceptualize the keywords of the paper and aggregate relevant literature to situate the challenges of academic and research best practices. In the third section, we present some empirical findings that dampen academic integrity and fuel mistrust in the Nigerian higher education system. The fourth section is the conclusion, including recommendations.

“A good education is a foundation for a better future.” — ELIZABETH WARREN

Literature

At the XVII International Academic Conference on Economic and Social Development, Andreas Schleicher, the author of PISA and the OECD Director for the Directorate of Education and Skills, suggested some factors that can be used to measure success in the educational system. Among the conditionalities are learning from best practices, exchange of experience between teachers, and cancellation of system monitoring (HSENews, 2017). In a previous publication that assessed the OECD 2009 PISA results to address the issue of what makes a school system successful, the authors focused on resource availability, policy environment, and practices in different countries.

Assessment results among OECD member nations suggest varied outcomes in terms of education system performance (OECD, 2010). The report notes that a successful education system is possible when students, regardless of socioeconomic or sociocultural background, are provided with unique learning opportunities, respected, and treated with fairness; schools are autonomous in decision-making in terms of appointments, curricular development, and assessment criteria; the entire education system has coherence; trainers are paid higher salaries, even with smaller class sizes; and the government invests a higher proportion of the country's GDP into the education system in the “form of building, infrastructure, salaries paid to teachers, and administrators and support” (OECD, 2010, p. 84).

Educational systems' performance standards have been a source of major inquiries and concerns (Moss, 1994; Fry & Bi, 2013; Mujiono et al., 2022), often leading to policy reforms

² Veritas University Abuja has started to implement this guideline as part of the recommendation and deliverable of the ToT workshops.

targeting improvement standards and infrastructural upgrades (Moore & Lackney, 1993; Darling-Hammond et al., 2020) and a push for increased public investment in the educational system (Mugaju, 1991; Fry & Bi, 2013) because it is widely asserted that higher performance of the educational system will inevitably translate to an increase in labor productivity and economic growth (Levin, 1998; Kang et al., 2010; Bloom et al., 2014; Oketch, 2016; Kromydas, 2017; Mahmudah & Cahya, 2020).

Public or private investment in the infrastructures that promotes academic excellence undoubtedly produces positive societal externalities. When individuals also consciously and honestly invest in education, the benefits are not only personalized but also can positively impact society and lead to “higher economic gains” (Habib & Nauman, 2021, p. 129). The reverse, and more severe, is the case where investment in the infrastructure that promotes academic excellence and best practices is abysmal or where students are trained in an educational environment that is indifferent to academic integrity.

Academic integrity is related to a shared “internal value system,” which provides a “sense of coherence on core values” to drive excellence and best practices in any higher institution (Jansen, 2023, p. 9). Moreover, an educational workforce trained in a system lacking the necessary pedagogical principles, core value system, and practices will be highly indifferent to academic integrity without additional exposure and provision of infrastructure that will redirect their orientation (Brimble, 2016). The educational system exhibits a direct influence on human capital acquisition. Human capital, on the other hand, is a determinant of variables closely associated with other “drivers of growth including innovation and political and economic institutions” (Botev et al., 2019, p. 5).

Thus, clamor for improvement in standards to reflect public confidence in the system is often a consequence of perceptions that the educational system is underperforming (Mugaju, 1991; Van der Berg et al., 2011; Darling-Hammond et al., 2020; Ogunode et al., 2022; Ogunode & Akimki, 2023), has credibility issues that place a burden on the integrity of the system’s output (Morris, 2018), or needs to transform and modernize because it is an archaic system “based on factory-model conceptions” (Darling-Hammond et al., 2020, p. 133). When the academic integrity of an educational system is questionable, Morris (2018, p. 3) suggests that “a review of existing institutional policy and procedures” to restore public confidence and foster academic integrity becomes inevitable.

Whether at the primary, secondary, or tertiary levels, academic dishonesty weakens the educational system. Habib & Nauman (2021) correlated the productivity of nations to improvement in human capital, which is a byproduct of the education system, noting that the education system “produce[s] responsible citizens of society” who will contribute to economic advancement locally or globally (Habib & Nauman, 2021, p. 129). Emphasis on the education system creating the

type of human capital that can be trusted as being honest or “responsible citizens” is vital.

For example, when the current COVID-19 pandemic became a global health challenge, the world started paying more attention to scientific practices and looked up to infectious disease experts, medical doctors, and the scientific community in the medical field to come up with urgent and lasting solutions to the pandemic (Lavazza & Farina, 2020). Although there were, and still are, several conspiracy theories surrounding the pandemic or spontaneous protests against COVID-19 vaccines (Fleming, 2020), public confidence and uptake of the vaccines are on the rise. Part of the initial cynicism was based on the perception of mistrust or dishonesty by people who are wary of how the disease emerged and the process of vaccine production and clinical trials (Jennings et al., 2021; Cooper et al., 2021). However, as the scientific community and policymakers continue to provide evidence of honest academic practice in research and clinical trials, most conspiracy theories are debunked, and public confidence in the products of the educational system (i.e., vaccines and other medical products to fight infectious diseases) will continue to increase (Funk & Tyson, 2020; Daly & Robinson, 2021; Daly et al., 2021).

Moreover, during an inflationary period, economic crisis, or recession, government people often consult economists for possible policy alternatives to steer the economy away from collapse. Families want medical doctors they can trust to serve their health needs. The public is desirous of engineers they can trust to design and construct roads, bridges, and buildings that will not collapse. The public is yearning for uncorrupt and unbiased electoral umpires that can conduct credible elections in electing government officials. Academic institutions are inclined on recruiting scholars who can conduct research and publications to enhance the institution’s image and reputation. A good education system that produces honest, responsible, and ethically sound citizens provides the rationale for further investment in the education system (Goczek et al., 2021; Ogunode et al., 2022). The net positive externalities of a good education system permeates the entire economy, including the electoral and judiciary systems.

Invariably, public reluctance in adopting or accepting the byproduct of the education system can be construed in part, as questioning the validity and integrity of the entire system. An education system that attracts public confidence and trust is successful because the political class, social class, trainers, students, and other stakeholders “have persuaded their citizens to make the choices needed to show that they value” academic integrity and best practices “more than other things” (OECD, 2010, p. 5). Some of the requisite factors necessary for judging an educational system as successful were outlined during the XVII International Academic Conference on Economic and Social development. Of key interest are the cancellation of system monitoring, the exchange of experience between

teachers, and learning from best practices (HSENews, 2017).

During discussions on the cancellation of system monitoring, it was suggested that trainers must embrace a culture of continuous learning and self-development to maintain quality service and remain relevant as an educational system service provider. But in developing countries like Nigeria, the fact that higher education trainers are paid lower salaries may impede the desire for self-development. Besides, the lack of suitable infrastructure heightened corruption among public office holders, and faulty bureaucratic processes (OECD, 2010; Makpor & Akpede, 2014; Dridi, 2014; Sahnoun & Abdennadher, 2018; Orim & Glendinning, 2023) can greatly affect trainers' incentive for continuous learning to improve the teaching and learning experience. Corruption in the education system that fuels academic dishonesty is said to be connected to the "high stakes of educational opportunity and the large sums allocated to fund it" (Transparency International, 2013, p. 4).

Academic dishonesty triggered by corrupt practices can negatively impacting "the economic rate of return on higher education investment by public institutions and individuals" (Heyneman, 2013, p. 102). According to the OECD (2010, p. 31) report, trainers reported apathy in motivation to improve their service delivery or use innovative approaches to improve their teaching experience because they will "receive no recognition for improving quality of their work." A better salary package and a conducive work environment are among the factors that motivate and retain the best trainers (OECD, 2013). In the case of an exchange of experience between teachers, trainers are encouraged to learn from their colleagues while also pursuing independence in serving their clients.

Learning from colleagues or peers can be a source of maintaining a culture of academic integrity in a school system that has an infrastructure of mentorship and role models. However, the challenge of finding the right mentor or role model in many Nigerian higher education systems is obvious, especially in a school environment fraught with harassment, intimidation (Ladebo, 2003; Agbaje et al., 2021), strife in departmental positions, and other forms of academic dishonesty. McKay et al. (2008) revealed that worker turnover and reduced employee engagement are common features in an educational workplace environment where harassment and intimidation are allowed to thrive. Many universities in Africa, especially Nigeria, are experiencing the exodus of young scholars to developed countries due to a harsh, unfriendly work environment and poor working conditions (Benedict & Ukpere, 2012; Odhiambo, 2013).

Theoretical evidence supports the assertion that an educational system burdened with poor or unsuitable working conditions and dishonesty will be devoid of academic best practices. Yet, "learning from best practices" is one of the factors that can significantly contribute to education system success (HSENews, 2017). Achievement of this goal, however, requires a review of the existing institutional framework,

determination of priority areas of need, and available infrastructure that can support the adoption of academic best practices. Availability of infrastructure and other resources is reckoned as an important determinant of academic performance or equity; a lack of infrastructure can make an educational system perform abysmally (OECD, 2010; Benedict & Ukpere, 2012). Education system infrastructure is construed as the components of physical assets and other facilities connected directly to an efficient and effective teaching and learning process (Abdullahi & Yusoff, 2018).

The OECD (2010) publication omitted a clear indication of what infrastructure is, but it was listed under a theme that explained the systematic organization of a school system that can guarantee student performance and academic excellence. The authors used the term "physical" to indicate the type of infrastructure they envisaged as necessary for better learning performance outcomes. The authors also listed investment in educational resources, which included relevant and current textbooks, better wages for trainers, well-organized non-academic staff, school buildings, availability of transportation facilities, meals for students, and other resources as being of great importance in determining better performance of the system. The authors noted that "the absence of such resources is likely to have adverse effect on learning" (OECD, 2010, p. 83).

The term "infrastructure" was used four times in the paper in connection with learning performance outcomes. In the Transparency International, (2013) publication on global corruption and how it affects the education sector, the term "infrastructure" was used about 24 times in the 499-page document, where majority of the usage equated it to physical structures. Some authors listed infrastructure among other resources that play significant roles in education outcomes. The list includes training, organizational capacity, human resources, teaching and learning materials, curriculum, extra-curricular activities, ToT, pedagogical supports, institutional capacities, investment in the sector, and relevant technology, like communication resources for improved student engagement and overall school system operation (Lapper, 2013; Hyll-Larsen, 2013; du Plessis, 2014).

Heyneman (2013, p. 105), on the other hand, added another layer of conceptualization to understanding educational system infrastructure and how that underscores academic and research integrity, noting that "98% of world-class universities ranked by the Times Higher Education magazine across 40 countries listed an average of nine ethical infrastructure elements like codes of conduct for faculty, students, and administrators" as determinants of academic best practices. In contrast, Lapper argued that all forms of corruption could potentially hinder access to quality education which, in turn, impedes economic development (Vivien et al., 2023). The submission by Lapper is reechoed in a recent publication (Fomba et al., 2022) which connected a mismatch in school completion and educational quality to corrupt practices in government institutions.

Lapper (2013, p. 17) indicated factors such as corrupt admission processes, awards of favorable grades for financial or in-kind incentives, misappropriation of public funds intended as investment for educational infrastructure, fraudulent hiring, staff promotion or unethical appointment procedures (Adamu, 2019; Fomba, 2022; Niemczyk & Rónay, 2022; Ogunode & Akimki, 2023).and failure to screen trainers adequately for fake certificates or academic paper publications. All these anomalies tend to result in “unskilled teaching” staff and subsequent poor service in the education sector. Lapper further stressed that “failing to address corruption [which induces academic dishonesty] and to provide an effective remedy [infrastructure that promotes incentives for academic best practices] to victims constitutes violations of the right to education.”

Conversely, Heyneman (2013, p. 106) advises that notwithstanding the contextual, cultural background (relative to the level of corruption in the government) of any university whose administrators desire to attain world-class academic integrity status and best practices, there must be a conscientious determination to promote ethical infrastructure. If this is not enforced, the likelihood for that university to achieve its mission is “essentially zero.”

Irrespective of the educational system level (primary, secondary, or tertiary), adequate and appropriate infrastructure is crucial to academic performance. According to Pardee (2011, p. 37), “building an infrastructure for quality is a critical piece” of a “strong commitment to high-quality education, beginning in early childhood” because it also influences the performance of trainers and learners. Cuyvers et al. (2011) conducted a survey to determine whether infrastructure is significant in the well-being of students. The authors drew the conclusion that infrastructure (good or bad) will have a potential effect on the well-being of students, which can affect academic performance. In their study, participants responded to the following variables:

Perception of the classroom and the school; involvement in the classroom; contact with teachers; the learning process; infrastructure and facilities; action plans; school atmosphere; regulations; involvement; contact with other members of staff; how the school deals with problems; study pressure; school curriculum and content, the marking system, pupils’ behavior at school, contacts with friends at school; general well-being; perceptions of study pressure; and the curriculum (Cuyvers et al., 2011, p. 3). In other research carried out by Aithal & Aithal (2019) to explain the type of infrastructure necessary for a university to attain the status of a world-class institution, they categorized such essential infrastructure into six groups: academic, physical, emotional, intellectual, digital, and network. The authors noted that when these six infrastructure categories are fully implemented, they can propel an education system to universal academic excellence.

Based on the foregoing, and to avoid ambiguities, we categorize infrastructure as physical, social, and nonphysical. The physical and social infrastructure are tangible structures like

buildings, public roads, communication equipment, multimedia, and information technology devices that can promote quality research, teaching, and learning. Nonphysical infrastructure is intangible and includes the academic policy environment, implementation, and enforcement; mechanisms to promote ethical conduct in research, teaching, and learning; and resources for performance improvement, such as feedback mechanisms from students, mentors, and role models, ToT, reassessment, quality assurance training, and continuous performance improvement (Orim & Glendinning, 2023). Another categorization layer is the ethical infrastructure, such as the value system that regulates academic conduct, culture of excellence, and best practices at the individual and institutional levels (Arar & Saiti, 2022; El-Amin & Marks, 2023; Spiteri, 2023).

Objectives of This Paper

In developing and developed countries, several factors motivate people to pursue a teaching career. Some are inspired by the passion of producing future virtuous intellectuals who will pass the mantle to the next generation. As with other professions, the motives differ but include economics, prestige, emulation, role models, subject matter expertise, inability to get employment in other professions, and even frustration. Regardless of the motivation, teachers are service providers, and students are their clients. It is irrefutable to assert that without the students, teachers would be out of job, excluding researching or consulting. Unfortunately, not every teacher understands this fact. Thus, there is contention in the literature as to whether the marketization of the higher education system is proper (Wong & Chui, 2019; Nixon & Scullion, 2022).

The norm in both developing and developed countries is that some graduate students at many universities end up as academic or non-academic staff. To provide support to graduate students who will later become part of the university workforce, most of the universities in developed countries have designed programs that will help graduate students succeed and maintain the academic and research reputation of the school whether or not they choose to be part of the institution’s workforce. Some universities, like the University of Manitoba and the University of Winnipeg, have designed certificate programs on higher education teaching, apart from requiring strict adherence to academic integrity and mandating that graduate students complete academic and research integrity tutorials (Stoesz & Los, 2019; Eaton et al., 2019).

Also, at the end of each course, students complete course evaluation materials to provide feedback to the teachers for performance improvement. These types of nonphysical infrastructure are seldom available for lecturers and graduate students in most Nigerian universities. Besides, most Nigerian university teachers are unwilling to allow their institution to introduce course evaluations at end of the semester. Bearing in mind the external and internal institutional challenges,

including endemic corrupt practices in the country that contribute to academic dishonesty in many Nigerian universities, the objectives of this paper are to:

1. Present and share experiential lessons gained from several sessions of ToT workshops organized between 2015 and 2019 as part of an international two-university CADFP collaboration.
2. Motivate cooperation and collaboration within the Nigerian university community and between African diaspora scholars to cultivate a culture of academic integrity, excellence, and best practices.
3. Encourage periodic ToT workshops in all the universities by leveraging the expertise of diaspora scholars and other stakeholders.
4. Pave the way for an in-depth empirical study to unravel more academically dishonest practices and make recommendations on how they can be redressed.

Material and Methods

During the first phase of the CADFP partnership, several unprecedented incidents of academic misconduct related to the absence of an operational physical and nonphysical infrastructural framework was observed among academic and non-academic staff and students. The severity of some incidents could have attracted punitive punishments in an academic environment where ethical infrastructure is enforced. In one instance, a second-year engineering student was slapped in the face and pushed out of the office. Upon thorough interaction with the student, it was found that the victim had genuine issues that required a compassionate approach, but the lecturer insisted without any modicum of remorse that students are habitual liars and fraudulent. In another example, a young female academic staff's research grant was misappropriated by the dean of the faculty, who was the "principal applicant."

Though the female staff (a fresh PhD graduate) did a major part of the grant proposal, the research funds were lodged in the personal bank account of the dean of the faculty—a practice that is uncommon in Canadian universities (research funds are lodged in the university bank account, not individual bank accounts). Based on the aforementioned personal experiences and other observed academic dishonesty and misconduct, we initiated collaborative discussions with our host institution to organize ToT workshops. The methodology was based on the collaborative need-based approach (CNBA) or need-based approach (Barry & Santarelli, 2000; Roy & Rangnekar, 2007; Timmis & Williams, 2013). The CNBA framework encourages innovative solutions to collective problematic issues, aimed at improving a status quo that impinges productivity and performance.

The CNBA approach is grounded in the social innovation theory (Farmer et al., 2018; Logue, 2019). Ghosh (2014)

suggests that proper adoption of the need-based approach will result in the gradual integration of innovative problem-solving among the target group. This method of generating problem solutions is achievable through the involvement of all stakeholders in defining the problem, setting SMART (specific, measurable, achievable, relevant, and time-bound) goals, analyzing resource availability for solution sets (alternatives), and learning new perspectives for addressing other socioeconomic or sociocultural challenges in their immediate environment. Our host institution accepted the proposal and, jointly with our collaborators, we started ToT workshops and personalized mentoring of young scholars and graduate students.

The first was carried out at the Federal University of Technology Owerri with academic and non-academic staff and graduate students as participants. Subsequently, we initiated and completed similar activities at the University of Abuja and Veritas University Abuja. Workshop keynote speakers included scholars from other universities and public servants who previously worked in the university environment as professors. Keynote speakers were collaboratively drawn based on a track record of academic excellence, mentoring, and role modeling attributes. The workshop format was usually interactive, with presentations and breakout sessions to discuss case studies.

Case study materials (see appendix) were drawn from the observed incidents and crafted in a story format to veil the identity of victims or offenders. We also incorporated personal experiences from our home universities. The workshop presentations typically included presentations and discussions on academic excellence, academic best practices, academic and research integrity, preparing and writing grant proposals, student-lecturer relationships, building trust among students and academic and non-academic staff, use of innovative smart learning tools, and the importance of student evaluation and feedback mechanisms, among other topics that keynote speakers were inclined to present. The focus of every workshop targeted the provision of ethical infrastructure and tools for developing a better teachable point of view, teaching philosophy, appropriate pedagogical dynamics, good classroom conduct, and mentoring and role model attributes—all necessary for the improvement of service delivery in the academic environment.

Cases Of Academic Misconduct in Nigerian Universities

Academic dishonesty and poor performance ratings in the education sector resulting from corruption is a huge challenge in developing countries. The scale of intensity is also heightened in developing countries compared to developed countries. For example, while only 19% of Germans believe that their education system is corrupt, most believe that academic best practices and integrity are strongly upheld by most German universities and research institutes (Wolf, 2013, p. 178). In contrast, 72% of Cameroonians regard their

education system as corrupt, with high teacher absenteeism that reduces the quality of educational services provided to the students (Ngwe, 2013, p. 74). Corruption in the management of investment funds for educational infrastructure is more complicated in developing countries because offenders are not often appropriately prosecuted.

For instance, the Nigerian Joint Admissions Matriculation Board, a federal government institution with the oversight function of higher education admissions in Nigeria, was rocked with an embarrassing embezzlement saga in 2018 totaling over USD 100,000. The staff accused of misappropriating of this fund alleged that the money was “swallowed” by a snake that

sneaked into the office where the money was lodged (Page, 2018; Elekwa, 2022). Other documented cases of academic misconduct and dishonesty involve professors and students.

In the following section, we present documented cases of academic dishonesty, misconduct (ADM), and harassment in Nigerian higher education institutions. The cases presented here have been published in academic journals or national and international news media or are ongoing cases that are being prosecuted at the relevant courts of law in Nigeria. Selection criteria for research articles was based on whether the paper was referenced more than 10 times and published in a reputable journal.

AUTHOR/DATE: LADEBO (2003) CITATION RATE: 62 (FEBRUARY 24, 2023)

Study Purpose	The author was motivated by the statement of the former Nigerian president, Olusegun Obansajo, who chided Nigerian university professors for being unproductive and using female staff and students for pleasure gratification. The comment by the former president generated mixed reactions in academia and the public. The aim of the study was to conduct an empirical survey to determine whether the claim was true and, if so, how widespread.
Methodology	The study was based on an empirical case study of three tertiary institutions to answer some research questions about whether sexual relationships among staff and students were consensual, voluntary, and widespread. Data were grouped into three separate case studies (Case I, II, and III).
Main Findings	<p>Case I: Detailed findings from a private university established in 1958 initially focused on theological education degree and certificate programs. Later, the university gained accreditation to award degrees and certificates in nonreligious related disciplines. Based on its mission, the university’s staff and students are required to have some religious backgrounds. At the time of this study, the university had 2,150 students and 120 staff.</p> <p>Findings:</p> <ul style="list-style-type: none">• Widespread sexual harassment was uncommon for Case I (probably due to the university’s religious background).• There were cases of consensual sex between students and staff.• Female students who were academically weak exchanged sex to get better grades. <p>Case II: Based on evaluation of a federally funded university established in 1988 with 3,778 students and 258 staff. The university had no ethical infrastructure to deal with sexually related academic dishonesty and misconduct (ADM), but that does not imply that such fraud was endorsed.</p> <p>Findings:</p> <ul style="list-style-type: none">• Between 1998 and 2000, two cases of sexual harassment and exam malpractices between staff and students were documented.• Extortion of money and demands for sexual relationships for better grades were reported.• ADM connected to sexual misconduct for grades or other incentives with students traversing the sphere of academic and non-academic staff.• Sexual coercion existed but was less common than consensual sex. Two academic staff faced disciplinary action and were eventually dismissed upon conviction.• Cases of sexual harassment and other forms of intimidation were often underreported for various reasons.

**Main Findings
(continued)**

Case III: Empirical analysis based on a state government-owned university established in 1983 with 18,000 student enrollment and 481 staff. The university had no official ethical infrastructural policy to punish sexual harassment offenders, but victims could lodge complaints with the student affairs department.

Findings:

- Sexual harassment between staff and students was widespread, leading to the termination of two faculty staff within the last six years.
- Two staff, a male boss, and a female subordinate, engaged in a physical fight based on alleged coercion for sexual gratification. Sexual trading for better grades was widespread, initiated by both the staff and female students.
- Students who identified themselves as “cult members” sexually assaulted others.

Comments

Although this research was published long ago, the situation has not abated; , it has become more complicated. This research captured academic dishonesty and misconduct (ADM) at public, private, and faith-based universities. It is important to note that cases of sexual harassment are grossly underreported. With the advancement in communication technology, however, some recent cases have been captured on video and disseminated via social media (Akpambang, 2021). Incidents of ADM academic relating to sexual misconduct is common even at faith-based higher education institutions. In 2018, a faculty member at one of the institutions where we collaborated was fired after facing the Senate Disciplinary Committee due to sexual harassment and extortion of money from students for higher grades. There were also cases of selling academic resource materials, like handouts, which are prohibited by the school.

AUTHOR/DATE: MEZIE-OKOYE & ALAMINA (2014)

CITATION RATE: 28 (FEBRUARY 25, 2023)

Study Purpose

Investigate the prevalence of academic dishonesty and misconduct (ADM) related to sexual violence on female undergraduate students and unpack the dimensions of such abuses and the physiological, psychological, and health impacts on victims.

Methodology

The study was based on a cross-sectional survey of respondents at the University of Port Harcourt, Nigeria, a school with 24,034 students. At the time of the survey, 48.3% of the students were female. The cohort were mainly females who resided at the university's hostel and had spent at least one year in the hostel. The author opined that living in the school hostels made them more prone to harassment than those living off campus or coming from their parent's homes. The survey's sample size was 430 respondents, but the data analysis was limited to 412. Statistical bivariate analysis was done using Epi Info v6.04d.

Main Findings

The survey was conducted in 2010, the mean age of the respondents was 22.10, and the respondents were mainly in the first and second years of their studies. This factor can place them in more vulnerable and compromising situations because they are young, new to the system, and may be struggling with the challenges of transitioning from high school to university.

Findings:

- Sexual violence was widespread, perpetrated by male students and university lecturers, and grossly underreported.
- Those who were less than 22 years of age experienced sexual violence (53.3%), and students in their first year of the study experienced more sexual violence (60.9%) compared to students (40.2%) who have stayed more than two years at the institution.
- Prevalence of sexual violence in Nigeria was compared to that of other African countries and the United States. The pervasiveness in Nigeria was higher.

Main Findings

- Lecturers constituted significant perpetrators of sexual violence. This finding conforms with other research findings across the country and in other African countries.
- The health impact was present but varied among victims. Cases of sexually transmitted diseases were reported, including physical injuries, depression, a sense of guilt, trauma, and mental health.

Comments

This study focused on sexual violence. Nevertheless, other forms of academic dishonesty and misconduct were prevalent. While female students were coerced into sex for better grades, male students were subjected to other extortion, bullying, and abuse of trust.

AUTHOR/DATE: ARCHIBONG (2013)

CITATION RATE: 21 (FEBRUARY 25, 2023)

Study Purpose

The author deviated from what was viewed as a conventional practice, which was to investigate academic dishonesty by Nigerian students only without extending it to lecturers. The goal was to enrich knowledge on cases of academic dishonesty and misconduct by academic staff by probing the forms of dishonesty, prevalence, and strategies to mitigate against the threat of academic dishonesty and its effect on performance.

Methodology

The case study was of one university and one college of education in Rivers State, Nigeria. The survey instrument was an open-ended questionnaire that solicited a response from lecturers across different disciplines. The sample size was 200, with a completion rate of 52%, covering 66 male and 39 female staff. Respondents included assistant lecturers, lecturers I-III, senior lecturers, principal lecturers, chief lecturers, associate professors, and professors.

Main Findings

Various forms of academic dishonesty were reported, including unethical research conduct, plagiarism, and "swamping" student research papers or theses of those they supervised to gain promotion. Swamping is a dishonest practice where a supervisor intentionally submits a student's term or research papers for publication without the student's consent or given credit for the publication (Archibong, 2013, p. 41).

Findings:

- Lecturers forced students to buy shoddy textbooks/handouts by bonding such to graded assignments, extorted money, and sex for better grades. Lecturers also indulged in writing projects, seminar papers, or theses for students for monetary gain or sexual gratification.
- Lecturers released exam questions for money or sex, claimed authorship in papers without any reasonable input, manipulated data and results (swamping), held dual full-time academic positions in more than one institution, practiced absenteeism, administered exams without teaching or covering the course outline, and provided avenues and incentives for students to cheat during exams and assignments.
- Lecturers abated exam malpractices, allowed students to grade exams and assignment papers, victimized students, and unduly delayed the grading of student exams and assignments.

Comments

The completion rate was low, which is understandable because academic staff may have been reluctant to complete the survey. The survey questions were extensive, which might have made lecturers uncomfortable, especially if they were culpable in some of the areas. It is interesting to note that the challenge of academic dishonesty is prevalent even at colleges of education institutions that train teachers.

The findings in this paper conform with similar research reporting cases of academic dishonesty.

AUTHOR/DATE: NKANG (2013) CITATION RATE: 12 (FEBRUARY 26, 2023)

Study Purpose	<p>Investigate physical and ethical infrastructure availability that can promote quality service (academic excellence) in Nigerian universities.</p> <p>Determine the perception of quality assurance between male and female professors and suggest ways of improving quality education service in Nigerian universities.</p>
Methodology	<p>Empirical data were collected from 225 male and female professors. The survey instrument was a structured questionnaire meant to gather data for testing a set of hypotheses. Confirmation of the hypotheses was done using t-test statistics.</p>
Main Findings	<p>External and internal factors contributed to the challenges experienced in the Nigerian university system in terms of physical and nonphysical infrastructure.</p> <p>Internal factors correlated to management and performance competency, while external factors were associated with a lack of motivation for quality service and accountability to academic best practices necessary for education system performance. This challenge can be connected to the dearth of physical, nonphysical, or ethical infrastructure.</p> <p>Findings:</p> <ul style="list-style-type: none">• Improvement of quality assurance, academic excellence, and mechanisms to enforce academic integrity requires a holistic approach and institutional change.• Poor quality assurance and academic best practices are common among Nigerian universities, placing them at a deficient rating globally.• In Nigerian universities, the physical, nonphysical, and ethical infrastructure is inadequate to guarantee and sustain quality service.• Sound ethical work culture is deficient, which affects academic and research conduct as well as relationships with students and other staff members.
Comments	<p>The paper focused on the mechanisms to improve quality assurance or academic best practices in Nigerian universities. The perspective of this paper is significant because it underscores the importance of quality service in the education sector and how it correlates with performance and productivity. The author rightly noted that it is impracticable for a nation to attain sustainable development without substantial improvement of the intellectual capabilities of the teachers/professors who provide the service needed to grow human capital.</p>

Discussion

Universities are generally established to provide quality education to students who are focused on acquiring academic knowledge that can potentially position them for a decent career so they can become useful to themselves and society. Apart from contributing to improvement of human capital stock, universities are expected to provide sustainable solutions to the challenges of their immediate environment. Local demand for knowledge for solving human problems should push the demand for creativity in the education sector. As such, the university environment is supposed to promote and support a teaching and learning environment that will enhance productivity and ethical conduct. As an instrument of human capital development, the education system is crucial for a healthy economy in all ramifications. For the education system to fulfill the critical role of human capital development, however, certain infrastructures are inevitably necessary.

These infrastructures range from physical to ethical. The professors/teachers coordinate the physical, nonphysical, and ethical infrastructures to derive human capital formation and development. The perspective provided by the human capital formation theory provides the impetus to understand why the cost of education is high, and investment in the sector is sometimes a priority. It can also explain why the teaching profession is viewed as a noble or prestigious career that attracts many people for several reasons. The nobility of the teaching career is evident in this widely held view in Nigeria that “teachers’ reward is in heaven.” Understandably, many people are attracted to the teaching profession for various reasons, including prestige, contribution to human capital improvement, and producing future leaders. Thus, teachers are service providers. However, to provide a service that can serve the needs of the students requires dedication to excellence in service and quality assurance, devoid of personal interest and all forms of dishonest, fraudulent practices. Unfortunately, the Nigerian education system continues to suffer from the effect of corrupt practices.

Does The Educational System Require Decolonization?

Some have suggested that the type of educational system bequeathed to Nigeria and other developing countries is flawed and faulty from inception due to colonial parochial interest. This perception has led some authors to demand the decolonization of the African educational sector (Uleanya et al., 2019; van der Poll et al., 2020; Abdullahi, 2021). A study by Uleanya et al. (2019) that investigated academic performance among undergraduate students in a South African university suggests that poor academic outcome is a byproduct of flawed educational policies and curriculum design. The study recommended decolonization of the education system to overcome the challenges.

Abdullahi (2021) used the term “academic imperialism” to mirror the effect of colonialism in the education sector, using it to make a case for the decolonization of the education sector. Isiorhovoja (2021) alluded that colonialization has produced a dysfunctional education system that needs decolonizing. The author suggested infusing indigenous knowledge into the education sector to solve local problems. A dysfunctional educational sector ostensibly lacks the infrastructure to promote a learning environment and academic integrity among lecturers and students (Fomba et al., 2022). Poor academic performance can compel students to seek ways of improving their grades. Female students can be tempted to lure male lecturers, while others can resort to offering money to lecturers. Corruption in Nigeria’s education takes cues from systemic corruption in the public sector.

The scenario in Nigeria mirrors similar challenges in other African countries (Mugala et al., 2022). We have presented four peer-reviewed research papers that documented evidence of academic dishonesty in Nigerian higher institutions of learning. Most were focused on sexual harassment (Ladebo, 2003; Owoaje & Olusola-Taiwo, 2009; Taiwo et al., 2014; Mthiyane & Mudagigwa, 2021). Research papers that discussed other forms of academic dishonesty and misconduct were focused mainly on the students. Only a small proportion of papers discussed the problems of academic misconduct among trainers. Extortion, intimidation, and harassment for financial gain are other forms of academic dishonesty among trainers. In one instance, the head of a department in one of our collaborated universities forced students of his department to transfer their common funds into his personal account.

The students who acted under duress had no other option than to do as mandated because failure to comply would result in severe repercussion on their academic grade. Anecdotal evidence suggests that colonial structures in the education sector contributed to academic misconduct (Konadu-Agyemang, 2000; van der Poll et al., 2020; Mthiyane & Mudagigwa, 2021). However, some authors have argued that colonialism should not often be blamed for all the endemic systemic corruption in the public and private sectors in Nigeria and other African countries because it appears like corruption predates the colonial era (Ogbeidi, 2021), just as Rose-Ackerman (1999) stressed that both the person who offers a briber in return for any benefit and the person who takes the bribe are all corrupt.

Incidents of sexual harassment in the workplace, especially between professors and students in the education sector, have recently become widespread (Wamoyi et al., 2022; Orfan et al., 2022; Wayomi et al., 2023). A previous study by Owoaje & Olusola-Taiwo (2009) revealed that about 70% of female respondents in their study experienced a form of sexual harassment from either lecturers or male colleagues. Of this figure, 48% were physically harassed, while the rest (32%) were subjected to other forms of sexual exploitation in return

for academic favors. In another study conducted by Taiwo et al. (2014) that involved 2,500 respondents with an average age of 22 years, 97% of respondents indicated knowledge of sexual harassment occurring. Victims of sexual harassment are mostly female students (98%) in the hands of male lecturers, according to Taiwo et al. (2014).

A recent study by Mthiyane & Mudagigwa (2021), however, suggests that sexual harassment by lecturers is also prevalent among male students. With the advancement in communication technology and social media, cases of sexual harassment are now being reported (Akpambang, 2021). However, due to the lack of clarity as to what constitutes sexual harassment (Wayomi et al., 2022), especially in developing countries like Nigeria, actual cases of sexual harassment are rarely documented (Orfan et al., 2022; Mousa & Abdelgaffar, 2022). Other compelling reasons for nonreporting of sexual exploitation are linked to fear of victimization or stigmatization (Lubale et al., 2023). Unfortunately, the offenders are seldom punished (Orfan et al., 2022; Mousa & Abdelgaffar, 2022), while the victims are affected by health, psychological, and emotional problems. Addressing the challenges of academic dishonesty and best practices will require inter- and intra-institutional level changes. It will also require additional infrastructure dedicated to ToT. Between July 2018 and June 2019, we organized six sessions of ToT workshops, all focused on promoting an infrastructure of trust among trainers. This conscientious effort in organizing ToT workshops is essential because it can contribute to filling the nonphysical infrastructural gap.

Should Systemic Public Sector Corruption Take All the Blame for Academic Dishonesty?

It might seem legitimate to blame systemic public sector corruption for academic dishonesty and lack of best practices (Fomba et al., 2022), but individual universities (private and public) are marred with corrupt tendencies or deviant behaviors (Okonta & Rossouw, 2023; Obalade & Arogundade, 2019). Okonta & Rossouw (2013) documented a high rate (69%) of academic misconduct and dishonesty among scholars at some point in their careers. Obalade and Arogundade's study on the ethical environment and how it contributes to deviant behaviors revealed that both private and public universities experienced academic dishonesty.

Academic dishonesty and lack of best practices promote sexual inducement for academic grades, falsification of results, plagiarism, and all forms of malpractices in the education system (Githaiga et al., 2023). Hiring of academic and non-academic staff, payment for student admission processes, award of contracts, and utilization of research grants are among the many areas affected by internal corrupt practices in several universities (Mugala et al., 2022; Githaiga

et al., 2023; Jansen, 2023; Orim & Glendinning, 2023). Arguably, external government officials interfere with the autonomy of the universities. However, the education system is ostensibly projected as an emblem of the national asset (van den Bor & Shute, 1991) required for building a robust and progressive nation.

Thus, it ought to be the moral beacon of ethical conduct, values, and virtues in every civilized society. This assertion is intuitively plausible because the education system is exclusively responsible for producing medical doctors who respond to the health challenges of the citizens, engineers who design and construct infrastructural needs of the nation, economists who formulate development policies, and trainers who train these and other professionals. Universities are, therefore, service providers with a mandate to serve the academic needs of the public directly or indirectly, locally, nationally, or internationally (van den Bor & Shute, 1991; Scott, 1999; Kindlein & Schwaiger, 2015; Kardoyo et al., 2019).

Although specific economic or noneconomic incentives can motivate individuals to join the teaching profession, only a handful of trainers consciously understand that they are service providers and students are their clients or customers (du Plessis, 2014; Kardoyo et al., 2019; Latif et al., 2021). Some trainers may presumably imagine that being a subject matter specialist is all that it takes to be a successful service provider in the teaching and learning environment. This worldview is erroneous because unless the trainer sincerely understands the process of communicating academic or technical knowledge to students in an ethically appropriate manner, the outcome will be flawed (Holt-Reynolds, 1999), and it compromises the education system as well as erode trust and confidence (Mthiyane & Mudagigwa, 2021; Mugala et al., 2022).

Conclusion: Implication on Academic Best Practices

African students who acquire their basic foundational academic training from African schools contribute significantly to the number of international students at higher education institutions in North American, European, Asian, and Australasian countries. The standard of education in many African countries like Nigeria is quite low compared to developed countries like Canada and the United States, where students from Africa usually apply for international student admissions. Education is among the fundamental basic rights of every human being and forms part of the criteria for measuring HDI.

As a component of human capital development, education is a considerable indicator for measuring socioeconomic development and the well-being of individuals and societies. Education and educational institutions contribute substantially to the GDP of nations, and it is crucial to global

sustainable development. Individuals in developed countries with higher GDP are reckoned as experiencing higher standards of living, lower mortality rates, higher educational standards, and other subcategories of the HDI and a healthy economy. Professors and teachers are important drivers for human capital growth.

A faulty system and process will produce faulty output. For instance, many teaching and learning environments in most Nigerian universities suppress any effort to achieve academic integrity and best practices. Sometimes students are crammed together during examinations, providing incentives for exam malpractices. Some lecturers only appear in the classrooms to teach when examinations are getting closer because they are engaged in other careers or teaching at more than one university. In some instances, students are given “marathon” lectures.³ It is important to initiate and sustain collaborative efforts that can promote academic excellence in Nigerian higher institutions of learning through sound and implementable physical, ethical, and nonphysical infrastructure.

Recommendations

- All tertiary institutions of education should institutionalize policies against sexual harassment and abuse. For universities with existing academic and research integrity policies, enforcement of such policies should be pursued,⁴ along with constant reevaluation and improvement to reflect current behavioral changes.
- Tertiary education regulatory organizations in government, such as the National Universities Commission, should make it compulsory for any prospective applicant for a license to open a new university to show evidence of having put in place enforceable regulations for academic best practices, particularly as it concerns teachers/professors, students, staff, contractor relationships, and morals in the educational system.
- Universities in Nigeria should leverage the expertise of diaspora scholars and collaborate with them in designing robust research policy frameworks and other nonphysical infrastructure that promotes world-class academic best practices.
- African diaspora scholars should collaborate with domestic scholars to build platforms for mentorship, role models, supervisory roles coaching in grant proposals, and other areas that promote academic integrity. Periodic ToT workshops should be organized in collaboration with diaspora scholars to enable trainers to retool, and lecturers should be comfortable receiving feedback from students in the form of evaluations.
- Universities should organize periodic townhall meetings or workshops with major stakeholders, including the host community, to enlighten them on the policies, efforts, and other infrastructure in place to curtail academic dishonesty and misconduct (ADM). When stakeholders discover that the university is making genuine efforts to promote an infrastructure of trust, their trust can be reinforced.

³ In one of the universities where we collaborated, some lecturers are known to give students lectures of more than seven hours, sometimes running into late nights.

⁴ Between 2016 and 2021, the university senate of the Federal University of Technology Owerri passed the sexual abuse and harassment policy, which set penalties and punishment for staff and student offenders, including contractors and their staff. It included research and plagiarism policies to prevent incidents of abuse, which the university council approved and made operational. However, enforcement is always stalled, mainly due to other forms of corruption.

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APPENDIX

PRESENTS: 2019 TRAINING OF THE TRAINER WORKSHOP
THEME: BUILDING AND PROMOTING AN INFRASTRUCTURE OF TRUST AMONG THE TRAINERS

Case Study 1: Handling Grant Money

Introduction: Universities all over the world depend on research grants and internally generated revenue to meet research-based financial obligations and other expenditures. Therefore, research grant writing is a significant integral of any university wishing to remain competitive and relevant in our dynamic world. Moreover, research grants are meant to fund specific primary or secondary research, which contributes to personal and institutional growth and development. Hence, every university places substantial attention on encouraging the academic staff to seek and apply for research grants.

Scenario: In this case study, we present a case that happened in a university with respect to research grant money. A young lecturer, a recent PhD graduate, applied for a research grant meant for a study in infectious disease. The research grant amount was USD 60,000. Part of the criteria for the award of the funding was that the principal applicant must be in the rank of a professor with about 10 years of experience. The young graduate did not meet that criterion, and she was advised by the faculty to make the dean of the faculty the principal applicant and herself the co-applicant. The young scholar developed the research proposal, completed the application, and submitted all the required documents for the application.

The application was successful, and the fund was released; however, the fund was supposed to be lodged in a domiciliary account. Because the dean of the faculty was the principal applicant and he operated a domiciliary account, the money was deposited into his account.

A few days later, the dean bought a new car and a new house, and his wife changed her wardrobe. Meanwhile, the young scholar waited for months after the fund was released, and there was no word from the dean. Upon inquiry, the dean became hostile. After the young lecturer consistently approached the dean for the release of the research grant, she was threatened by the dean. Subsequently, she started receiving calls from the dean's wife, who warned her to stop bothering her husband or she would not be around to tell the story. The young scholar was afraid for her life and career future, and she was at a crossroads as to what to do next. She could not report to other colleagues or take up the matter because the dean was influential in the university.

Task: Evaluate the scenario critically, identify the problems, and discuss the main pitfalls of the process and what you think should have been done differently.

- If you were this scholar, what would you do?
- What advice can you give this scholar?
- How could this situation be avoided?
- If you were the director of the funding agency, would you grant additional research funding to this university?
- Was the dean's wife justified in defending her husband?
- If this research was not carried out, does this influence the economy and the populace?
- What other problems do you see in this scenario?

Case Study 2: Misplaced Research Funding Utilization

Scenario: This happened at a university of technology. A young lecturer who completed his PhD in the UK had just returned to continue his lecturing job at the university in Nigeria where he obtained his first degree in electrical and electronic engineering. With the network he developed in the UK, he liaised with his doctoral supervisor to attract research funding for his university. His university signed the memorandum of understanding for this research funding; however, at the last minute, the university reconstituted a committee for the research funding.

The management decided that senior professors from the department of humanities should head the committee, meaning professors from departments that were unrelated to the main research became members of the committee in place of the young lecturer. This incident was not the first time that the young scholar was undermined in this type of scenario. The young scholar became discouraged and started considering going back to the UK to pursue his career.

Task: Discuss this case study and come up with some solutions.

- Are there some problems that you can identify in this second case study?
- Do you think this type of scenario will improve the fortunes of this university in terms of additional research grants?
- Do you think that young scholars will be motivated to write research grant proposals based on what happened in this case study?
- What recommendations can you come up with in terms of this situation?
- If this happens at Veritas University and you are asked to head the committee, though the research topic is not in your area of expertise, would you oblige, especially as the research funding is over 80 thousand Pounds?
- What other suggestions can you make to correct this type of situation from occurring?

Case Study 3: Student–Lecturer Relationship

Introduction: As service providers, we have been taught that we need to treat our clients (the students) with the utmost respect and compassion. We are also instructed to treat students with discretion, giving them the opportunity to gain our trust and respect.

Scenario: A student in your class has just asked you to “friend” them on Facebook.

Task: Discuss what you should do in this situation.

- As the student’s professor/lecturer, how should you respond?
- What are the implications as a teacher of the younger generation?
- What are the considerations that you need to keep in mind?

Case Study 4: More on the Student–Lecturer Relationship

Scenario: A student in your class has just traveled to the UK with their parents on holiday. This student is among the top/bottom in your class. The student returns with a gift they bought for you, which happens to be something you have wanted to get.

Task: Discuss what you should do in this situation.

- As a professor/lecturer who has been taught about conflict of interest, how should you respond to this gift?
- Should you accept this gift? Have you had a situation where students offered you gifts before?
- What are the implications of accepting the gift?
- What are the considerations you need to keep in mind?
- Is it proper to accept unsolicited gifts from your students?

In many public and private Nigerian universities and among many lecturers and researchers, a great disconnection in academic best practices and standards persists. Economic and noneconomic incentives motivate people to join the teaching profession. Notwithstanding, lecturers are service providers, and students are their clients. Not many people are cognizant of this reality. Thus, in some universities, the academic environment is still overtly fraught with intimidation, harassment, exploitation, extortion, physical abuse, misappropriation of research grants, and suspicion among academic and non-academic staff. Coupled with a lack of mentors and role models in some cases, young scholars often waver between maintaining the status quo, doing things differently and becoming targets for harassment, or seeking a better work environment abroad.

For service providers to be successful, certain policies, tools, and skills are mandatory. In some professions, policies are implemented to promote constant retraining, retooling, performance evaluation, reassessment, quality assurance training, reexamination, and feedback mechanisms to enhance best practices. Such policies are intended to guarantee that the service provider is systematically equipped in our dynamic world of technological advancement. Universities in Nigeria and Africa deserve such innovative policies, in addition to participating in academic conferences, to make the teaching and learning environment appealing.

Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Practicum as Signature Pedagogy: Nigerian Apprenticeship Model for Building Institutional Capacity for Professionalizing Social Work Teaching and Research

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ABSTRACT

In 2018, the University of Lagos established a Department of Social Work to train social workers. Lecturers, seconded from the Department of Sociology, identified knowledge gaps in social work education, particularly in practicum, the signature pedagogy of the profession. In 2019, on the host university's invitation, I undertook a 90-day fellowship focused on practicum. Professional disciplines require practical skills development and practice ethics. I facilitated curriculum design, field integration seminars, and practicum workshops for over 200 students, faculty, field instructors, and practicum staff. The trainings culminated in the publication of a field education handbook to document agreed-on roles, responsibilities, processes, and procedures to promote effective practicum placement, supervision, and learning evaluation. Practicum is a mandatory component of the requirements for the award of social work degrees but valuing and incorporating indigenous knowledge, customs, and traditional helping relationships has potential for equipping future social workers to address local social problems. Similarly, qualitative research has salience for understanding local complex human development, mental health, and sociocultural determinants of health. African diaspora dual understanding is beneficial in contextualizing, honouring, and critically interrogating culture to enhance sustainable higher education. Therefore, I plan to return with a cohort of African diaspora scholars to collaboratively build capacity for conducting qualitative practice-informed social action research, promote research ethics, and facilitate online and in-person research institutes for graduate student mentorship, grant writing, and research exchanges that benefit Nigerians.

Introduction

My 2019 fellowship at the University of Lagos was built on the Social Work in Nigeria project (SWIN-P), an international collaboration between Nigeria and Canada. Like the SWIN-P project, this fellowship focused on building institutional capacity by helping the new Department of Social Work train social workers using a train-the-trainer model for sustainability. The practicum, also known as field education or a practice internship, is the signature pedagogy of the social work profession and was identified as a huge gap by non-social work-trained lecturers seconded to the new department. As a fellow of the Carnegie Foundation, which promotes African diaspora connections with higher education institutions on the continent, I worked with the host liaison on professionalizing social work teaching and learning by training lecturers and practitioners to equip students to address social problems through practicum placements.

The University of Lagos participated in the SWIN-P 2009 roundtable "Educating for Social Change: (Re)Visioning Social Education in Nigeria for the 21st Century" and the 2011 launch of the Nigerian Association of Social Work Educators (NASWE). The aims of NASWE included biannual conferences, regulatory legislation for the profession, and more social work programs

across Nigeria. Although the conferences have not been held as planned and an enabling legislation has not been passed, universities are recognizing the economic potential of social work programs and have begun creating or expanding them at their institutions. University of Lagos created a social work unit in 2014 despite there being few social work-trained lecturers and practitioners, and by January 2018 the unit attained departmental status, but it lacked active training of the lecturers, and no field education staff were hired. This reflects the global proliferation of universities and new programs globally, which Preston et al. (2012) note is driven by an entrepreneurial agenda, and makes the lack of training and resources concerning, further highlighting the need for the fellowship.

Undoubtedly, this program has tremendous potential, being in Lagos state, with a population of over 15 million. Nigeria itself has a population of 214.9 million people (Worldometer, 2022), and is the gateway to the rest of Africa. Such massive size has population health implications—including mental health, which remains stigmatized in sub-Saharan Africa—so social work programs have huge needs to address. The lecturers with non-social work backgrounds were challenged, as practicum had not been understood or integrated thus far, leaving a gap. Social work is both an academic and professional discipline

and practicum is the signature pedagogy; therefore, future social workers need experiential field education. Workers help clients navigate social emotional, medical, and mental health challenges exacerbated by rapid population growth; urbanization; discovery of oil, which heightened poverty; corruption; substance dependency; gender role reversals; displacements; domestic violence; and child maltreatment. To align with this profession, Nigerian social workers must be equipped with professional ethics and ethos to alleviate oppression and promote equity meaningfully within the local context (International Federation of Social Workers, 2020). There is immense opportunity to infuse classroom and field education with Africa's rich communal culture and indigenous helping structures previously devalued by colonizers (Ugiagbe, 2015; Chilisa, 2012). As social workers support children, youth, seniors, families, and groups through uncertainties, crisis, and trauma, starting with the known to navigate the unknown rather than imposing Western hegemony is imperative.

Consequently, the African Union recognizes the need for African diaspora scholars to help develop permanent, relevant, and sustainable higher education. The host liaison and I collaboratively conceptualized a fellowship to professionalize social work by addressing the dearth of social work-educated lecturers and practitioners. My background in sociology at both the bachelor and master levels, from universities of Ife and Ibadan respectively, enabled me to resonate with the social work educators with sociology backgrounds. However, I also had my master's and PhD social work degrees and had directed the social work field education program at a Canadian university. My goal was to harness Nigerian realities and faculties prior learning in other disciplines (e.g., nursing, which has clinical education components), to help the lecturers in these fields understand social work practicum (Tsang & Yan, 2001) as reflected in my scholar's application statement:

As a Nigerian-born Canadian educator, having received teaching awards for contributing to transforming and decolonizing Canadian social work terrain, nothing would be more fulfilling than giving back to Nigeria. Professionalizing Nigerian social work and establishment of accreditation standards motivates me. I desire to help develop culturally relevant indigenous responses not replicating western norms. I believe in "nothing about us without us" and recognize the politics of identity and representation, therefore curriculum development must be representative, decolonizing, and framed by cultural appreciation.

Education in Africa remains colonized, even though Africa has rich epistemology waiting to be harnessed for curriculum, research, and practice. Even in Canada, my teaching is infused with Afrocentric world views, proverbs, symbolism, music, and wholistic communal practices. Social work in Nigeria must value the cultural capital of the people to engage them and incorporate African ethics, demystifying the profession and disrupting its constant striving for legitimacy through the white,

Euro-Western gaze. The fellowship aimed to do this through workshops for current lecturers and practitioners drawn from government, social services, nongovernmental organizations, churches, and mosques to cocreate a model of social work that works for Nigeria.

Understanding the role of family, religion, elders, relationships, community resources, and other existing sociocultural systems enables perspective-taking and contextualization that broadens Western knowledge and practice models. The training in social work theories, practice models, and ethics that non-social work-trained lecturers and practitioners sought had to be contextualized to be sustainable (Tsang & Yan, 2001). When facing sensitive issues, people will accept help that they trust, believe in, or consider credible, as Alexander (2020) found in her study of women impacted by sexual violence; otherwise, they merely tell researchers or practitioners what they want to hear. African history, teachings, symbolism, proverbs, and values are important in cocreating therapeutic relationships. These components and other indigenous best practices can build local capacity, enhancing the reputation of social work in Nigeria and strengthening NASWE's ability to build a community of practice through regular conferences. Pastors, imams, elders, and other community leaders have roles to play in building the future of learning in Africa, which is a key priority of Carnegie Corporation of New York and is particularly important in social work, which is a community-oriented discipline.

Professionalizing Social Work

Nigeria's 21,279,253 population (Worldometer, 2022) needs qualified social workers to address pressing social problems and build tomorrow's new humane social order. Curriculum that reflects anti-colonialism legitimizes Afrocentric epistemologies (Ugiagbe, 2015; Chilisa, 2012). Against this backdrop, this paper contributes to African diaspora literature by highlighting practicum as social work's signature pedagogy and emphasizes the importance of context and indigenous knowledge, or the cultural capital of the people. I outline the needs assessment strategies, the activities carried out during the fellowship, and the achievements accomplished. We trained over 200 students and almost 100 practitioners over the course of this fellowship. I also contributed to graduate student development and curriculum design during this fellowship through funding provided by Carnegie Corporation of New York. I donated books, which led to establishing the first social work departmental library at University of Lagos, and after the fellowship, the host liaison and I continued working and coauthored a practicum handbook for the department. The fellowship was successful in meeting the needs identified by current lecturers in the department, but it was not without its challenges. Therefore, this paper offers recommendations for mitigating barriers and then articulates future directions to build on the success of this rewarding and impactful fellowship.

Needs Assessment

The needs assessment was organic through informative interviews with the head of the social work unit before the trip, participant observations, interviews, and brainstorming with faculty members upon arrival, as well as focus groups with students and stakeholder consultations during the fellowship. The multipronged assessment approach highlighted the gaps and the prospects of the emerging social work program. It also illuminated the challenges otherwise brilliant academics with non-social work terminal degrees were having in teaching social work practice or supervising practicum. One lecturer said:

Maybe we ourselves should have had the opportunity to do it before coming to teach what you have not yourself undergone. But no training was provided, so we just continue teaching what we know from sociology and nursing where most of us come from.

The assessment further showed that tested traditional helpful support practices like kinship care, extended family, and communal and social supports were relegated under the guise of development, even though valuable Afrocentric practices are now being appropriated in Western child welfare systems. It is common to hear the African proverb, "It takes a village to raise a child," touted by organizations as they adopt African extended family and kinship care practices. We acknowledge the need to situate clinical assessments of psychosocial development, social policy, and macro practice within the cultural context and not make Western responses to grief, mental health issues, depression, and loss the global standard. Analysis of stakeholder reports showed that social work has an important role in community and mental health, which is highly stigmatized in sub-Saharan Africa. We therefore commenced a series of training activities for various stakeholders to work toward change.

Activities

Activities implemented during the 90-day fellowship included curriculum review and brainstorming, field supervisor and faculty training, student practicum seminars, and practicum design processes. Topics covered include features of the profession, traditional helping relationships, the apprenticeship model, micro/macro supervision, placement matching processes and procedures, appointment of practicum agencies and supervisors, learning goals, site visits and evaluation of student learning, and community-based practice research and practice-informed research.

Globally, social work is not well appreciated (Dhembo et al., 2020). Many countries lack the appropriate legislative framework for the training and practice of social work, which often results in social work being conflated with other courses (Akesson et al., 2021). During pre-seminar focus groups held with four cohorts of Social Work and Social Development Studies students to assess baseline knowledge, many struggled to articulate the distinguishing features of social work. It is therefore hardly surprising

that the public, too, does not understand the role of social work (Dhembo et al., 2020), even though it has a unique and crucial role in the well-being of families, groups, and communities. Students' responses included "social work is the same as sociology," or that it is just "a branch of psychology and sociology." Another student asserted, "Social workers are the ones advising single mothers or delinquent children to stop bad behaviour," while several first-year students admitted they were only there "because my cut off mark was too low for the course I wanted, so they gave me social work." I adopted the seminar style of teaching to build rapport, trust, and a relationship with the students by asking them questions like "What brought you to social work?" Listening to them and having them debate the differences between social work and sociology led them to ask many questions that revealed their current knowledge, insights, and thoughts. Disclosing to them that I also studied sociology in Nigeria at both the bachelor and master level made me more relatable, and discussing social work interventions piqued their interest. They subsequently said, "I can make a difference, so it is that important. You are saying I can work with mental health people. I used to think I cannot do mental health because it means working with somebody who [is] mad." I further explained social work's role in advocacy, social change, and promoting equity and self-determination to help combat stigmatizing social, cultural, and religious views that inhibit access to help. These seminars galvanized the students' passion and newfound desire to make a difference as social workers.

Similarly, brainstorming with lecturers included interactive activities reflecting African culture, rather than white supremacist ways of doing, knowing, and being (Chilisa, 2012; Dhembo et al., 2020; Ugiagbe, 2015). We extensively discussed becoming comfortable with not knowing or being the expert in a climate that deifies titles, degrees, and recognizing the rights and agency of clients in their own lives. Students were increasingly aware of personal bias as the risks of social workers doing clients further harm generated much dialogue.

The International Federation of Social Workers (IFSW) standards include practicum that is contextualized to ensure social workers gain hands-on skills to intervene in pressing local social issues, domestic violence, child abuse, women's empowerment, human trafficking, and mental health, which all require informed assessment through motivational interviewing, effective case planning, case management, group facilitation, etc. Lecturers asked questions about how to facilitate practicum seminars, integrate theory and practice, and conduct site visits to evaluate hands-on learning in placement setting under the supervision of seasoned qualified practitioners. As Wiebe (2010) points out, "[T]he field education experience ought to provide students with the opportunity to go beyond analysis to active engagement

in social justice work” (p. 70). These discussions generated questions about funding and resources in the new department.

Social Work in Nigeria

Nonetheless, social work is not totally new. Before the advent of colonialism, indigenous helping practices were carried out through the extended family, traditional and community leaders, elders, local religious leaders, philanthropists, and others in the community. They served the social welfare, religious, security, legal, and financial needs of children, the elderly, the sick, the unemployed, the poor, and strangers (Ogundipe & Edewor, 2012). In Northern Nigeria, the introduction of Islam brought about the “Zakat” system of social relations, which caters to those in need (Mbah et al., 2017). Colonialism, westernization, urbanization, and “progress” exacerbated modern social problems that have overwhelmed the traditional informal social supports systems (Nwanna, 2010). Formal social work was imported, as Nigeria’s first foreign-trained social workers practiced social work that was not relevant to Nigerian local social contexts upon their return (Mbah et al., 2017). To indigenize the curriculum, we redeveloped the undergraduate social work curriculum using an adult education model, recognizing that learners are not blank slates (Freire, 2006): They have valuable life experiences and prior learning. Eurocentric curricula and models had been imposed, ignoring both tested and locally evolved practices from the Global South (Tsang & Yan, 2001; Mathebane & Sekudu, 2017; Ugiagbe, 2015) and elevating hegemonic Western epistemologies over the cultural capital (teachings, concepts, ways of knowing, and systems of learning) of the African people (Chilisa, 2012; Ugiagbe, 2015). I therefore upheld Nigeria’s apprenticeship program (Ekekwe, 2021) as a model for integrating traditional reciprocal helping into the practice of social work.

Carnegie African Diaspora scholars’ contributions to higher education align with calls for a resurgence of indigenous knowledge and cultural practices that align with local needs but were discarded under the guise of progress (Ugiagbe, 2015). Eurocentric hegemony cannot be universalized and normalized in a country like Nigeria, where there is tribal/language and religious plurality. Social work, however, often unwittingly perpetuates colonialism by ignoring these realities (Anucha, 2008). Nigeria’s rich cultural and collectivist traditions of helping, parenting, peer support, and mutual aid must inform our grief support, play therapy, storytelling, music therapy, and child/women empowerment. As the pitfalls of individualism are being realized, and there are calls for more frontline workers globally (Akeson et al., 2021), the spirit of ubuntu, omoluabi, and ajobi that is traditionally characteristic of Nigerians must inform their training.

Members of the African diaspora undertaking immersive visits demonstrate they are not practicing voluntourism

or white saviours rescuing Black people who are deemed inferior. As fellow Africans we give back, promote African epistemology and its potential to broaden the plurality of experiences and knowledge. Our exposure enhances our appreciation of African indigenous potential, helping us work with colleagues in moving toward sustainable curriculum development and practice that disrupts white supremacist focus on pathologizing Black people based on an assumed proclivity to criminality and deficiency.

It is important to not obfuscate helping relationships and practices already in place across Nigeria (Ugiagbe, 2015; Tsang & Yan, 2001). In Nigeria, religious leaders are often the first responders; the goodwill and followership they enjoy must therefore be recognized to ensure their integration into professional helping. They should first be equipped for the roles they currently play, often without training (Alexander, 2020). Elders, youth leaders, clan, and family heads also occupy roles that interplay with social work and must be integrated, similar to the role of Indigenous band leaders in Canada. Furthermore, police officers, lawyers, and probation officers can follow pathways to certifications in domestic violence, addictions, crisis interventions, mental health first aid, youth work, and child welfare. These certifications impart robust transferable skills that include local practices and ethical values.

Research-Informed Practice

Colonialism also manifests in the research enterprise. I reviewed proposals and papers for a research colloquium in the Faculty of Social Sciences and provided feedback on dissertations and research presentations. I observed a limited repertoire of theories, use of quantitative designs when qualitative approaches were more salient for accessing nuanced findings on sensitive complex phenomena, and an absence of social action research that involves in-depth explorations. We outlined how research can inform practice and promote client-driven and timely responses for wholesome social work education (Anucha, 2008). It is key to integrate research into field work, allowing for connections between theory and practice (Oba, 2017, 2019) using qualitative approaches to understand complex phenomena and explore cognitive, emotional, mental health, and social needs in specific populations (Creswell, 2013; Akeson et al., 2021). Qualitative designs are not about numbers (Creswell & Poth, 2018) but investigate the roots of issues (Dominelli, 2002). They promote in-depth understanding of social work and practicum rooted in anti-oppressive practice, which Preston et al. (2014) defined as “a set of politicized practices that continually evolve to analyze and address constantly changing social conditions and challenges.” Relatedly, the penchant for titles and a belief that BSW or MSW is not an academic degree was illuminated by the

department's insistence on awarding BSc or MSc degrees through the sociology department. The department argued that BSW or MSW would not be as academic, thus perpetuating hegemonic narratives about what counts as scientific or academic and therefore valuable knowledge.

Lack of awareness of the value of qualitative research among overworked, underfunded agency staff and directors hindered their capacity building. Social work students can help social service practitioners in program/patient/client satisfaction evaluation, group facilitation, grant writing, community outreach, and compilation of resources. The lecturers have to be aware of these benefits to equip future social workers to add value to practitioners overwhelmed with heavy caseloads. Illuminating obscured Afrocentric indigenous practices and knowledges can challenge habituated generalizations of masculine or white urban experiences (Dhembo et al., 2020; Oba, 2019) by honoring African thoughts, teachings and ethno-cultural philosophies. Focusing this fellowship on practicum as the signature pedagogy of social work highlight the need to integrate theory and practice to address pressing social problems contextually. The activities we implemented yielded many benefits, and those strategies are outlined in the next section.

Activities and Strategies

This fellowship provided a major boost to an academic program in the making. As a Nigerian-born social work professor educated in both Nigeria and Canada, I supported the institutional capacity-building process through activities including designing and delivering student seminars, field supervisor training for the growing rank of non-social work-trained practitioners, and brainstorming/training sessions with lecturers. It was exciting to create a new field education program from the bottom up as we focused on the characteristics of the profession, which include formal education, accreditation, practical skills acquisition, a code of ethics, and licensing by a professional society (Ford & Gibbs, 1996) while also situating the practicum within the Nigerian context. The IFSW maintains that regulating social work requires all social workers to be licensed under an enabling bill that would ensure social workers do no further harm to vulnerable people as they navigate physical, mental, emotional, spiritual, sexual, and systemic oppressions. This requires completing a practicum under the supervision of a qualified professional (Burke & Ngonyani, 2004).

Field Supervisor Training

With the generosity of Carnegie Corporation of New York, we trained 60 practitioners from human service agencies, including the Lagos State Chapter of the National Association of Social Workers, the Ministry of Health, the Lagos State Ministry of Youth and Social Development, the University Teaching Hospitals in Lagos, community service organizations,

and nongovernmental organizations. The training covered professional roles, ethics, supervision, learning goals, evaluation of learning, and qualifications for field agencies. We deliberated on ethical practice, supervision, learning goals, and qualifications for field supervisors in the Nigerian context. The very engaged practitioners expressed interest in accelerated master's degree programs, acknowledging social work uniqueness and value within their practice settings.

Student Seminars and Graduate Development

We held practicum seminars on integrating theory and practice for over 200 students across all cohorts of students in the Social Work and Social Development Studies programs. Students found the idea of being involved in their own learning novel, but by the end of the fellowship, they were beginning to reconceptualize their social work education as experiential and engaging. Many had useful insights, radiating a sense of pride in belonging to a noble profession. They asked interesting questions as we used the seminar style, rather than traditional didactic learning, to promote engaged learning, role-playing, perspective-taking, and case studies as learning tools.

I customized and delivered the practicum seminar to varied cohorts over the course of the term and helped graduate students see the linkages between models like cognitive behavioral therapy and narrative therapy and African conceptualizations. The belief in connections between the spirit, soul, and body mirrors ideas about linkages between thoughts, emotions, and behaviors and understanding mind-body connections for self-regulation and individual, family, group or social change through understanding their roots.

During the trip, I continued to supervise my Canadian MSW students who were concluding their major research or practicum reports. I provided feedback on their work by email despite the time difference and scheduled committee meetings and two defense presentations using Zoom technology. This was in 2019, before Zoom became a household name, so we were apprehensive. The defense presentations took place midday on campus in Canada at 7:00 p.m. Nigerian time. Some Nigerian colleagues and graduate students attended the presentations but not the committee deliberations. They described the presentations as eye-opening, complimenting the knowledge, confidence, and self-efficacy of the students as well as the support and validation provided by the committee. The fellowship was rewarding and contributed to strengthening international connections with my host liaison and other colleagues in the home country. As part of an excellent program which paired 51 African diaspora scholars' higher education institutions and collaborators across Africa, we made great strides in curriculum co-development, training, mentoring, and research, particularly field education. We also focused

on incorporating African indigenous knowledge to create meaningful, relevant social work intervention.

Faculty Training

My fellowship lasted three months, which enabled me to be fully immersed, interacting organically with lecturers in informal settings as well as formal situations, including scheduled brainstorming and training sessions. The informal discussions individually and in pairs and pods illuminated how many faculty were motivated to join the new department for faster advancement. They expressed appreciation for the training. Expressing a new appreciation for the field of social work, one said, “Social work is really different. It became even clearer when your student defended their work, talking about what they did during their practicum—that opened my eyes.”

The community engagement opportunities and use of practical metaphors in the training were also appreciated, as aptly expressed by a lecturer: “It was good that we had joint sessions with the community because everyone can be on the same page, so much is new. But relating it to apprenticeship, it is not so strange, we all get it; we’ve always had apprenticeships in Nigeria.”

Both practitioners and lecturers were struck by how much the practicum can contribute to student learning and stated: “Students just going to get their logbook signed will end, but we need more placements and supervisors because ... they cannot just do a few weeks’ orientation here and there. With this, they will have learning goals, stay in one place, and actually work with clients.”

The Ministry of Health was cited by fourth- and third-year students as a setting where their learning was enhanced. However, the Ministry representatives at the training said they were assigned more students than they could handle, which impacted the quality of supervision they could give. This demonstrated the need for all supervisors to be trained. It also showed that given the opportunity, students are committed to learning and will attend practicum sites regularly if there are strategies and meaningful activities to support their quest for learning.

Site Visits

Based on the above, I stressed the importance of lecturers visiting placement sites to get familiar with different settings, mandates, and populations served and to assess the gaps students can address. Accompanied by some lecturers, I visited placement sites where we were given tours and introduced to their processes, problems, and prospects. The agencies ranged in size, outlook, and clarity of vision. None had students placed with them at the time, as the school year had been disrupted by the strike action that ended just before I began my visit; therefore, I could not model how evaluation visits are conducted. We problem-solved with an organization where social work students had been given

tasks that did not contribute to their learning and consulted with others on issues of governance, funding, research, staffing, and other concerns. I donated vetted books to the agencies we visited and commended the work being done with limited resources. The visits also provided a learning moment to discuss processes of selecting, evaluating, and / or terminating agencies if the need arose.

I was a discussant in a university event hosted by the Faculty of Law on public law, where I added some perspectives to the discussions on public good, human rights, the spirit of law, ethics, and social and moral responsibility. Connecting to Nigerian traditional systems where communities pulled together to farm, harvest, build barns, raise children, and generally ensure no one was left behind, I emphasized holistic approaches in our respective but interrelated disciplines to ensure we engage the whole person in context in pursuit of the common good. It was gratifying to see panelists applying the interdisciplinary lens to conceptualize collaborations that interrogate social determinants of health, social justice, and human rights for the health and well-being of the populace.

Social Work Library

A major highlight of the fellowship was the opportunity to donate about 200 textbooks to the department to establish a social work library, which was nonexistent at the time of my visit. We determined that books on theory, group work, and field education activities were relevant and transferable. The process was fraught with challenges, but the chief librarian was incredibly supportive, providing space at the main library, overseeing transportation from the port, and cataloguing and stamping the books to prevent pilfering. Another highlight of this very successful fellowship was the publishing of the co-authored field education handbook, which I describe below.

Practicum Handbook

The host liaison, Professor Chinwe Nwanna, and I continued to collaborate. In 2021, we successfully published the practicum handbook, documenting practicum roles, policies, procedures, processes, and responsibilities to ensure continuity and consistency. It will also enhance sustainability and enable effective onboarding of new practicum lecturers, staff, supervisors, and agencies. We included the history and evolution of social work and incorporated transformative ideas generated throughout the fellowship. The placement forms, learning goals, and evaluation forms contained in this handbook will enable students’ input into their learning and professional development. The handbook is integral to the train-the-trainer sustainability model, and it will promote community engagement as practitioners and lecturers will co-facilitate training, fostering reciprocal relationships between the university and the community, to the benefit of students.

The fellowship was rewarding. It contributed to strengthening international connections with my host liaison and other colleagues in the home country. As part of an excellent program which paired 51 African diaspora scholars' higher education institutions and collaborators across Africa, we made great strides in curriculum co-development, training and mentoring, research, and particularly field education, where we focused on incorporating African indigenous knowledge to create meaningful relevant social work intervention.

Challenges

The fellowship exceeded expectations: We trained hundreds, established a library with 200 volumes, and published a handbook, but this huge success was not without challenges, some of which I briefly outline below.

Lack of Transition Strategy

The lecturers were disillusioned by the lack of resources and social work training before or even after their secondment to teach a subject area most had not studied and general lack of strategy for the transition. Lecturers were paying for basic needs, including stationery and internet data, while on campus. This contributed to the lecturers hardly using email at the time, which slowed down communication and the pace of work. However, this predicament also evoked empathy as I saw the conditions under which Nigerian colleagues work.

Lack of Transportation for Field Visits

The lack of funding also bothered lecturers who questioned how midterm evaluation site visits would be conducted if they had no way of getting around and would not be reimbursed for their expenses. I found out there was a departmental car, but faculty members did not have permission to use it for placement visits, as varied bureaucratic challenges ensued each time the issue was raised.

Need for a Field Office

The department has no designated field office with dedicated staff. The current situation—in which clerical staff who have other duties assign students in bulk to agencies without follow-up or further action—does not communicate an understanding of the importance of practicum.

Orientation and Onboarding

Onboarding of fellows should be at the institutional level to remove inconsistencies in planning and engaging diaspora scholars and expectations. This would demonstrate upper-level management support for the project, the host, and the diaspora scholar and reduce the risk of sabotage through withholding basic resources such as an office space. Heads of departments must be accountable to the university administration and the goals of the fellowship. Additionally, no fellow should be

oppressed because of gender, age, title, status, tribe, race, or other identity marker, which some scholars (mostly female) disclosed they faced during the alumni convening conference where selected projects were showcased.

Respect

Observing that a lack of respect for staff, students, and junior colleagues was hindering collegial relationships and cross-fertilization of ideas, I organized a coffee hour attended mostly by students and junior faculty, many of whom I also held consultations and intellectual dialogues with. There was a need to equalize and balance power, as well as create a safe space for cocreating a humane climate that facilitates creativity, co-ownership, and reciprocal accountability. I received respect back from the students, staff, and lecturers as all gave me valuable insights that ensured the success of the project as I gained a panoramic view of the department. I found it advantageous being a diaspora scholar, as I could relate to how much the department mirrors the larger society of which I was also a product.

Another barrier was how underpaid staff and lecturers were, which evoked my empathy, but I ensured food was served at meetings and training sessions to help colleagues, students, and staff stay engaged by alleviating some of the concerns sensitively. I also gave out souvenirs and little gifts for participation, presentations, making unobtrusive contributions thus not making colleagues feel they were getting handouts.

Systemic barriers include the drive for high student enrolment without commensurate infrastructure or resources, which impacts the students, staff, junior faculty, and the vulnerable populations they aim to serve.

Recommendations

Access, quality, and consistency are key challenges to building academic bridges, encouraging interdisciplinary collaborations, and maximizing the potential of diaspora scholars to contribute to mental health interventions, malaria eradication, provision of potable water, digital learning, and qualitative research. Diaspora engagements must be institutional to maximize synergy and promote continuity. The university's international office must be involved in conducting orientations. Institutional engagement can enhance strategic planning as well as mobilization of resources locally and globally. The university must demonstrate upper-level management support for the project and the results, making heads of departments more accountable to the university's goals for the fellowship.

Diaspora can best add value by not focusing on who takes the credit, but rather focusing on the ultimate good, and staying flexible and adaptable. Having cohorts of diaspora fellows working with several departments can promote synergies, interdisciplinary projects, and high-level buy-in beyond the departmental level. It also exposes fellows

to other departments, thereby avoiding generalizing the experience in one department to all others.

Pre-fellowship orientation should extend to the hosts in Africa to understand what Carnegie funding covers and what is excluded. The belief that the Western knowledge and practices are best and can be imported wholesale must be disrupted at the orientation to make the visits and projects collaborative, re,“ rooted in colonialism and inimical to intentionality in sustainable engagement, that can forestall a return to status quo once the scholar leaves. During this fellowship we combated the “tell us” mentality and got to a place of comfort with collective brainstorming, which is mutually beneficial.

Gatekeeping, empire building, and turf protection are coping mechanisms that reflect deeper systemic and structural issues rooted in colonialism and imperialism which are implanted, embedded, and ingrained everywhere. The diaspora scholar must be patient and nonjudgmental while advocating for more robust critical thinking and decolonizing of a curriculum that accesses international support but honors local cultural capital.

Social work does not criminalize social problems, but rather interrogates the systemic roots, upholding the dignity of every human being, which is a foundational principle (Canadian Association of Social Workers, 2005a, 2005b). These values are also apparent in African cultures (e.g., the belief that no child is illegitimate in Nigeria). There is tremendous philosophical wisdom encapsulated in African proverbs such as “it takes a village to raise a child.” Therefore, we removed borrowed words like “retarded,” “delinquent,” “unwed mothers,” and other stigmatizing labels from the course outlines to avoid reproducing sexism, ageism, and other isms. The goal is to ultimately craft Nigeria’s social work code of ethics within both the IFSW guidelines and the Nigeran context and worldviews of mutuality and reciprocity to champion social work that works for our people, works in our nation, and works to enable us to tell our own stories.

Future Directions

Future fellowships will build on the success of this visit by mentoring graduate students in grant writing for social action research, whereby findings from practice-informed research will shape policy and practice directions and vice versa.

It is hoped that the University of Lagos will build on its involvement with SWIN-P and NASWE to innovate socially responsive indigenous social work especially now that the enabling laws that regulate the profession have been passed in Nigeria, affording the profession formal recognition, social protection laws, and funds to train adequate numbers of social workers by targeted dates.

It is imperative to evaluate the number of social workers needed for the country’s teeming population and articulate plans and timelines to achieve the target number of

practitioners at certificate, diploma, postgraduate diploma, and degree levels. Those with prior degrees in other disciplines would qualify for fast-track or advanced standing pathways based on assessment of their previous learning. Intermediate-level professionals would also be licensed to support social workers in roles such as social service, gang prevention, child and youth work, as well as addiction / disability counselors. This would facilitate development of needed human resources, allowing professional practitioners to chart their own course to fulfilling careers at varied levels.

Additionally, to increase qualified practitioners through certificate courses, emphasis will be placed on the prospects of certificate courses that can harness prior learning of experienced community practitioners. These practitioners, such as pastors, may continue in their current callings but with the needed certifications in domestic violence prevention counseling, marriage therapy, addictions counseling, suicide prevention, and teen-parent mediation, which Nigeria now needs due to the social media intergenerational divide. Their advanced standing pathways can lead to licensing as social workers or as allied health workers, peer support, or community outreach workers. These certifications can mitigate the dearth of trained social workers by focusing course offerings on the country’s urgent needs.

Education that builds collaboration between the town and gown can raise a workforce capable of addressing local pressing needs meaningfully and contextually. This can also help all future social workers integrate theory and practice into their practice regardless of their varied pathways. These are ways the department can develop connections and community-based opportunities to support students in placement (Nwanna,2010).

Despite African traditional communality, Nigerian academics had imbibed neoliberal individualistic values of competition, hierarchies, and separation of the academy from the community, who are regarded as unintellectual and having nothing to offer without any self-reflection about the power and colonial views that privilege, competition, and individualism, instead of reciprocity (Oba & Zerafa, 2023, Akeeson & Oba, et al., 2008). Universities must eschew governmentality, (Foucault, 1977/78) and colonialism by thinking outside the box to assess, fast-track, and proactively license cultural helpers who can promote the balance between theoretical, ethical, and practice skills by harnessing their existing goodwill and community engagement skills. These helpers should use the apprenticeship model to integrate instruction, demonstration, observation, and role-modeling of Nigerian or African best practices.

The social work library which I donated is situated within the main library. The chief librarian took personal interest in seeing the project come to fruition. She was instrumental to getting the last set of books released from the ports into the safety of the library to avoid pilfering. As COVID-19 has

shown, an online library is imperative so field practitioners and students can access resources to improve critical thinking and practice. I gave books to some agency directors, but it is more sustainable for the department to include online access to library resources as an incentive to attract qualified field supervisors.

COVID -19 has shown us that we are capable of online learning, teaching, knowledge production and dissemination (Nwanna, Oba, Ayobade, Busari-Akinbode, forthcoming). For my next visit, I shall work with the already-trained lecturers and practitioners to train more agencies, but also record the training, making it available online for new lecturers, field supervisors, and students to continue to incorporate critical, anti-colonial, Afrocentric practices into the class and field education curriculum. We also hope a functioning field education office will be in place and field education staff will have been hired who can also be trained to automate practicum processes, as there are prospects of using the matching, placement, and evaluation data for continuous improvement and training. We can collaboratively access funds for the field office, the counseling center that the department established after my visit in response to heightened incidences of suicide, physical and sexual violence, and mental health issues in the university.

Finally, a key future goal is to contribute to promoting qualitative social action research, which we have discussed earlier in this paper. A systemic outcome would be the strengthening of the newly established research ethics board, by promoting the importance of qualitative research designs and the ethics of research with vulnerable populations on sensitive topics. Access to research funding and international collaborations will be enhanced when faculty and student researchers complete ethics protocols before conducting research. We plan to hold a summer research institute in 2023 and encourage researchers to pitch relevant research ideas. We can work with the researchers, community partners/agencies, and international collaborators to develop research proposals and grant applications to attract funding. The process will be hands-on, providing graduate student training as well as facilitating knowledge sharing from the global South to the North, thereby, disrupting hegemonic notions of what is knowledge and who can produce it.

Thereafter, annual summer research institutes would be held online to continue the North- South partnership through mutual reciprocal teaching, learning, and application of contextualized research to local, national community issues. I am on the steering committee of the Faculty of Community Services international speaker series at the Toronto Metropolitan University. Our aim is to invite international scholars, learn from them, disrupt white supremacy, interrogate power and foster reciprocity. These are common threads across my teaching, scholarship and community/professional / national and international service as an African born scholar

who lived, schooled and worked in Nigeria before moving to Canada. I brought with me skills, Afrocentric knowledge, philosophical wisdom encapsulated in witty proverbs and rich culture but had to start afresh as Canada disdained my non-Canadian education and work experience. I have however excelled as a celebrated social worker and now as an award-winning teacher scholar and Associate Professor. Whether in my child welfare/ domestic violence practice spanning fifteen years or my scholarship, I have proved that my elders' Afrocentric teachings work to protect children, to meditate conflict and to teach and research anti-oppressively.

I must now give back to the land that bequeathed me the gems I have used to design, teach / implement anti-black racism courses, and research studies, training and mentoring of graduate students, international summer interns, and post-doctoral professionals. It is preposterous to believe Africans must become Western to succeed or usurp our cultural capital without due appreciation. African indigeneity resurgence and Afrocentricity broadens Eurocentric and other epistemologies for an equitable humane, socially just world where social work, works with and not against people. As social work is now a burgeoning discipline across Africa, teachings and practices must value and honour socio-cultural capital to address real-life issues for meaningful societal outcomes, avoid positivistic research, and promote wholistic population health approaches to local issues (Denzin & Lincoln, 2011; Oba, 2019).

Conclusion

Working with the University of Lagos to develop field education as signature pedagogy in its new Department of Social Work was eye-opening. During the fellowship, I helped develop field integration seminars and field instructor training using a train-the-trainer model. Being adaptable, being open to learning, and focusing on the goals are at the core of both hosts' and diaspora scholars' success. The collaboration was mutually enriching and culminated in the production of a practicum handbook to serve as a training/reference guide on the roles, responsibilities, policies, and procedures for students, faculty, field education staff, and supervisors.

Follow-up visits will assess how the department is taking ownership and customizing the manual to train new field supervisors, lecturers, and faculty. The fellowship created awareness of the unique features of the social work profession and enhanced pride in the profession. As a cohort, we will connect with NASWE to ensure it reconvenes via Zoom technology, so training webinars can be recorded and shared amongst members. This will allow regular meetings and training to contribute to a community of practice among social work educators, practitioners, and Africa diaspora partners. Sustainability through indigenous methods, knowledge, and practices can transform the social work terrain to produce social work that works for Nigeria and Nigerians locally and globally.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Benefits and Challenges of CADFP Fellows in Host Communities: An Experiential Exposition

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Introduction

The Carnegie African Diaspora Fellowship Program (CADFP) in African institutions is laudable and very helpful to the host universities in Africa. It allows for exchange of ideas, mentoring, teaching, and research collaboration with colleagues in the host universities. The program will be more beneficial if the host communities, and the CADFP Fellows can develop a unified perspective. They need to have trust in each other, believe in themselves, cooperate, and be ready to learn something from each other. The Fellows should also respect the perspective and point of view of the host communities' faculties and students. The Fellows should be regarded as friends and patriots who come to give back to the communities they left for other countries. It should be clear that the Fellows still believe that they are extensions of their home communities in Africa and are ready to share and give part of the experience they have gained in these foreign universities to African institutions. The Fellows should see the host faculty as colleagues with equal but perhaps different academic experiences. The Fellows should not believe that their views are better than those of the host faculty. Tasks should be approached in a cooperative manner, not as a superior toward subordinates. This will make the cooperative work between them a success story. I will now proceed to illustrate my theoretical perspective of the issue at hand.

Theoretical Perspective

We can begin our analysis by considering the logic in Plato's allegory of the cave. Plato is concerned with how people who are in the same situation could be of help to each other, especially if some members of that group had an opportunity to gain alternative knowledge that could elevate and make the situation of the people, who are still in the position they were before, better. The aim is to elevate and free those who are still trapped in the former situation. The allegory described the plight of some prisoners who were chained together and were unable to see the sunlight but could only see a shadow of reality from a fire which imperfectly lit the cave. Shadows were cast on the walls of the stony cave, and that was the only perception of real people the chained prisoners ever saw. A number of these prisoners escaped and saw the real world, then came back to the cave to report what conditions outside the cave looked like. However, their former co-cave-dwellers did not trust them and believed they were not telling the truth. They did not believe that their colleagues came back to help them because their picture of reality was still fixed on what they saw on the side of the cave, which was lit by an imperfect fire instead of the original light from the sun. They were content to remain in the position of ignorance rather than accepting the account of reality from those who had seen it in the real world.

This allegory can explain part of my experiences as a Fellow in Nigeria but cannot apply perfectly to the entire experience. The following are, however, in line with the allegory. The Fellows and the host faculty were in the same situation and had or were exposed to the same experience in the host countries before the Fellows migrated. The Fellows have alternate experiences and have added them to the shared experience the host faculty and the other Fellows had while in Africa. The host faculty are still living with the former experience and knowledge but might have some knowledge of what the Fellows do. However, they have not been engaged, in most cases, in the activities brought by the Fellows (except the host personnel who have been abroad in the past and relocated back home). The real experience brought by Fellows comes from comparing their home experience with the additional experience they have acquired in their places of sojourn. The Fellows can be regarded as helpers in the kind of activities we are supposed to do in the host institutions. There is a bond binding the Fellows and the host, which is like those who had been inside the cave together and had the same experience. Fellows, therefore, should have the same emotional attachment and eagerness to perform the helping activities given in their contract with the CADFP. The problems faced by the Fellows can be likened to the cave dwellers' rejection and sometimes inability to achieve the level of excellence the Fellows expected when pursuing their fellowship. Many problems are responsible for this, and they may be traced to several factors: the Fellows themselves, the host personnel, and the general environment. We should also not overlook the huge benefits accruing to both the hosts and the Fellows from the program. However, there are many benefits based on my experience, and this marks an important difference from Plato's allegory analysis of the relationship.

The Setting

I served at Crawford University, Faith City, Igbesa, Ogun state, on the outskirts of the city of Lagos. It was a small university compared to major Nigerian universities, as it has a population of less than 3,000 students. It is a private Christian university, but admission is open to students of all faiths. There is no gender, state, or religious discrimination in admission policy or in faculty and staff recruitment. It has all the characteristics of any Nigerian university. The governance of the university is supervised by a council headed by a chairman who might not even come from the church. The chairman is chosen based on their experience in higher education management. The council has a final say on the policy of the university subject to the final approval of the chancellor, who is the head of the church in West and Central Africa. The university, though a private institution,

operates based on the federal government's regulations on higher institutions. Like all universities, it must be accredited by a panel set up by the Nigerian Universities Commission. This is where the university benefited a lot from my experience. I was able to be involved in the preparation for the accreditation and sat with the panels to answer questions about the university. I was able to contribute to the sociology department's accreditation preparation as well as that of the university's graduate school.

Students

The students in the university are mostly Nigerians from the southwest area of the country. Most are Yoruba, the dominant group in the locality where the university is located. There is a degree of diversity, as most major Nigerian ethnic groups were represented in the student population. There was not much diversity by religion. Most students were Christians, and the students are, by university regulation, required to obey Christian principles and live a Christian life, at least on campus. This enhances discipline and prevents deviancy among the student population. The university is residential, and there are separate women's and men's dormitories. All students are required to attend the university church on Sunday, when special church officials usually came from church headquarters to officiate and teach the students. Most of the faculty and staff also officiate in the university church. This is significant, as it helped my mentoring activity and helped me establish a network of students whom I still interact with today. Some have even been admitted for graduate work due to their perception of the American system based on our discussions. Most of the students live on campus and are fed in the university's cafeteria. This is different from most other universities, where students are responsible for their own meals and either cook their food or purchase it from independent cafeterias around the campus.

The university has a library with an internet connection that is not strong enough to support the academic and social functions of faculty, staff, and students adequately. Some of the academic departments have local libraries/reading areas. However, there is a need for up-to-date materials, journals, and faculty and student support. This created an impediment to mentoring in research methods and statistics, which was one of my major reasons for going to the university. Background information here is necessary to help us understand the benefits the university and I derived from the program. It will also help us understand the challenges that both the Fellow and the community face. It will also enhance our recommendations of what is required to improve the situation.

My Activities

The university received me very well when I arrived on campus on May 6, 2017. In fact, they had been expecting me, and my coming was announced at a convocation held shortly before my arrival. The Vice Chancellor of the university was my point person. A place was prepared for me in the university's guest house, which was close to the Vice Chancellor's residence. Food from the university's cafeteria was sent to my residence every day by university cooks. There was also a driver who took me to my office and back daily. The atmosphere was friendly. The Dean of the college and the Chair of my department were very nice. We met several times to plan my work. I gave them my prepared work plan, and they contributed to what would make it workable.

I planned to do the following:

1. Holding weekly workshops for methodology enhancement for the lectures
2. Developing curriculum and expanding the scope of the department's current program
3. Jointly working on creating a Center for Peace, Terrorism, and Ethnic Studies
4. Working on the department's accreditation activity
5. Mentoring graduate students who are university lecturers while completing their graduate work in Nigerian universities
6. Advising and mentoring lecturers on graduate education, admissions, and teaching methods
7. Holding public lectures to sensitize the university community on current pertinent academic and public issues
8. Establishing a peer-reviewed journal, which will be coordinated jointly by faculty in the host department and my U.S. university.

The journal and the center are projects we hope to make long term, establishing collaboration between my university in the United States and the host university. We also discussed the possibility of a student and teacher exchange program.

In addition, the dean of the graduate school requested that I advise graduate students on research methods and dissertation writing. This was very rewarding, and I enjoyed it, as most of the students have now graduated and are still in contact with me. It should be noted that this is a practical breakdown of the activities I engaged in at the university. They can be seen as the components of what was in the contract of the fellowship program.

Benefits and Challenges

The faculty of the university benefited from my presence, but there were challenges. The chair of the sociology department set up workshop days for research and methods. The workshop was designed to acquaint teachers with the latest methods in both qualitative and quantitative research, especially how to use statistical packages and other new methods in the latter. There was much enthusiasm for this workshop. Some of the lecturers who were completing their doctoral studies at other universities were especially interested in the workshop. Many graduate students also attended. At first, we were using data from my research for demonstration. Later, we started using original data from the participants at the workshop.

Eventually, however, unavoidable challenges arose. These insurmountable problems came from many sources:

1. **Institutional.** The university administration did not integrate our workshop into the general time allocation of the university. Despite the fact that the administration was eager to see me, my activities had to be sandwiched between available free time, which normally would be used by lecturers to prepare for their next lesson. The administration was prepared for me but had no plan as to how I would perform my functions. Free time differs from teacher to teacher and student to student. It was therefore difficult for them to find a common time for my meeting. This problem is evidence of a larger problem in the relationship between the administration and academic staff of universities. The administration is very powerful, and the chairs and deans of colleges could not exercise power that was not approved by the central administration. As a visiting Fellow, my case was handled by the administration, which dictated what the chairs and deans must do. They were mostly concerned with my welfare in terms of having a good office, chairs, and the like. However, the nitty-gritty of my activities were not discussed; they were taken for granted. The university timetable was centrally prepared, but administration overlooked this. Hence the problem. In addition, the accreditation panel being awaited by the university meant all the teachers' free time was used for preparation. The authorities made it clear that they must work hard to see that the university is accredited. This affected all my work at the university. We worked together to expand the sociology program and to create concentrations. We even attempted to rename the department to include security studies. We did a good job attracting new students and helping graduates from the department fit into the ever-shrinking job market. The governance of the university was different from American universities, where an academic committee on curriculum development usually approves academic changes. In Nigeria, the change was taken to the senate, where the arguments were sometimes not only about

the academic importance but about other things, such as conflicts of personalities, which affected approval. The changes were in the process of being approved before I left, but it seems that some more powerful interests blocked it and it reemerged in another form in another department. I also worked to create a center for the study of peace, terrorism, and ethnicity. This was well received, and the department was happy with it. However, some department faculty members argued that the university would take it up and would not give them the credit they deserved for creating it. They were also worried about how the money that might accrue from the venture would be shared. It was argued that the university would take the money and give the department peanuts from the proceeds. We completed the structure and organizational design of the center, and I presented it to the authorities. The department's fears came true, as the university opined that the center cannot be owned by a department but should be a university affair. It was not presented for approval by the time I left. Future contacts show that the university has downgraded the department based on low enrollment, and most of the lecturers I interacted with have left for new jobs. The department still exists and the ideas are still there, but they have not yet been established.

2. **Technological.** There were significant problems with equipment. I needed computers, internet, and some applications to do my work. In fact, there were no computer labs. Some teachers who brought their own computers to work had no internet connection. The university internet was not really working. We could not access websites needed for explanation and data. The university had no data analysis packages, such as the Statistical Package for the Social Sciences (SPSS). Most teachers use their computers as word processors or get internet on them through the data from their phones. There was no powerful internet. When we bought some data packs, a single download from a website use up all the money loaded onto them. My computer happened to be the only one with the data analysis packages. I was fortunate that I could assess the packages offline without internet. However, this created a problem and discouraged most attendees. There were no smart teaching podiums, and we used my computer hooked to a projector without a screen. We were using the wall as a screen. This was exacerbated by the next problem: power instability. I was very successful with mentoring the graduate students—their dissertation writings and course works progressed well. But we had problems with technology, especially in data analysis. The computers were not well equipped with relevant data analysis programs, and most of the books were outdated. Because of internet problems, we could not browse much, as our internet pack finished quickly. We overcame this by getting my friends in the United States to

send large downloaded materials to us by mail; we then used them offline. I benefited a lot by learning how to work with limited resources. I also continue to enjoy a large network of students in Nigeria.

3. **Environmental.** Problems arose from the infrastructure of the society. Issues like power outages, transportation, and bad road conditions on the way to the university made things difficult in Nigeria and negatively affected workshop attendance. Most of the time there was no power to use the computer. I had to use the chalkboard to illustrate my analysis, and relevant books were not available. As a result, interest in the workshop decreased. The road to the university was very bad; a journey which should normally take 30 minutes can take 5 hours, and there was no good security. The Vice Chancellor narrowly escaped being kidnapped on the road and lost his official car to thieves. The lecturers were therefore eager to leave the campus to get home before it was dark. They usually left after their classes.

4. **General security.** Difficulty developed in doing our work beyond a certain time, as the teachers were clamoring to leave the campus before it got dark to avoid being attacked by criminals. This was a societal problem that could be tackled by the state and federal governments.

5. **Opposition.** Some established lecturers did not agree with the enhanced methods. Most in this group were senior teachers who were glued to their method. Some of them seldom engaged in new research. Information that came to me was that they refer to this workshop and even the fellowship program as the “new” academic imperialism from the United States. The group never came to the workshop and would not encourage others to come. However, their places were filled by the postgraduate students who were allowed to participate later and were eager to learn what is regarded as a “new” approach. (It was not new but just refreshed and enhanced their understanding of method.)

My other projects had problems similar to those I enumerated above.

Conclusion

We can conclude that the program has a lot of benefits for the host universities, the Fellows, and their home institutions. The Fellows gain experience and know the problems faced by people in Africa, which helps when dealing with situations in their home university. What could have been regarded as a problem before going on fellowship will now be seen in new dimensions and be tolerated. The program also enhances Fellows’ productivity after returning and creates a network by which they can continue to collaborate and help the host universities.

The host universities gain a lot from interaction with the Fellows. My experiential approach shows that the benefits to the host university exceeded what was written in the

contract. There were some issues which manifested only after I arrived and my expertise was sought for solution. The host university might even value the “new” issue more than the issue that was originally addressed in the contract. In my own case, the issue of accreditation took precedence over a lot of my activities in the host institution. It happened that I came at the moment when the university was preparing for accreditation, and my experience as a former dean in a Nigerian university and my work in the United States were well utilized. The accreditation preparation and visitation span the entirety of my almost three-month stay in the university. In that case I had to concentrate on my contractual requirements and the accreditation issue, which was then the pressing issue for the university. It was also a blessing to me because I was able to create a strong network of academics not only in the university I served but in other universities. I was even invited to present public lectures to staff and students at two other Nigerian universities. The lectures were free for the attendees.

We were able to suggest that the benefits and challenges of this experience go hand in hand. The benefits are the high expectations of the Fellow, which the hosts also cherish. To achieve this benefit, there are some situations in the host environment which should not be overlooked. However well-thought-out your mentoring or curriculum development or even research proposals are, they must be acceptable to the standards of the host. That brought the critical question of whose standard is supreme and who is helping whom. This is where our earlier theoretical perspective of Plato’s allegory of the cave becomes relevant again. The host society appreciates the presence of the Fellows, but their own standards should be considered. The Fellows should not think that whatever they brought, which they truly believe is good, must be tested by the standards and tradition of the host. It is not easy or even possible to change the governance system or the rules governing academics in the host university. Sometimes, the majority of the host faculty may even support one’s proposals, but they have to be approved by the university’s higher authority. Some members of the higher authority have their own “best way,” which your own explanation cannot change. This can be seen among the lectures and with regard to some academic issues. It showed in graduate mentoring, where some supervisors forbade their students from using any method besides the one the supervisor understands. That then raised a critical question: Does the host institution regard Fellows as helpers or just people carrying out the instruction of the Institute of International Education (IIE)? There is no simple answer to this question. The answer is situational and depends on the activity and the department in question. The host will regard our activities as helping, depending on the interactional style of the host and the benefits to be gained by the individuals with whom we interact.

Whatever method or state-of-the-art delivery method you want to create, it will have no impact if the university's technology cannot support it. I remember one of the attendees in my workshop said, "We are blessed with this method of analysis. It looks easy now when you are explaining it, but it will become ineffective if not impossible to use after your departure." When I asked him to explain what he meant, he explained that:

- 1) The first problem was power. He said the university went to length to buy diesel oil to power the generator for me to run my workshop, which might not happen after my departure
- 2) The university has no working internet.
- 3) All the packages I was using for analysis were not available to them. They cannot afford them individually, as they claim their remuneration was too small to even sustain them. (A full professor in Nigeria earns less than \$1,000 in a month. Lecturers in lower cadres receive even less). One professor told me that they had to take on extra work to make ends meet.
- 4) The universities do not give computers to lecturers to use in their offices. (I believe the older and wealthier universities may be doing that.) The computers some individual teachers bought are mostly used or cheaper ones which do not have the capabilities to perform the work they want them to do.

The most annoying issue to me was that the trainings and mentoring I did with the lecturers cannot be imparted to students. This was because most of the students lacked all these essentials (internet access, computer, appropriate books). Some computer lessons were taught in theory alone without students having a computer to practice what they were taught. A full professor then gave his opinion that, "Carnegie should commit some support material to the university that the Fellows are posted to." Materials such as computers with adequate programs, projectors, and books should be requirements, that the Fellows bring with them to the host institution and leave in the libraries of the department when their fellowships end.

The university will also regard the fellowship as a help if they perceive immediate gain. For example, my host counted my accreditation activities as more of a help than my academic mentoring, center creation, and curriculum development. Unlike the cave dwellers of Plato's allegory, the host agrees that the Fellows have been in the same situation with them before; they believe that their going away and coming back should not be seen as if the hosts are inferior and need more help. This conclusion can be derived by seeing how careful the hosts were in adopting most of our activities that called for change. Finally, I suggest that if the Fellows and IEE consider this critical evaluation here, the program will be a benefit, as it has done a lot for Africa already.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Leveraging e-Learning Technologies to Address Institutional Challenges at University of the Sacred Heart Gulu

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ABSTRACT

In today's competitive and globalized environment, quality education remains a necessity and priority in developing countries such as Uganda. However, academic institutions experience limitations in research (capacity to attract research grants, staff expertise and experiences, and limited collaborative research); limitations in teaching (pay disparity; resources [e.g., availability of textbooks/resources]; facilities [e.g., classroom arrangements]; and technology [e.g., technical aid to students and teachers]); and limitations to service (schedule challenges, resource challenges, and institutional/personnel commitment). The remedies of these challenges would require the host institutions, fellows, and community to participate and assist the higher educational establishments fully. We suggest leveraging technology such as Google apps for education, to support and address the limitations on effective research, teaching, and service. In addition, fellows can use platforms such as Zoom and Skype to train and lecture online, work on grant proposals and manuscript preparations, and teach students. Experiences during the global COVID-19 pandemic also underscore the power of informational technologies as a solution to these challenges.

Introduction

The internet is one of the most transformative technologies with great impacts on education (Bostrom, 2003). The pandemic-stricken world has exposed vulnerability in the areas inclusive of education. Therefore, this is a crucial moment to critically reflect on the direction that the education sector should take in the future and to determine the powers of control of its future, for technological choices are neither neutral nor do they affect only their immediate contexts of application (Selwyn, 2010). Globalization and technology are two of the many drivers that impact today's education, locally and internationally. Numerous universities are implementing innovative online strategies to ensure the success of e-learning for academic success but three issues that are critically important for the success of these initiatives relate to the design of learning tasks which is not well instituted in many universities that lead to variation in academic performance of the students, support in the learning environment, and reorganization of methods of communication and mode of delivery of instructional materials. The inconsistency of these three issues brings a negative impact on academic performance (Lim, 2004). While information and communication technologies (ICTs) have been introduced in education systems in most African countries, ICT expansion and adoption remain slow due to a lack of effective ICT policies and a long run supporting ICT infrastructure (e.g., electricity, Internet, software, and hardware devices), teacher capacity, and financial resources. As such, the introduction of ICTs in education and the overall transformation of Africa's Education Systems (AES) in science, technology, engineering, and mathematics using ICTs, especially in a minority of African

schools, have the potential of widening the digital divide based on several factors, e.g., sex/gender, location, and socioeconomic status (Barakabitze, et al., 2019).

E-learning is on the increase across university education all over the world. Currently, many universities worldwide conduct e-learning in different forms. Despite this widespread adoption of e-learning in university education, research suggests that e-learning adoption has not yet reached its full potential (Lockias et al., 2008). The global academic programs vary according to the techniques, mode, and approaches used in delivering instructional materials in e-learning-based education. There has, however, been consistent progress made in online teaching and learning among some universities in developing countries over recent years, because of gradual improvement of ICT facilities and other e-learning technologies, which are the backbone of e-learning education. It is noted that students perform better in a good ICT environment; as pointed out by Stepp-Greany (2002), technology helps weak students by "redistributing teacher and classmate attention so that incapable students can become more active participants in the class."

The articulation and mapping of different pedagogic processes, tools, technologies, and techniques that provides a pedagogic approach to e-learning platforms is more reflexive and consistent with practitioners' theoretical perspective on learning and teaching processes. It is noted that the organizational structures and processes that constitute the educational environment have a significant impact on how teaching and learning is conducted in a virtual learning environment (VLE), for the academic performance of students. Consequently, we suggest that the way a particular VLE is

designed and constructed for the purposes of management might have a profound impact on how likely it is to facilitate the use of a variety of pedagogical approaches in e-learning academic programs (Conole, 2004).

The use of ICT has gained a prominent role in teaching and learning. ICT has been proposed to enhance students' learning in a problem-based learning (PBL) environment. Technology-based distance learning is becoming popular throughout the world. In sub-Saharan Africa, advancements in communication technology more than two decades ago raised much hope, as technology-based distance education was seen as a promising, cost-effective and cost-efficient answer to expansion of access to education. These high hopes in technology-based distance education have, however, turned into disillusionment because of the challenges relating to digital infrastructure affecting most of sub-Saharan Africa (Mukuni, 2019). Mbarika, et al. (2002) concede that the great strides that Africa is making toward improving internet diffusion do not tell the whole story. One part of the story is that internet diffusion is largely restricted to the major cities. The rural populations are generally outside coverage areas. Other parts of the story have been presented by several writers. For example, Intsiful & Osae (2003) and Mukuni (2019) list the following constraints to effective and efficient use of ICT: prohibitive subscription costs, inadequate promotional strategies, inadequate relevant user information, poor quality of internet services, unfriendly regulatory framework, and ineffective network traffic and infrastructure management.

The opportunities and challenges discussed by the authors of this paper apply to the University of the Sacred Heart Gulu (USHG) in Uganda. For example, USHG has had a private internet service provider (ISP), with shared bandwidth, that provided very low internet speed with only 10% of the specified bandwidth guaranteed. However, the university has managed to connect to the National Backbone Infrastructure, and this has improved the internet speed.

Current Knowledge About e-Learning

The number of different e-learning technologies available to support teaching and learning is growing exponentially. A major issue for faculty and educational developers in higher education, including USHG, is to determine which e-learning technology is most appropriate to support their teaching needs and provide optimum learning opportunities for students. Over the last few years a vast amount of literature has been published on e-learning technologies and how they are used in education. Therefore, the decision to use a particular technology should be based on sound research and clear evidence. The papers review many of these e-learning technologies and provide information regarding their use and the opportunities afforded by them. As pointed out by Craig et al. (2012) e-learning is supported by many related but different e-technologies. They identify 14 e-technologies,

implemented in different platforms, that can be used in e-learning: assessment and survey tools, asynchronous communication, digital repositories, management and administration tools, photo sharing, podcasts and streaming, shared documents, social bookmarking, social networking, subscribed content delivery, synchronous communications, virtual worlds, weblogs and microblogs, and wiki.

Education reform is occurring throughout the world, and one of the tenets of this reform is the introduction and integration of ICT in the education system. USHG is currently planning to conduct most of its teaching and learning processes online using the Google Classroom platform, and a blended approach. As duly recommended by Jhurree (2005), the successful integration of any technology, e.g., ICT, into the classroom warrants careful planning and depends largely on how well policymakers of an institution understand and appreciate the dynamics of such integration. Up until now, higher education has, for the most part, been evolving its way forward—sometimes enthusiastically, sometimes hesitantly—in its adoption of online and blended course models. But the pandemic delivered a seismic jolt that greatly accelerated this evolution, forcing higher education to become inventive and create an array of new course models to cope with a truly unique situation (Pelletier et al., 2021). USHG might experience hesitancy—given the apparent advantage of small numbers in comparison to large spaces/facilities that would allow for full compliance with SOPs. Therefore, a blend of virtual and campus-based interaction would go some way in providing scaffolding for more dependent learners, to move them toward increased independence (Donnelly, 2009). Despite the attention that has been paid to documenting the online tutor's role, there is still a need for us to understand the impact of increased use of technology more fully on teachers' roles in higher education today (Sharpe & Pawlyn, 2009).

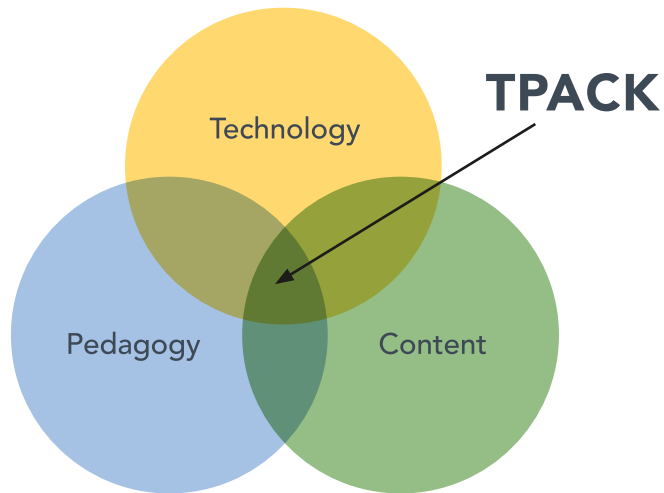
e-Learning Conceptual Framework

The Technological Pedagogical Content Knowledge model (TPACK) is a useful framework for explaining the transition to e-learning. It encapsulates the knowledge and skill demands of contemporary instructors (Archambault & Barnett, 2010). Figure 1 (Turnbull et al., 2021) displays TPACK's triad of interrelated teaching knowledge of pedagogy, content, and technology. Pedagogy often refers to the teacher-focused approach to educating children and contrasts with adult learning principles embedded in andragogy (adult education), which ideally involves the voluntary commitment of learners to pursue knowledge for its essential value (Pew,

2007). The second element of the model, content, encompasses specific knowledge domains of education such as health, engineering, or law. Technology includes all the tools, software, and hardware necessary to facilitate online learning. These three fundamental elements in this framework best explain transition experiences of e-learning in different countries.

FIGURE 1

Technological Pedagogical Content Knowledge (TPACK) model



Technologies Used in e-Learning Platforms

E-learning technologies are primarily communication technologies that facilitate learning and feedback. While Craig et al. (2012) identify at least 14 technologies used in e-learning platforms, these technologies are integrated in the most used e-learning technologies (Google, Moodle, and Zoom) in Uganda.

Google education platform

Google Workspace for Education (Google, 2021) is a set of Google tools and services tailored for schools and homeschools to collaborate, streamline instruction, and keep learning safe. Google Workspace for Education offers multiple options to meet organization's needs. Google Workspace for Education Fundamentals provides tools to aid teaching and learning, such as Classroom, Google Meet, Google Docs, Google Forms, and Google Chat. Google Workspace for Education Standard provides the same tools as Education Fundamentals but with advanced security features and enhanced administration controls. There is a provision for Teaching and Learning Upgrade that adds enhanced video-communication capabilities, Classroom add-ons, and other features and tools to the Education Fundamentals or Education Standard edition. Google Workspace for Education Plus includes all the features in Education Standard and Teaching and Learning Upgrade with additional features for certain services, such as attendance tracking in Google Meet. Education Fundamentals is free to all qualifying institutions. Education Standard, Teaching and Learning Upgrade, and Education Plus are all paid subscriptions.

Moodle education platform

Moodle is a free, online Learning Management system enabling educators to create their own private website filled with dynamic courses that extend learning, anytime, anywhere (Moodle, 2021). Moodle learning platform provides educators, administrators and learners with a single robust, secure and integrated system to create personalized learning environments. The software can be download onto a web server of an organization. In addition, Moodle is provided freely as Open Source software, under the GNU General Public License. Anyone can adapt, extend or modify Moodle for both commercial and non-commercial projects without any licensing fees and benefit from the cost-efficiencies, flexibility and other advantages of using Moodle.

Zoom platform

Zoom (Zoom, n.d.) is a video-conferencing service that is used virtually to meet with others either by video or audio-only or both, all while conducting live chats. It also allows recording sessions for viewing later (Castelli & Sarvary, 2021). A Zoom meeting refers to a video-conferencing meeting that is hosted using Zoom. A student can join these meetings via a computer, phone, or tablet. Meanwhile, a Zoom Room is the physical hardware setup that lets universities schedule and launch Zoom meetings from their classrooms. Zoom's main features include:

- **One-on-one meetings:** Host unlimited one-on-one meetings, even with the free plan.
- **Group video conferences:** Host up to 500 participants (if you purchase the "large meeting" add-on). The free plan, however, allows you to host video conferences of up to 40 minutes and up to 100 participants.
- **Screen sharing:** Meet one-on-one or with large groups and share your screen with them so they can see what you see.
- **Recording:** You can record your meetings or events, too.

Zoom offers four pricing tiers. The basic Zoom tier is free, with an unlimited number of meetings, but each meeting is capped at 40 minutes in length, and meetings cannot be recorded; Zoom Pro costs \$14.99 per month, allows hosts to create a personal meeting ID, and allows meeting recording in the cloud or on your device; Zoom Business for mainly small and medium business tier costs \$19.99 per month, offers transcripts of Zoom meetings recorded in the cloud and provides dedicated customer support; Zoom Enterprise for large business costs \$19.99 per month and per meeting host (100 minimum) and is meant for businesses with 1,000+ employees. It offers unlimited cloud storage for recordings, a customer success manager and discounts on webinars and Zoom Rooms.

The University of the Sacred Heart Gulu has access to Google Workspace for Education fundamentals but would

need to upgrade in order to optimize the benefits of the workspace for e-learning. USHG could also consider the Zoom Pro package.

Challenges

Challenges in online education

During the COVID-19 pandemic, the theory of broken education among universities, including USHG, offers an opportunity to education technology companies to sell untested solutions that sometimes have little to do with proper teaching and learning philosophies. Some education technology companies are now generously offering their services and products for free, with the prospect of further sales. As these tools become rooted in teaching practice, it becomes difficult to go back, as a result of escalation of commitment. In addition, and more disturbingly, some of these tools employ login requirements and tracking cookies to capture and gather data that can be monetized in the future. This is a rising business model in technoscientific capitalism, where the development of useful technological products and services is less important than the ownership and control of assetized personal data (Birch & Lewis, 2020).

Information technology (IT) tools and other infrastructure used to support e-learning in higher education are basically classified into asynchronous and synchronous (Larasati & Santoso, 2017; Lim, 2004). It is well known that asynchronous learning systems are built on communication platforms that do not require time-sensitive interactions between stakeholders in the education process (Larasati & Santoso, 2017). Learning management systems (LMSs) such as Moodle and Blackboard are examples of well-established distance learning platforms that are structured to facilitate stakeholder interactions based on a “request-response” framework only, and these are unconstrained by time limitations, which can cause inconveniences at USHG and any other higher learning institutions. On the other hand, synchronous online learning involves the real-time interchange of information, which is usually conducted via video-conferencing tools such as Zoom and Skype (Janghorban et al., 2014; Kohnke & Moorhouse, 2020). These have been pivotal to the efforts of most higher education institutions (HEIs) to recreate classroom environments online. However, a combination of the two modes of engagement is necessary to replicate all face-to-face (F2F) instructional activities in a purely online environment (McDaniels et al. 2016). A study conducted by Romero-Ivanova & Shaughnessy (2020) on digital practice during COVID-19 indicated that synchronous tools such as Zoom are invaluable in sustaining a sense of connectedness in an otherwise isolated situation. USHG and other learning institutions must carefully consider the capacity of ICT tools to support both modes of communication before integrating them into course delivery systems. This will also require technical support inclusive of

instructor-student support as well as university support to address issues that arises with the technologies (Watts, 2016).

As blended learning becomes embedded into the practices of higher education, many more staff are involved—some of whom have not made an active choice to adopt technology, have not been involved in the pedagogical redesign decisions, and are not all sharing the same responsibilities (Sharpe & Pawlyn, 2009). Further issues involve the specific skills required of the role, such as constant repositioning of context from project to project, fast acquisition of knowledge related to such context both at the subject and pedagogical level, and the requirement to stay abreast with technological developments in the field (Donnelly, 2009). There is further evidence of a blurring of roles between the academic developer and more traditional academia (Donnelly, 2009). For USHG, there is a need to reinforce and clearly define the role of lecturers as developers of online content/modules.

Institutional challenges

Some of the institutional challenges among students and staff at universities are access to devices, access to the internet, cost of data, and access to electricity (Czerniewicz, 2021). Elsewhere in the world, the shift to emergency remote teaching, physically distanced teaching and hybrid models has led to pedagogical changes that many argue should continue, in order to improve the quality of the student learning experience.

Challenge for educators

The popularity of emerging digital technology presents new opportunities and challenges for educators. Farnan et al. (2008) argue that educators need to familiarize themselves with advances in digital media, not only to take advantage of the educational opportunities they provide, but also to encourage safe practices and professional behavior by students using these technologies. Armatas and Holt (2003) warn, however, that a constant challenge will be “to integrate the possibilities of the emergent [technology] with ongoing commitments to the established corporate technologies.”

Methods

This paper draws upon desk research (literature reviews), virtual group discussions and communication exchanges. The virtual group discussions were conducted through Zoom, Google Meet, and WhatsApp. In addition, the authors contributed to the writing of the paper through Google Drive and emails.

Findings

In the effort to establish a functional technological infrastructure on its campus, the USHG set up a modest local area network (LAN) to connect key faculty offices, computer laboratories, and some classrooms. The university has also been recently connected to the National Backbone Infrastructure/Fiber by the National Information and Technological Authority

(NITA) Uganda. This connection provides the university with some stability in internet connectivity accessed both through the local area network and wireless network. While these developments provide some stability, they are insufficient and do not address the needs of students who may have to access their classes remotely from their homes.

In 2016, USHG subscribed to Google apps for education. The platform provides access to most classroom features, including a platform to present course content, as well as manage student and teacher communication, students' assessments and grading. The platform also provides opportunities to network through emails. The university also uses Google Meet to hold virtual meetings and trainings.

Although not yet fully explored by the university, USHG has considered the adoption of Zoom as an alternative platform for enhancing e-learning. However, the resource limitations and challenges that the university faces have hampered this development.

Another platform used at the university is WhatsApp, a mobile phone- and web-based application that is used by both teachers and students to send text and voice messages, make voice and video calls, and share images, documents, user locations, and other content. Although the platform requires the internet, WhatsApp has been particularly helpful due to its significantly low internet consumption and lower cost compared to texting.

The university also uses e-signatures, which has facilitated formalization of collaborative engagements in research. In particular, the USHG is currently undertaking joint research with the Royal Holloway College of the University of London and with other universities in South Africa and Uganda.

The challenges the USHG faces with using these technologies include:

- Students' comfort level with using these technologies
- Students' familiarity with the technologies
- Limitations of e-learning materials
- Skills and resource persons, as these are new areas for USHG
- Cost of equipment
- Cost of education in Uganda
- Power accessibility and reliability for equipment
- Internet connectivity
- Safety and security of the properties
- Quality of online content and examination. Currently, the technological infrastructure and expertise do not allow for conducting examinations on line, even though some assignments can be conducted using the online platforms. There has also been a restriction on universities conducting online examinations.

- Stress experienced by teachers in having to deal with technologies. Most instructors have been used to traditional education methods and now must deal with new methods of e-learning. This can bring stress, discomfort, and hesitancy, and these can be tied to mental health issues.

Opportunities for collaborations with USHG

- E-learning will make greater collaboration possible. This has been clearly shown in the continued collaboration between the Carnegie African Diaspora Fellowship Program (CADFP) fellow and USHG.
- Increased possibility of arranging for and doing multidisciplinary research with USHG that involves multiple countries; research done both online and in person. For example, USHG is working in research with two universities in South Africa, Kyambogo University and Royal Holloway, University of London. In addition, USHG is collaborating with Dr. Opiyo, a CADFP fellow, in setting up a Data Science Center.

Opportunities to use other platforms at USHG

USHG is currently using only the Google platform. USHG should take advantages of other available e-learning platforms such as Zoom, Skype, and Moodle. For example, Moodle is a free open source platform that is being used by teachers around the world and is easy to learn.

Discussion

In this study, we conducted desk research and virtual group discussion on e-learning in the context of how it can be applied to the USHG. We identified several challenges that USHG must overcome to succeed with e-learning. To mitigate some of the challenges, the USHG has done the following:

- Engaged consultants to train its key faculty and teaching staff in the use and application of Google apps for education. The training encompassed course development and implementation, classroom management, and students' assessments. Challenges still exist around the hesitance of teaching staff to adopt the platform (e-learning) as a suitable replacement for physical classrooms.
- The university has also organized similar trainings for its continuing students in order to ensure that they gain the skills and confidence in using Google apps for learning. A key challenge that has hampered the adoption of this platform remains the unreliable and low internet speeds, coupled with limited access to computer devices.
- The USHG has also developed community outreach programs aimed at helping students at the university as well as external students in lower secondary schools to familiarize themselves with e-learning technologies.

This outreach program has become very useful during COVID-19 within the communities.

- We have also identified some areas where USHG needs to work with the government, donors, collaborators, stakeholders, and well-wishers to provide support and services to help with challenges. These include access to computer devices, access to the internet, subscriptions for premium versions of learning management systems, ensuring honesty and integrity in the learning process, data safety and security, and changing the traditional mindset of educators.

Recommendations

USHG is ready for e-learning; however, there are challenges that should be addressed to ensure the optimization of effective and efficiency in e-learning at the university. USHG needs funds to be able to get the infrastructure needed for e-learning and the expertise to advise lecturers and administrators, and to train students. We need to increase capacity building for lectures on the ground.

The University of the Sacred Heart Gulu also needs to partner and benchmark with experienced individuals, corporations, and universities in other parts of the world that have succeeded in the efficient adoption and use of e-learning technologies. This shall help the nascent university to appreciate the adoption of e-technologies, make continuous improvements, and implement changes in education processes.

Conclusion

This study has highlighted the opportunities and challenges that USHG, as a young university, particularly, has faced during the COVID-19 pandemic and the move to greater utilization of technology in the education sector. There are significant available e-learning technologies and platforms that USHG can leverage to promote and further academic collaboration that will, in turn, address its institutional challenges; this will thereby build and strengthen its capacity for research and teaching and for service to the community. As the university embraces e-learning in continuing its educational mission, it will also need support in using the greater opportunities available.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Experiential Epistemology: A Proposed New Pedagogical Direction for Nigeria's Educational System

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Introduction

Nigeria, like many countries of Africa, is a former colony of colonial Britain. One of the relics of that relationship, which has survived and persisted to date, is Nigeria's educational system. Even though post-independence Nigeria has implemented a wide range of major reforms of its educational system, one critical aspect of that system that has survived post-colonial reforms is the fundamental relationship between the teacher and the student. It is a relationship that privileges the teacher, not just as master and expert of knowledge, but also as the exclusive source of knowledge. It is a top-down relationship of pedagogical power that sees and treats the student as a blank slate without any form of active agency in knowledge construction. In that relationship, the student approaches the teacher as an empty container to be filled at the teacher's knowledge fountain. The student is infantilized and treated as lacking any experience to draw from and contribute to his or her own learning.

This has major philosophical and practical implications along epistemological and pedagogical dimensions. One such implication is didactic pedagogy, which results in rote learning. With the student's experience completely devalued and discounted, the student engages learning as an uncritical, mechanical, and repetitive exercise in content consumption without any meaningful effort at critical processing and analysis. For a country that has the highest number of its citizens, relative to other African countries, studying in European and American colleges and universities where rote and didactic pedagogy is replaced with constructivist, experiential, and andragogical models, Nigerian international students face major learning style challenges.

In highlighting this challenge, this paper presents an alternative pedagogical approach, one that honors, encourages, and invites the student's lived experience as an essential element of knowledge construction. Three major learning theories—Lev Vygotsky's (1978) social constructivism, Malcolm Knowles' (1978) andragogy, and David Kolb's (1984) experiential learning—will form the basis for this proposed new approach. For historical context, this paper will also present, as part of the theoretical architecture, colonial theory and how Western intervention in Africa worked to undermine and devalue authentic African indigenous knowledge and experience, thus imposing a culture of didactic and rote learning.

Theoretical Framework

Constructivism

Constructivism, as an epistemological philosophy, is a rebel philosophy. It arose out of dissatisfaction with the traditional objectivistic epistemology of Western theories of knowledge (Yilmaz, 2008). It rebelled against traditional objectivist and positivist epistemology that scaffolded the

notion of objective truth and meaning detached from, and independent of, human consciousness (Grotty, 1998; von Glasersfeld, 1995; Hendry et al., 1999). In contrast, constructivism asserts that knowledge cannot exist outside and independent of human minds; that truth is relative, not absolute; and that "knowledge is not discovered but constructed by individuals based on [their] experiences" (Yilmaz, 2008, p. 162; Grotty, 1998; Fosnot, 1996). To the extent that truth is variable and relative to the observer, constructivism's central argument, therefore, is that "knowledge is not passively received from the world or from authoritative sources but constructed by individuals or groups making sense of their experiential worlds" (Yilmaz, 2008, p. 162, citing Maclellan & Soden, 2004). As Maclellan and Soden (2004) suggest, meaning making based on previously constructed knowledge means that:

1. Learners are intellectually generative individuals (with the capacity to pose questions, solve problems, and construct theories and knowledge) rather than empty vessels waiting to be filled.
2. Instructions should be based primarily on developing learners' thinking.
3. The locus of intellectual authority resides in neither the teacher nor the resources, but the discourse facilitated by both teachers and learners.

Philosophically, constructivism holds the position that knowledge is best acquired through reflective and active construction in the mind (Mascolo & Fischer, 2005). It views knowledge as an intersubjective interpretative process where the learner engages new information from past experiences and cultural background to construct an interpretation of the new information. Pedagogically, it is an approach to learning that "holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner" (Elliott et al, 2000, p. 256).

Initial instructional approach in the West followed the behaviorist, nativist model, reflecting such classic writings as those of Thorndike (1906). Thorndike's central argument is that learning occurs through "the differential strengthening of bonds between situations and actions" (Palinscar, 1998, p. 346). This involves direct instruction teaching, where the teacher assumes an active and direct role and maintains complete control of the content of learning, pace of learning, and sequence of content of what is learned. According to Baumann (1988):

The teacher, in a face-to-face-reasonably formal manner, tells, shows, models, demonstrates, and teaches the skills to be learned. The key word here is teacher, for it is the teacher who is in command of the learning situation and leads the lesson, as opposed to having instruction "directed" by a worksheet, kit, learning center, or workbook (p. 714).

Apart from its effectiveness in teaching factual content, there is little evidence that direct instruction is effective in the development of higher-order cognitive skills (Palinscar, 1998; Peterson & Walberg, 1979). Interest in higher-order cognitive skills, such as reasoning and problem solving, resulted in a revolutionary shift from behaviorist direct instruction pedagogy to cognitivism (Bruner, 1990). The cognitive pedagogy goes beyond being just an improvement on behaviorism; it focuses on meaning making as a fundamental goal of learning and knowledge (Bruner, 1990). It is in this realm of meaning making in cognitive pedagogy that constructivism finds abode.

Constructivism is not one unified theory. Between the polar extremes of the broader constructivist continuum lie its several versions, which, in varying degrees, reject the very notion of positivist objectivity that undergirds direct instruction. Matthew (2000) observes that educational literature identifies 18 versions of constructivism, but Yilmaz (2008) notes that all such versions fall under three broad categories: (1) sociological, (2) psychological, and (3) radical constructivism (p. 163). Cognitive constructivism, at one end of that continuum, recognizes the individual as constructing knowledge, while radical constructivism, at the other end, "rejects the notion of objective knowledge and argues instead that knowledge develops as one engages in dialogue with others" (Palinscar, 1998, p. 347). Cognitive constructivism, derived from the work of Jean Piaget, argues that knowledge is the product of active construction by learners from their existing cognitive structures (schemas). Learning, therefore, reflects learners' stage of cognitive development. The pedagogical focus in cognitivist constructivism is helping learners assimilate new information and making necessary modifications to their existing cognitive structure to accommodate the new information (Piaget, 1985).

As an adjunct of constructivism, social constructivism is a social learning theory developed by Lev Vygotsky (1978), a Russian psychologist. Even though Vygotsky was a cognitivist, he rejected the assumption that learning could be separated from its social context. Accordingly, he maintained that all cognitive processes originate in social interactions and not just in the assimilation and accommodation of new knowledge by learners. The central claim of the theory is that individuals are not just active agents in the creation of their own knowledge, but that this knowledge construction takes place in social and cultural interaction with other members of their environment.

Social constructivism views learning as a collaborative process where knowledge is forged in learners' interaction with their culture and society (Vygotsky, 1978). In rejecting Piaget's (1985) assumption that it was possible to separate learning from its social context, Vygotsky (1978) insists that "every function in the child's cultural development appears twice: first, on the social level and, later on, on the individual level; first between people (interpsychological) and then inside the child (intrapsychological)" (p. 57). Radical constructivism, developed by Ernst von Glasersfeld, maintains that all knowledge is

constructed rather than products of sensory perceptions. Put differently, knowledge is invented, not discovered. According to Ernest (1994), "the humanly constructed reality is all the time being modified and interacting to fit ontological reality, although it can never give a 'true picture' of it" (p. 8).

Social constructivism maintains that meaning is personally constructed by the learner through experience, and that the meaning so constructed is the product of the interaction between prior knowledge and new information (Arends, 1998; Fox, 2001). It is the prior knowledge that not only provides the foundation for, but also influences, the new or modified knowledge that an individual constructs from a new learning interaction (Phillips, 1995). In the absence of that prior experiential foundation, there is no sustainable basis for a true cognitive engagement in new learning experiences.

Learning, in social constructivist epistemology, is more a rather active learner-driven process than a passive process of assimilation and absorption of teacher-generated information (Fox, 2001).

In the passive teacher-driven tradition of learning, the learner is viewed as an empty vessel to be filled with teacher-produced knowledge. On the contrary, active constructivist learning posits that learners construct knowledge and meaning only through the process of active interaction with the world (Vygotsky, 1978). It is an interaction that results in meaningful connections between prior knowledge, new knowledge, and the pedagogical process, so that even when information is passively received, the process of its understanding (meaning making) is active.

Another major claim of social constructivism is the sociality of learning. Dewey (1916) argues that learning is a social activity, something that takes place in social interaction, instead of abstract concepts. Cognitive meaning making is both relativist and interactional, involving the learner's community and environment (Vygotsky, 1978). Therefore, as is the case with everything social, teaching and learning is the process of sharing and negotiating knowledge in a social space. But, even as learning is a social activity, all knowledge is personal, reflecting each individual learner's distinctive stance, which itself reflects the learner's existing knowledge, socialization, value, culture, and general body of experience.

Constructivist Pedagogy

Despite its relatively recent emergence as an epistemological theory, constructivism has gained vast interdisciplinary pedagogical popularity. It has informed new teaching, learning, and research approaches in such fields as psychology, philosophy, anthropology, sociology, and more (Yilmaz, 2008). As a pedagogical orientation, constructivism is the creation of learning environments, learning activities, and learning methods that are rooted in constructivist philosophy. Its central goal is student-centered learning, empowering the student to develop personal and independent understandings in the subject matter of learning (Richardson, 1997). The role of education is

to “assist individuals within a society to understand their lived reality” (Ezeanya-Esiobu, 2019, p. 12). Unless individuals learn by experiencing real life, they will not be able to develop freely and contribute to the development of society. Or as Ezeanya-Esiobu (2019) puts it, “memorization, abstract learning, drill and the ‘learning of fixed subject matter’, ... will not be very beneficial to the individual seeking to explore and understand the realities of his own lived experiences” (p. 12). Citing Dewey (1916), Ezeanya-Esiobu (2019) notes:

The curriculum should be conceived, therefore, in terms of a succession of experiences and enterprises having a maximum of likeness for the learner with a view to giving the learner that development most helpful in meeting and controlling life situations. ... The method by which the learner works out these experiences, enterprises, and exercises, should be such as calls for maximal self-direction, assumption of responsibility, of exercise of choice in terms of life values (p. 12).

Fox (2001, p. 24) summarizes the key claims of constructivist pedagogy thus:

- Learning is an active process.
- Learning is an adaptive activity.
- Learning is situated in the context in which it occurs.
- Knowledge is constructed by the learner, rather than innate, or passively absorbed or invented.
- All knowledge is personal and idiosyncratic.
- All knowledge is socially constructed.
- Learning is essentially a process of making sense of the world.
- Experience and prior understanding play a role in learning.
- Social interaction plays a role in learning.
- Effective learning requires meaningful, open-ended, challenging problems for the learner to solve (see also Boethel & Dimock, 2000).

A key premise of constructivist pedagogy is that education will, at every point in time, be built around “the human experience of the learner” (Ezeanya-Esiobu, 2019, p. 11). Therefore, unlike training, which is modeled around repetitive tasks that are devoid of philosophical understanding, education must focus on empowering the learner to think clearly without depending on abstract images. It must reflect the learner’s life, or, as Ozmon and Craver put it, education serves to “direct, control, and guide personal and social experiences” (1986, p. 114). Nothing about the human experience, which education explores, is objectively preset. Ezeanya-Esiobu (2019) captures it even more succinctly, arguing that education should not be based on “some perfected system of truth, but should strongly encompass a system of knowing that is rooted in experimentation, existing and emerging reality” (p. 11). When education deviates from that,

it takes attention away from the content of the learner’s own experience and places it instead on subject matter (Ezeanya-Esiobu, 2019; Dewey, 1916).

Teaching in constructivist tradition reflects a conscious effort to jettison the objectivist, didactic, and memory-oriented transmission models of learning to a more intersubjectivist, interpretivist, and student-centered model (Cannella & Reiff, 1994). Knowledge and truth are not absolute, just the individual’s interpretation of them based on their past experiences, personal views, and cultural backgrounds. Thus, the student builds (constructs) their own meaning by drawing on their knowledge and experience. In this learning approach, the learner matches newly acquired information against already existing knowledge and constructs new or modified knowledge to understand and make sense of the world. So knowledge is acquired through the learner’s involvement with content, rather than rote and robotic imitation and repetition (Kroll & Laboskey, 1996).

To serve as the vehicle that fosters innovative spirit and unleashes development, constructivist epistemology deemphasizes any approach to learning where knowledge is presented as “abstract, universal, and independent of the learner’s surroundings and existing realities” (Ezeanya-Esiobu, 2019, p. 16). Or, as Freire puts it, constructivist epistemology results in “the emergence of consciousness and critical intervention in reality” (Freire, 1968, p. 68). Therefore, rather than acting as a “dispenser of knowledge,” the teacher in constructivist learning serves as a guide, facilitator, and co-explorer who “encourages learners to question, challenge, and formulate their own ideas, opinions, and conclusions” (Abdal-Haqq, 1998, p. 2). Learners so encouraged become empowered learners who, in turn, become “inquisitive, reflective, enthusiastic, and autonomous” (Cannella & Reiff, 1994, p. 28; Fosnot, 1989; Zeichner, 1983). Here is how Cannella & Reiff (1994) captures those attributes of the empowered learner:

The inquisitive learner is continuously learning, questioning, and investigating. The individual places him/herself in new situations, taking risks and exploring unknown circumstances and interactions. The reflective individual analyzes, evaluates, and tests concepts. This reflective disposition is also used to examine oneself as a learner, how contradictions in thought are generated and resolved, the shared perspectives and differences in thought between self and others, and the sociocultural impacts on one’s own learning. The enthusiastic learner finds pleasure in learning. The individual has either retained or recaptured that intrinsic “joy in learning” experienced by all human beings as young children. The individual chooses to explore and experience and is always open to new possibilities. Finally, the empowered learner is an autonomous individual, self-governed, yet one who recognizes multiple perspectives and takes into account the effects of decisions on all concerned (p. 28).

Andragogy

In making the case for a new approach to adult learning, Malcolm Knowles (1975) draws a distinction between pedagogy, which he describes as “the art and science of teaching children,” and andragogy, “the art and science of helping adults learn” (p. 32). The thrust of Knowles’ theory of andragogy is that adults, as mature students, should not be infantilized with dependent, didactic, teacher-driven, disempowered, and nonreflective epistemology. Instead, the adult learning process should focus on and honor all sources of knowledge and insight, including “intuition, artistic experience, introspection, analytical case histories, action research, and controlled experimentation” (p. 32). Like constructivism, Knowles’ andragogy is a repudiation of the epistemic absolutism of scientism, which dominated teaching and learning in the 1950s and 1960s, according to Knowles (1975):

We can no longer afford the luxury of enjoying such multi-million-dollar fads as programmed instruction, packaged didactic learning systems, and airborne canned television instruction programs, as we did in the 1950s and 1960s. We have finally really begun to absorb into our culture the ancient insight that the heart of education is learning, not teaching, and so our focus started to shift from what the teacher does to what happens to the learner (p. 33).

In proposing andragogy, Knowles (1975) calls into question the traditional pedagogical model, which he describes as “progressively regressive” (p. 33). Here is Knowles’ case for a new order of teaching and learning:

The best education—the procedures for helping people learn which are most congruent with what we now know about the learning process—takes place in the nursery school and kindergarten, and it tends to get progressively worse on climbing up the educational ladder, reaching its nadir in college. This because the forces at work on learners from about the second grade on have very little to do with learning. Most of them have to do with achieving—passing tests, scoring high on SATs, getting into college (or graduate school), or qualifying for a job (p. 33).

Origin of Pedagogy

Knowles (1975) traces the emergence of the pedagogical orientation to some assumptions developed in the Middle Ages. Before the emergence of monastic schools in the Middle Ages, there existed earlier traditions of teaching and learning, which fell with the fall of Rome. Knowles mentions great teachers of ancient times, such as “Lao Tse and Confucius in China, the Hebrew prophets, Jesus, Socrates, Plato, Aristotle, Euclid, Cicero, Quintilian” (p. 33), who were teachers of adults, not children. Their instructional assumptions and learning procedures, such as learning being a process of discovery by the learner, dialogue, and learning by doing, were dismissed as

paganistic and forbidden when monastic schools came onboard in the seventh century (Knowles, 1975).

The novices who were admitted into the monasteries to prepare them for monastic life needed to be taught how to read and write so they could use and transcribe the sacred books. For the teaching monks, therefore, instructional approach was modeled on the assumptions about “what would be required to control the development of these children into obedient, faithful, and efficient servants of the church” (Knowles, 1975, p. 33). That, according to Knowles, was the origin of pedagogy. It was a teaching and learning model that was intended for children but had, unfortunately, been extended to the education of adults.

To underscore his claim, Knowles (1975) offers the etymology of the word pedagogy, pointing out that it comes from the same stem as pediatrics—the Greek word “paid,” meaning child, and “agogus,” meaning leader of (p. 34). In literal terms, therefore, pedagogy means the art and science of teaching children. Knowles’ essential argument, therefore, is that to speak of “‘the pedagogy of adult education’ is a contradiction in terms” (p. 34). To overcome that contradiction, people involved in adult education have begun to embrace a new learning orientation that comports with the needs of the adult learner. That orientation is the theory of andragogy, or as Knowles (1975) puts it, “the art and science of helping adults learn” (p. 32). Etymologically, andragogy is derived from “the stem of the Greek word ‘aner,’ meaning man (as distinguished from boy)” (Knowles, 1975, p. 34).

Assumptions of Andragogy

Four main assumptions undergird the andragogical claim:

1. Changes in self-concept

The adult learner is a learner whose self-concept has grown from one of total dependency (consistent with being an infant) to one of increasing independence and self-directedness. The assumption here is that the point at which individuals gain self-concept is that point in their development when they psychologically become adults. It is at that point that the individual “develops a deep psychological need to be perceived by others as being self-directing” (Knowles, 1975, p. 34). From that point on, any experience that such individual perceives as infantilizing only impedes their learning (Knowles, 1975; Cross, 1981).

2. The role of experience

The adult individual is assumed to have accumulated a rich reservoir of experience, which also serves as vital reference resource to relate and test new learnings. Andragogically, therefore, there is a decreasing use of transmittal teaching techniques and an expanding use of assistive experiential techniques that recognize and tap into the learner’s experience while involving the learner in analyzing the experience

(Knowles, 1975). This sees the replacement of lectures and assigned readings with discussions, field experience, team projects, laboratory simulations, and other action-learning models of learning.

3. Readiness to learn

As individuals mature into adults, motivation for learning ceases to be due to biological development and pressure, and becomes about the acquisition of developmental tasks necessary to meet the individual's evolving roles in society. According to Knowles (1975), it is a distinction between a teaching approach that assumes that "children are ready to learn those things they 'ought' to learn" and a learning approach that assumes that "learners are ready to learn those things they 'need' to learn." (Knowles, 1975, p. 35)

4. Orientation to learning

Children, in pedagogical tradition, have been conditioned into a "subject-centered" orientation to learning, while adults, consistent with andragogic philosophy, engage in a "problem-centered learning orientation" (Knowles, 1975, p. 35).

5. Motivation to learn

As a person matures, the motivation to learn becomes internally driven, rather than externally imposed (Knowles, 1984, p. 12).

Experiential Learning

Even though the theory of experiential learning has come to be associated widely with David Kolb, Kolb himself will be the first to admit that it is a theory that draws from the foundational work of notable 20th century scholars—John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire, Carl Rogers, and others (Kolb & Kolb, 2005). Kolb (2015) acknowledges that he "noticed the dimensions" (p. 56) of the theory in the pioneering works of those twentieth-century scholars, and attempted to "integrate the common themes of their work into a systematic framework that can address twenty-first century problems of learning and education" (p. xvii). These prominent pioneers of experiential learning helped to develop "a holistic model of experiential learning process and a multilinear model of adult development" (Kolb & Kolb, 2005, p. 194; Kolb, 1984). Kolb's (1984) experiential learning traverses the vast fields of higher education, human resources development, and management education (Matsuo & Nagata, 2020; Illeris, 2007; Yamazaki & Kayes, 2004; Kisfalvi & Oliver, 2015; Tomkins & Ulus, 2016).

Kolb's model remains the most referenced and influential model in the field of experiential learning theory (Seaman et al., 2017; Fielding, 1994; Robotham, 1995). According to Kolb (1984), learning is "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience"

(p. 38; Kolb, 2015, p. 49). For Kolb (1984), experiential learning is a "holistic integrative perspective on learning that combines experience, cognition, and behavior" (p. 21). This definition redefines the act of learning from a teacher-centered, outcome-oriented, passive reception of information to a student-directed process of active exploration. In other words, students learn not by accumulating facts and concepts, but through a dialectical process of experience and analysis. In Kolb's own words, "knowledge is continuously derived from and tested out in the experience of the learner" (1984, p. 27). Kolb also states that his theory of experiential learning is predicated on the following six assumptions that are equally shared by prior scholars:

- Learning is best conceived as a process, not an outcome. This means that the key goal of higher education is to engage students in "a process that enhances their learning" (Kolb & Kolb, 2005). Or as Dewey (1938) put it, education should be viewed and approached "as a continuing reconstruction of experience" (p. 79; Kolb & Kolb, 2005).
- All learning is relearning. Effective learning occurs when it follows a process that "draws out the students' beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas" (Kolb & Kolb, 2005, p. 194).
- Learning requires individuals to resolve dialectically opposed modes of adaptation to the world. It is these dialectical tensions that drive the learning process. Learning is the back-and-forth movement between "opposing modes of reflection and action and feeling and thinking" (Kolb & Kolb, 2005, p. 194).
- Learning is a holistic process of adaptation to the world. Learning goes beyond the cognitive realm. It involves the "integrated functioning of the total person—thinking, feeling, perceiving, and behaving" (Kolb & Kolb, 2005, p. 194).
- Learning results from synergistic transactions between the person and the environment. It is a dynamic interplay between the person and the environment. Or, to borrow Piaget (1985), learning takes place through the equilibration of the two dialectic processes of assimilating new experiences into existing cognitive structures and accommodating existing concepts into new experiences.
- Learning is the process of knowledge creation. It is a constructivist theory of learning whereby "social knowledge is created and recreated in the personal experience of the learner" (Kolb & Kolb, 2005, p. 194). It is this constructivist character of experiential learning theory that separates it from the transmission model of traditional learning process, where "fixed ideas are transmitted to the learner" (Kolb & Kolb, 2005, p. 194).

Although many experiential learning models exist, Kolb's (1984) model has the distinction of being well developed and researched (Armstrong & Mahmud, 2008). Kolb's research offers a strong and well-reasoned theoretical base, something that is missing in the work of many other writers (Holman et al., 1997). Or as Zuber-Skerritt (1992) puts it, Kolb (1984) provides "a comprehensive theory which offers the foundation for an approach to education and learning as a lifelong process and which is soundly based in intellectual traditions of philosophy and cognitive and social psychology" (p. 98). It is a theory so influential that it has been extended and applied to many other disciplines. In human resource development research, Chang (2017) explores Kolb's (1984) model from a neuroscientific perspective. Yeo and Marquardt (2015) propose an integrated framework that combines action learning with experiential learning (Matsuo & Nagata, 2020). Kolb's (1984) theory proposes a systematic way of structuring and sequencing a learning curriculum to improve student learning. It makes the bold claim that learning is a cyclical process. At the heart of Kolb's model is a four-stage learning cycle that explains how experience is transformed through reflection into general concepts, and how those general concepts are used as guides for active experimentation, which results in new experiences (Healey & Jenkins, 2000). This four-stage learning cycle results in the following four key learning modes:

- Concrete experience (CE), the mode of experiencing
- Reflective observation (RO), the mode of reflecting
- Abstract conceptualization (AC), the mode of generalizing and conceptualizing
- Active experimentation (AE), the mode of testing existing experience, which results in a new order of experience

A key claim of Kolb's (1984) model is that effective experiential learning occurs only when all four modes in the learning cycle are completed (Brooks-Harris & Stock-Ward, 1999; Cowan, 1998). Specifically, individuals engage themselves in new experiences (concrete experience); using diverse perspectives, observe and reflect on these new experiences (reflective observation); develop general conceptual frames from which generalizations and new theories can be developed (abstract conceptualization); and test the implications of these general theories to concrete situations (active experimentation) (Kolb, 1976, 1984). The four learning modes follow each other in a learning cycle. The cycle may be entered and initiated at any of the four points, but the clockwise sequence of the cycle must be followed (Kolb, 1984; Healey & Jenkins, 2000). When the cycle is followed, there is a feedback effect that informs new action or, in Kolb's (1984) language, new concrete experience. This new concrete experience becomes the basis for a whole new

cycle of learning. It is this recursive learning cycle that results in effective experiential learning (Kolb & Kolb, 2005).

A major feature of the theory is that the different stages of the learning cycle are matched with distinct learning styles. As Kolb (1984) explains:

There are two primary dimensions to the learning processes. The first dimension represents the concrete experiencing of events at one end and abstract conceptualization at the other. The other dimension has active experimentation at one extreme and reflective observation at the other (pp. 30–31).

McCarthy (1990) names these orthogonal dimensions as (1) perception, vertically anchored by CE at one end and AC at the other end, and (2) processing, horizontally anchored by AE at one end and RO at the other end (Brooks-Harris & Stock-Ward, 1999). Individuals have different ways of perceiving new information and experience, ranging from immersing themselves in the particular experience, using their senses and feelings in a "concrete" way, to thinking in abstract modes, using logic and reason (Healey & Jenkins, 2000, p. 187). The same predilection attends the way individuals process or transform perceived information. Some prefer processing information by doing or through active experimentation, while others prefer watching or through reflective observation (Healey & Jenkins, 2000; Fielding 1994). Kolb (1984) argues that learners develop a primary preference for learning in a particular way but may adopt different learning styles in different learning situations and environments.

With these orthogonal dimensions of perception (how learners perceive or grasp new information or experience) and processing (how learners process or transform perceived information), four individual learning style quadrants emerge (Smith & Kolb, 1986). Kolb (1984) identified four groups of learners, based on their preferences for different modes of learning, as divergers, assimilators, convergers, and accommodators. He related these learning styles to the ideas of Jean Piaget and John Dewey (Brooks-Harris & Stock-Ward, 1999). McCarthy (1990) relabels the categories correspondingly as imaginative learners, analytic learners, common sense learners, and dynamic learners. Divergers (imaginative learners) perceive new information primarily through concrete experience, and they process or transform the perceived information primarily through reflective observation. They approach new situations from many perspectives. They possess strong imaginative ability and rely heavily on brainstorming. They learn best when they are allowed the freedom and the opportunity to reflect on their own personal experience and construct personal meanings as a critical aspect of engaging in the learning process (Kolb, 1984; McCarthy, 1990). Assimilators (analytic learners) perceive new information primarily through abstract conceptualization and transform new information primarily

through reflective observation. They deploy inductive reasoning and are able to create theoretical models by integrating their reflections and observations into their existing experience. They do well in learning environments that promote reflection, conceptualizing, hypothesizing, and critical analysis (Kolb, 1984; McCarthy, 1990).

Convergers (common sense learners) perceive new information primarily through abstract conceptualization and process information through active experimentation. They are heavily oriented toward deductive reasoning. Their strengths lie in problem-solving, decision-making, and practical application, as they are able to integrate theory and practice, learning by testing theories and applying common sense in the process. Their learning goal is to put new experience to immediate practical use. They do well in learning environments that allow direct involvement, practice, and active experimentation (Kolb, 1984; McCarthy, 1990). Accommodators (dynamic learners) perceive new information primarily through concrete experience and process information through active experimentation. They are able to get involved, carry out plans, and take actions, and they are easily adaptable to immediate circumstances. By way of trial and error, they are able to integrate their experience and application, as they are eager to apply any new information they learn to real-life situations. Their learning goal is to take knowledge and experience with them and learn on their own. They do well in learning environments designed to connect learning to application so they can actively use learning to further their personal experience (Kolb, 1984; McCarthy, 1990). Honey and Mumford (1986) adapt Kolb's learning style, using simpler everyday language: pragmatist, reflector, theorist, and activist, for divergers, assimilators, convergers, and accommodators, respectively.

The logical implication of the differential learning preferences is the need to keep this in view as a foundational step in creating a meaningful learning experience. Not only should learners be assisted in developing awareness of alternative learning approaches, but they should also be encouraged to be more flexible in meeting the different demands and challenges of new learning situations (Gibbs, 1988). Kolb's (1984) theory also requires that teachers are aware of their own individual learning styles, as effective experiential learning may be jeopardized if there is a manifest mismatch between the learners' style and the teacher's approach (Fielding, 1994; Matsuo & Nagata, 2020). The choice of learning style reflects the learner's abilities, environment, and learning history (Nulty & Barrett, 1996). Learners do better when subject matter is presented in a form that reflects their preferred learning style (Kolb, 1984; Healey & Jenkins, 2000). Kolb (1984) argues that teachers should encourage students to engage in all four stages of the learning cycle, and strong evidence shows that student learning and retention are enhanced when more learning styles are used (Stice, 1987).

It is important to note the different understandings of experiential learning, which have, in turn, generated some confusion and criticisms of Kolb's (1984) model. Brown (1980) observes that when and where such confusion exists regarding what is meant by experiential learning, the writer and the reader may have different understandings of the term. According to Brown (1980), while most people view experiential learning as learning by experience, there does not seem to be a common understanding beyond that. He contends that there are at least three possible interpretations of experiential learning:

learning how to perform a specific act or operation by doing it ("how to" learning); learning the complexities of a professional role by experiencing the milieu in which the role is performed and attempting to perform parts of the role (role socialization); or an individual's conscious and focused use of the rich experience of life, including formal learning settings, to further a largely self-constructed learning agenda (learner managed experiential learning) (cited by Rydell, 1985, p. 52–53).

In the frame of that last meaning, the learner-managed experiential learning, Kolb's (1984) model offers a clear critique of very theoretical academic programs and courses that do not recognize the already-existing experience and knowledge of students. It is also highly critical of learning activities that do not give learners the opportunity to reflect upon their prior experiences to be able to relate them to their present learning situations in their theoretical aspects (Jenkins, 1997).

Healey and Jenkins (2000) offer a summary of the strengths of Kolb's (1984) model and state that according to them, the model:

- provides ready pointers to application;
- directs [educators] to ensure that a range of teaching methods is used in a course;
- provides a theoretical rationale for what many [educators] already do ... and then offers suggestions on how to improve on that practice (in particular ensuring effective links between theory and application);
- makes explicit the importance of encouraging students to reflect and providing them with feedback to reinforce their learning;
- supports [educators] in developing a diverse, aware classroom;
- makes [educators] aware of the way in which different learning styles have to be combined for effective learning;
- can be readily applied to all areas of the discipline ...;
- can be used by individuals and course teams; and
- can be applied widely from a single classroom session to an entire degree program (p.186).

Colonization Theory

Historically, this theory can be placed in the context of “early European conquest, domination, and colonization of various countries in Africa, Asia, and the Americas” (Subreenduth, 2010, p. 120). Colonialism is the “expansion of a sovereign nation to other territories and sovereign nations” (Cheng, 2008, p. 317). It is a theory that critically presents a system of domination and value that is based solely on the erroneous belief that the dominated and subjugated populations are inferior to their European colonizers (Cheng, 2008, p. 317). But colonialism was not just an isolated accident. It debuted at the same time as the development of social Darwinism, ethnocentrism, and racism, which were all used to “justify White European domination over non-White European populations” (Cheng, 2008). It is a theory of power, and one of the tools used in creating, maintaining, and enforcing the structural power and control of colonial establishment was educational curricula and content (Subreenduth, 2010). Colonialism relied on the indoctrination of the colonized into a “certain mind-set that elevated the superiority and power of the colonizer” (p. 120).

To appreciate the role of educational curriculum in the dynamics of classical colonialism, Franz Fanon’s four phases of the colonial process is most instructive. Here is how Subreenduth presents it:

The first phase was one of forced entry into foreign lands and exploitation of the natural resources of the colonies. The second phase entailed the establishment of a colonial society that denigrated indigenous culture, practices, and knowledge while elevating that of the colonizing nation. In order to cement the difference between the superior colonizer and inferior colonized relationship, the third phase had to portray the colonized peoples as savage, inhuman, and in need of being civilized via colonial impositions. The first three phases resulted in a race-based system that was established during the fourth phase of colonization. This race-based system permeated the political, social, cultural, economic, and educational systems of the colonies and was designed to privilege the colonizer and to ensure the subjugation of the colonized. Hence, education became a powerful tool to propagate this superiority–inferiority complex (2010, p. 120).

An obvious major casualty of colonial epistemology is indigenous knowledge and experience, which has been derogatorily described in words and terms like “primitive,” “backward,” “savage,” “rural,” “unscientific,” lacking in “universality,” etc. (Kiggundu, 2007, p. 49). Even academia has not spared indigenous knowledge systems. Ezeanya-Esiobu (2019) points out that scholars have dismissed indigenous knowledge systems as “archaic, old and symptomatic of backwardness,” and “indigenous people’s way of life ... as simplistic, naïve and even primitive, ‘reflective of an earlier, and therefore, inferior stage in human cultural progress’ and consequently of no relevance to the

highly advanced and technologically oriented needs of modern society” (p. 7; citing Knudston & Suzuki, 1992, p. 1). Colonialism devalued, denigrated, and denied the colonized populations’ systems of knowledge and experiences, both about themselves and of their world. Ezeanya-Esiobu (2019) captures it more bluntly:

Western intervention in Africa brought with it a repudiation of Africa’s originality, and a belittling of the continent’s authentic experiences, which ipso facto, meant that the Africans’ environment, lived experiences, way of life, their cultural values, belief systems, and educational structure and curriculum (among others) were considered backward, unscientific, and barbaric. Following this misconception was concerted effort aimed at a superimposition of the European psyche over that of the African, often strategically orchestrated through the colonially established, or post-colonially controlled education systems. Indigenous knowledge systems, which are a product of the environment and should ideally form the foundation upon which the formal education system of any society is constructed, has been consistently and intentionally relegated to an inferior position (p. 1).

In that inferiorized state, colonial education failed to accomplish what Ezeanya-Esiobu expects education to accomplish, which is to “empower the learner to ask historical questions and examine assumptions and ‘accepted meanings and appearances’” (Ezeanya-Esiobu, 2019, p. 13, citing McLaren, 2003, p. 62). Ezeanya-Esiobu maintains that in the absence of emphasis on critical thinking and interrogation of accepted meanings in education, the school only serves more as a tool for the perpetuation of the ideas of the dominant class. Educational curriculum and pedagogical approach in the colonial and neocolonial systems have only functioned to advance the epistemological biases of the colonial power. In debunking the privileging of one epistemological claim over others, Ezeanya-Esiobu (2019) argues that:

[t]he existence of one single, universal and supposedly objective yardstick for validating all knowledge, comes into question since what is referred to as knowledge is founded upon the linguistic, environmental and ‘other meaning-making resources of a particular culture, as different cultures view the world in very different ways, all of which work in their own terms’ (p. 4; citing Foucault, 1969, p. 45).

Oguamanam (2006, p. 19) puts it even more succinctly, describing “the Western culture as a local tradition, which has been spread worldwide through intellectual colonization.”

A discussion of colonial pedagogy calls to mind Freire’s (1968) “banking concept of education,” by which he means that education has been used for “the maintenance of the oppressive status quo; knowledge is a gift bestowed

by those who consider themselves knowledgeable upon those whom they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates education and knowledge as processes of inquiry" (p. 58; Ezeanya-Esiobu, 2019). Colonial pedagogy infantilizes learners by turning them into mere passive recipients of knowledge from those who possess such knowledge. This is the modus operandi of colonial education, because, as Freire puts it, it suits the "purposes of the oppressors, whose tranquility rests on how well men fit the world the oppressors have created, and how little they question it" (Freire, 1968, p. 63; Ezeanya-Esiobu, 2019). Yet, in all of this, indigenous knowledge simply means:

culturally informed understanding inculcated into individuals from birth onwards, structuring how they interface with their environments. It is also informed continually by outside intelligence. Its distribution is fragmentary. Although widely shared locally on the whole than specialized knowledge, no one person, authority or social group knows it all. ... It exists nowhere in totality, there is no grand repository (Sillitoe, 2002, p. 9).

Attempts at decolonizing curricula, by countering Eurocentric epistemology and repositioning indigenous epistemologies and experiences, have not fared well due to the intricate entanglement of neocolonial mentality with global and Western politics (Subreenduth, 2010). As Cheng (2008) puts it, with the increasing intensity of the global order and globalization process, "colonial power continues to be firmly rooted in the former colonies" (p. 318). As such, the present form of education that still pervades formerly colonized territories does not encourage creativity, as it "attempts to maintain the submersion of consciousness" (Freire, 1968, p. 68; Ezeanya-Esiobu, 2019, p. 16). Colonial epistemology denies representation to the colonized learners who do not see themselves in the thematic situations under examination, so that "they can easily recognize the situation (and thus their own relation to them). ... It is inadmissible to present pictures unfamiliar to the participant" (Freire, 1968, p. 107). But a liberated, decolonized, and experiential epistemology makes learners feel like "masters of their own thinking by enabling them the freedom to analyze their own world experience and not that of another" (Ezeanya-Esiobu, 2019, p. 16). This is the same sentiment that Gandhi was alluding to when he lamented that "the curriculum and pedagogic ideas which form the fabric of modern [Indian] education were imported from Oxford and Cambridge, Edinburgh and London. But they are essentially foreign, and till they are repudiated, there never can be [Indian] national education" (Gandhi, 1956, p. 26).

Today, even though colonialism in the form of trans-sovereignty is almost extinct, as most formerly colonized nations have regained self-rule, the legacy of colonialism is hardly extinct. Its effect lingers in the new phenomena of

neocolonialism and postcolonialism. These twin phenomena refer to the historical impact, legacy, and continuing influence of colonialism on the formerly colonized states (Said, 1979, 1994). Said (1979) has stridently shed light on the existential struggles of formerly colonized nations coming to terms with their colonial pasts as they forge a future. It is a decolonization struggle, because even as formerly colonized nations want to move on, they "continue to be under the influence of colonialism" (Cheng, 2008, p. 318). Their indigenous knowledge and experiences continue to be devalued, discredited, and discounted in epistemological and pedagogical philosophies and praxis—even till this day.

Experiential Epistemology and Criticisms of Kolb (1984)

Simply stated, experiential epistemology refers to a source and nature of knowledge that is forged, nurtured, and sustained in the learner's experience. It is a knowledge process that honors the subjective experiences of the learner. This is the definition of knowledge that is consistent with the third sense in Brown's (1980) definition of experience in experiential learning. According to Brown (1980), there does not seem to be a common understanding of what constitutes experiential learning beyond the rather simplistic circular definition of learning by experience. The problem with that approach is that experience in that frame of meaning is solely constituted in learning by doing.

Much of the criticism of Kolb (1984), argues Kayes (2002), centers around two main fronts: "(a) empirical validation of the theory and its instrumentation in the Learning Style Inventory (LSI) and, (b) its theoretical limitations" (p. 140). Regarding the LSI, criticisms have focused on its psychometric properties (Kayes, 2002; Freedman & Stumpf, 1980). The theoretic criticisms have centered on the argument that experiential learning theory "decontextualizes the learning process and provides only a limited account of the many factors that influence learning." (Kayes, p. 140). For this class of critics, "emphasis on individual experience comes at the expense of psychodynamic, social, and institutional aspects of learning" (Kayes, 2002, p. 141; Holman et al., 1997; Reynolds, 1999; Vince, 1998). Kayes (2002, p. 142) presents strong responses to these criticisms in what he terms "critique of the critics." Given that the term "experiential learning," within the framework of this paper, is used and understood as defined by Brown (1980), it is not my intention to engage in any of the criticisms of Kolb (1984).

Nigeria's Educational System

The educational system that colonial Britain bequeathed to Nigeria at the latter's independence was, essentially, a colonial educational system. Ibukun and Aboluwodi (2010) argue that not only was the colonial educational system "too theoretical to be able to make meaningful impact on the

life of Nigerians" (p. 9, citing Akinlua, 2007), but subjects, contents, and curricula reflected the taste, values, and agenda of the British colonial establishment. Ezeanya-Esiobu (2019) laments that colonial rule actively served to repudiate much of Saharan Africa's own indigenous knowledge across sectors. Rather than education functioning as an "independent and growth centered enterprise with adequate and well-trained personnel," it became an institution "where untrained or ill-trained personnel were hired to depend on external forces for directions and strategy" (p. 107). Consequently, Africa's post-independence education policy makers "continue to advance the colonially bequeathed foundations of education across the region" (p. 107). Regrettably, this has continued to be the case in Nigeria, 61 years after independence, even with a series of reforms of the education sector.

The National Policy on Education (also referred to as the 6-3-3-4 system) was announced in 1982 as a major national reform and became a guiding policy for Nigeria's education (Nwagwu, 1983). The policy rationale was to address the continued dependence of Nigeria's educational system on colonial legacy (Ibukun & Aboluwodi, 2010). It was widely believed and lamented that Nigeria's post-colonial education system "was exotic, bookish and consequently insensitive to Nigeria's immediate social and community life" (Ibukun & Aboluwodi, 2010, p. 10; Akinlua, 2007). Ibukun and Aboluwodi (2010) go further and are blunter in their assessment:

The curriculum at all levels of the education system was more in tune with European environment than to the African setting. The content of subjects like Geography emphasized the studying of capes, bays, fjords and several other foreign features not experienced in the Nigerian or African landscape. History program of study was stuffed with stories and analysis of European wars, reigns of monarchs and national treaties that had very little meaning and bearing to African mind. The trend was equally observed in the nature of the colonial educational system where emphasis was placed on the production of an elite group that shunned manual and practical work available in their immediate communities (p. 10)

Akinlua (2007) echoes these same sentiments, insisting that Nigeria's colonial period had an educational system that was "totally irrelevant to the needs and aspirations of developing nations" (p. 94). Citing several authors, Akinlua (2007) dismisses the colonial educational system thus:

The content of education offered was said to be bookish (Castle 1972; UNESCO 1974), irrelevant (Cameron & Dodd, 1970; Arasteh 1966) and incoherent (Castle, 1972). Ashby (1964) and Sinclair (1976) together with Murray (1967) summarized the content of the colonial education as the "3R's" which they believed was merely training the African beneficiaries to be shopkeepers, interpreters for the

whitemen and village catechists... These scholars saw the intervening period of colonization as the 'mason' that laid the very bad foundations and precedents in educational practice that would for a long period overshadow and retard genuine efforts at national development via school education (p. 94).

With the poor foundation laid in the colonial era, the content and practice of Nigeria's education continues to be irrelevant and unrealistic to the needs and realities of the Nigerian people. A bookish educational model for a predominantly agrarian society is a total disservice to that society (Phelp-Stokes Commission, 1923). Colonial education alienated Nigerians from their long and rich traditions and values of manual labor and the dignity of labor that characterized their pre-colonial past (Akinlua, 2007). Akinlua (2007) points out that university education in the colonial era was, essentially, producing white-collar job-seeking elites "rather than assisting the development of creative self-reliant people that are much needed to consolidate meaningful economic and technological development in the countries" (p. 95).

It was these structural shortcomings that have informed every post-colonial reform in Nigeria's education sector. However, Akinlua (2007, citing Ehindero, 1986) laments that even with these post-colonial attempts at reforming and improving the educational system, not much progress has been made, as all efforts have tended to be the metaphorical new wine in an old bottle. The National Policy on Education (6-3-3-4 system) has been generally adjudged as a colossal failure (Akinlua, 2007; Ehindero, 1986; Ajayi, 2007; Oluwatelure, 2007). Citing reports and conclusions of various research work, Akinlua (2007) presents the following as reasons major curricular reforms have not succeeded:

1. Most curricular content and practice since the colonial period to the present are deeply seated in European cultures and hence are very alien to the traditional African culture. The salient ingredients that can make them work are conspicuously missing in the African context.
2. Curricular changes and adjustments have been generated and driven by extraneous and selfish motives ranging from attempts to pacify critics of alien friendly policies of selfish colonial governments to the spirited maneuvering of thoughtless and visionless parasitic indigenous governments trying to create impression of being serious to home crowds.
3. Many curricular adjustments and innovations were merely 'ink and paper' masterpieces but mere 'shadows' and 'ghosts' in execution. To this end many changes and innovations in paperwork were never accompanied by concrete physical adjustments, constructions and changes in the school system. Thus, the school building, the teacher and the time-tables that operated the grammar schools of fifty years ago are still the same set of instruments that are offered to operate the new systems.

4. Government policies on education and the functioning of it are not sincerely dynamic over the years. Illegitimate new governments keep destroying previous governments' creativity in order to win supports from antagonistic environments. The little inadequate monies meant for educational development constantly disappear into private pockets (p. 95).

Indigenous Knowledge

Indigenous knowledge, in the context of this paper, is an alternative knowledge system to the so-called "mainstream, Western-styled, or modern understanding of knowledge" (Ezeanya-Esiobu, 2019). It is the knowledge system that recognizes the unique and shared knowledge of a culturally bound group of people or community, which is the source and basis of the way they see the world (Ellen & Harris, 2000). Greiner (1998) sees it as "the unique, traditional, local knowledge existing within and developed around specific conditions of women and men indigenous to a particular geographic area" (p. 1). Kiggundu (2007) defines it by reference to its development from a people's interactions with their environment. However approached, one thing is constant, and that is the fact that cultures and societies amass their indigenous knowledge base as part of their efforts to master their environment and survive in it. And because indigenous knowledge is a product of society's interactions with their environment, and the environment is constantly changing and evolving, indigenous knowledge does not hold rigid epistemological claims (Ezeanya-Esiobu, 2019).

With the definitions of indigenous knowledge, one thing that is obviously missing in Nigeria's colonial and post-colonial education system is indigenous epistemology. And with everything colonial being about power dynamics, McLaren's (2009, p. 63) observation that "some forms of knowledge have more power and legitimacy than others" cannot be any truer. Educational curriculum in Nigeria, as in other Africa states, is still largely determined by the colonially mediated question of what qualifies as proper education. Within the frame of that inquiry, indigenous knowledge is considered an inferior system of knowledge to so-called Western scientific knowledge. Expressing this power asymmetry, Ezeanya-Esiobu (2019) laments that indigenous knowledge is "often dismissed as lacking in legitimacy, such terminology as 'non-quantitative, out of date, and amethodological' are often used to describe the concept of indigenous knowledge, while arguments are presented, stating that it is bereft of scientific rigor and objectivity" (p. 108). Yet even the World Bank admits that research has shown that when people's prior knowledge and experience is recognized and made part of current teaching and learning, their retention capacity for taught content increases (Ezeanya-Esiobu, 2019).

And because indigenous knowledge is devalued and discounted, indigenous curricular content and pedagogy are

also devalued and discounted, as curricular designers and operators go for foreign contents and curricula dictated by the wishes and interests of sponsors and donors. Or, as Ezeanya-Esiobu (2019) puts it:

In sub-Saharan Africa, education and research have mostly taken the form of an outside-in approach whereby the agenda of what is to be researched is set by the donors or development partners. This is also the case with curriculum of teaching and learning. Very few efforts, transformative in approach and content, has been put into modifying the curricula of teaching and learning across the continent of Africa, in order to make for independent, environmentally generated and sensitive teaching, learning, and research (p. 108).

When one considers that the difference between the Western form of knowledge and indigenous knowledge is simply one of approach that is philosophical in essence and a result of different experiences, the continued glorification and privileging of Western knowledge at the expense of devalued indigenous knowledge is simply as mind-boggling as it is inexcusable. This is how Oguamanam (2006) presents some of the key differences between these two knowledge forms:

1. The transmission of indigenous knowledge is mostly orally based, that is, through folklores and legend, or through imitation and demonstrations. Western science transmits knowledge through writing.
2. Indigenous knowledge is gained by observing and participating in simulations, real-life experiences and trial and error. Western knowledge is taught and imbibed in abstraction.
3. Indigenous knowledge is founded on the spiritual; the notion that the world and its components have life force and are infused with spirit, and this includes both the animate and inanimate objects such as fire and trees. Western knowledge severs the animate from the inanimate and treats all as physical entities.
4. Indigenous knowledge views the world as interrelated; it does not necessarily subordinate all other life forms to mankind as they are all interrelated and interdependent parts of one ecosystem. Western science views mankind as superior to nature and "authorized" to exploit it maximally.
5. Indigenous knowledge is integrative and holistic in nature, rooted in a culture of kinship between the natural and supernatural. Western science is "reductionist and fragmentary, reducing and delineating boundaries to the extent that every relationship is treated as a distinct whole."
6. Indigenous knowledge values intuition, emphasizes emotional involvement and subjective certainty in

perception. Western science thrives on logic and analysis, abstracted from the observer, and the replication of measurement to determine results.

7. Indigenous knowledge is based on a long period of close interactions with the natural environment and phenomena. Western knowledge thrives on the mathematical and quantitative (pp. 15–16).

Sadly, the consequence that attends this needless devaluation of one knowledge system at the gain of the privileged other is huge. Not only does a Nigerian educational curriculum that is not Nigerian by content and delivery result in the production of Nigerians who are disconnected and detached from their indigenous roots, experiences, and realities, but it also affects the design of development strategies (Ezeanya-Esiobu, 2019). Development thinking and conceptualization in post-colonial Africa generally (not just Nigeria) “is not the direct descendant of, or an adaptation of the principles of the indigenous communities over which the new nation states have imposed their rule” (Ezeanya-Esiobu, 2019, p. 109). To get Nigeria where it needs to be developmentally, indigenous knowledge and experience will need to drive research and development planning. Or, as Ezeanya-Esiobu puts it:

research agenda, curriculum, and ‘given’ conceptual frameworks should be continuously reexamined by researchers, teachers and students, with the aim of eschewing all manifestations of neo-colonial underpinnings and emphasizing indigenous ideas and addressing Africa’s peculiar realities and challenges (Ezeanya-Esiobu, 2019, p. 109; Ezeanya, 2011).

Nigerians have to tell their own stories and articulate their own developmental needs. Such stories and needs must freely reflect the unique experiences of the people. Perspectives matter, and perspectives will draw from indigenous experience. Mkabela (2005) lays it out more elegantly, arguing that research has to embody the examination of indigenous realities from the perspective of the indigenes, and that research should recognize indigenous experience and place it at the center of inquiry, as well as honor and affirm indigenous voice and cultural experience as the starting point for any meaningful multicultural approach to inquiry. The people’s history and lived experiences can no longer be severed from research that affects them. The ugly effect of this severance is one that UNESCO (2002) has acknowledged. According to UNESCO findings, development efforts have not attracted people’s participation in research when they do not use research instruments and mechanisms that allow and empower them to use their own knowledge. There is a great need to develop research plans and procedures that allow and promote the participation of indigenous people and the interface of scientific activities with indigenous knowledge.

To achieve this interface, Nigerian scholars and researchers need to merge their acquired foreign knowledge in research methodologies with the realities of their home culture and

experience, especially when they are engaged in research impacting their local environment (Nsamenang, 1995). This aligns with the United Nations (2015) Agenda for Sustainable Development, which acknowledges that the indigenous knowledge system possesses useful knowledge on sustainable living. But it goes on to lament that formal education systems have systematically disrupted indigenous knowledge and replaced it with “abstract knowledge and academic ways of learning,” so that, “today, there is a grave risk that much indigenous knowledge is being lost along with its valuable knowledge about ways of living sustainably” (cited in Ugwu & Diovu, 2016, p. 23). Sifuna (2008) insists that “the failure to integrate indigenous learning and Western education was partly a deliberate effort to eradicate African education” (p. 20).

Education and research can no longer be a binary between acquired Western knowledge and local realities. Gandhi (1956) addressed this binary relative to the claims of Western universal subjects that dominated India’s so-called nationwide curricula such as physics, chemistry, and mathematics but completely disregarded India’s national industry of “spinning and weaving” (p.23). Rather than insist on India’s education to become one of mere “spinning and weaving institutes,” Gandhi maintains that “such indigenous knowledge and industry must be combined with the universal courses in order to produce creative, innovative and well-grounded citizens who are in touch with their environment and the wider society” (Ezeanya-Esiobu, 2019, p. 17).

Ezeanya-Esiobu (2019) has identified the following as six challenges that Nigerian and other African researchers, seeking to incorporate indigenous knowledge into their research, must address:

1. The unwillingness of custodians of indigenous knowledge to part with it for fear of loss of economic, social, and political power that come with the possession of such knowledge.
2. Local fear and skepticism among custodians of indigenous knowledge about the usage of such knowledge in the hands of foreigners and their local research partners. These fears are not unfounded as Western pharmaceutical corporations have been known to have patented and profited from procured indigenous knowledge to the complete exclusion of the indigenous custodians and communities from whom the knowledge was obtained.
3. The effectiveness of some indigenous knowledge is environment specific. Thus, some indigenous knowledge cannot be functionally and effectively transplanted to other locations where they have not been tried and tested.
4. Care must be taken to identify genuine indigenous knowledge holders and avoid pretenders and quacks who also parade as indigenous knowledge custodians and experts. So, due diligence is required.

5. The line that separates indigenous knowledge from general indigenous culture can sometimes be blurry. This results in the conflation of indigenous knowledge, which is a distinct body of knowledge, with general local culture, especially for Westerners who already approach non-Western culture with ethnocentric attitudes. This can result in misinterpretation of indigenous knowledge and experiences.
6. The issue of intellectual property rights for the use of indigenous knowledge is one that researchers and scholars deal with. It is not just procuring and protecting intellectual property right over indigenous knowledge, it is also crafting a unique shelf life clause for indigenous knowledge that makes it proprietarily timeless. Ezeanya-Esiobu (2019) observes that “new legal alternatives are to be considered to protect indigenous pharmacology, in order to stem the tide of ‘illegal’ patenting and economic exploitation by the West” and recommends “a sui generis approach that provides for the nature of indigenous intellectual property to be defined in accordance with the cultural values of the indigenous communities” so that “unlike the IPR regime that provides a shelf life for inventions, the sui generis provision should recognize the timeless nature of sub-Saharan Africa’s indigenous pharmacology and should be devoid of the provisions for originality and material form, which the global IPR regime upholds” (p. 110).

India, like Nigeria, is a former colony of Britain. Like Nigeria, India’s indigenous knowledge system was also devalued, debased, and discounted during its colonial era. Unlike Nigeria, however, India’s post-independence reform of its educational curriculum was driven primarily by an active and conscious understanding of the deeply devastating effects the harm of colonialism had on India’s indigenous knowledge system. If any person would know the extent of this harm, it was Mahatma K. Gandhi, credited as the father of India’s independence from Britain. Gandhi was unapologetic in his condemnation of British colonial education policy in India, primarily because it was a policy that was deliberately crafted to advance British interest and values at the expense of India’s indigenous education system. Gandhi (1956) decried the focus of British colonial education policy in India, which encouraged mechanical learning, as opposed to character formation, and lamented that “we become lawyers, doctors and school masters not to serve our countrymen, but to bring us money” (p. 22).

As in Nigeria, British colonial education policy was not geared toward the building of a true and authentic Indian society. Instead, it was designed to produce British-oriented Indians (Ezeanya-Esiobu, 2019). Gandhi’s (1956) account of the Indian village of Baroda can easily be the story of any Nigerian village. Here is how Gandhi captures the miserable state of Baroda:

The sanitation of their villages is as primitive as in the other parts of India. They do not even know the value of manufacturing their own cloth. Baroda possesses some of the richest lands in India. It should not have to export its raw cotton. It can easily become a self-contained State with a prosperous peasantry. But it is bedecked in foreign cloth—a visible sign of their poverty and degradation. ... The fact is the education in Baroda is an almost slavish imitation of the British type. Higher education makes us foreigners in our own country. ... There is no originality or naturalness about it. It need not be at all original if it would only be ab-original (Gandhi 1956, 5; Ezeanya-Esiobu, 2019).

When curriculum and pedagogy fail to embody indigenous knowledge, the educational system as a whole fails to promote a sense of pride and continuity among the local population. As Gandhi (1956) argues, education should be about intergenerational continuity and no society should lose its cultural investments, history, and knowledge bank due to an educational policy and system that is designed for disruptions and discontinuities. Any policy, colonial or post-colonial, that allows and promotes such disruption and discontinuity of the indigenous system should, in Gandhi’s (1956) words, be “scrapped.” Here is how Gandhi puts it:

The system must be scrapped; enquiry must be made promptly as to what constituted the elements of education before Indian Universities were constituted, before Lord Macaulay wrote his fatal minutes. Promptness is essential, because the race of old teachers is nearly extinct and the secret of their methods may die with them. The resuscitation of those curricula may mean the disappearance of political history and geography. ... [W]e dare aver that they strike us as infinitely more efficient and satisfactory than the latest thing to come out of Europe” (Gandhi 1956, 28; Ezeanya-Esiobu, 2019).

Eyong (2007) echoes a similar sentiment about the harm that colonialism has done to indigenous knowledge systems in Africa:

IKS [Indigenous Knowledge System] has suffered for decades from several strategies of disinformation embedded in westerncentric, colonial, and post-colonial education, and western religion, science, and technology. Today, these systems form a bulk of selective omission of non-European achievements, inventions and technologies in academic works. Often, data on IKS are distorted to confirm the hypothesis of non-Africanist scholars (Eyong, 2007, p. 131).

The harm of an educational system and policy that fails to recognize local knowledge cannot be overemphasized. When

such a system ignores indigenous experiences, education is reduced to mechanical and robotic consumption of information to which the learner cannot relate. Gandhi (1956) lamented the disconnect between textbooks that local learners were required to read and the learners' own real-life experiences. The colonial learner of foreign texts cannot be expected to have a sense of pride in their history, identity, and indigenous experience. And this could result in a learner who becomes estranged from his own surroundings, and who feels "no poetry about the home life, the village scenes are all a sealed book to him, his own civilization is presented to him as imbecile, barbarous, superstitious and useless for all practical purposes. His education is calculated to wean him from his traditional culture" (Gandhi, 1956, 29). Gandhi (1956) could have been writing for the Nigerian society and experience.

Epistemological and Pedagogical Reset

Nigeria's epistemological and pedagogical traditions need urgent reset. Her educational system continues to be a relic of colonial legacy, even though it is a legacy that dishonors, devalues, disavows, and discounts Nigeria's indigenous knowledge system. A constructivist-oriented educational culture will help achieve this needed reset. Nigeria, indeed Africa, should do away with an educational culture that surrenders its authentic indigenous knowledge to the ethnocentric and objectivistic epistemology of the colonizing West. With the intersubjective and interpretative process of a constructivist-oriented educational system, the Nigerian learner is offered the opportunity to engage new learning from past experiences and background. In the collaborative philosophy and practice of social constructivism, the Nigerian learner will become an active cocreator of his own learning experience, and no longer will his indigenous knowledge and realities be repudiated and relegated to the footnotes of the epistemological traditionalism of the West.

Pedagogically, a reset Nigerian educational system will dump the objectivistic, didactic, rote, and memorization model of learning that has taken hold in it. In its place will be a teaching and learning tradition that encourages and empowers learners' critical engagement from an experiential standpoint and advantage. Rather than have teachers act as dispensers of knowledge to an infantilized learner, teachers will serve as guides, facilitators, and co-explorers of knowledge who encourage critical learning (Abdal-Haqq, 1998). Put differently, the Nigerian learner, especially the adult learner, can no longer be treated like a child learner. Instead, in the growing and expanding tradition of andragogy, the Nigerian adult learner's self-concept, experience, readiness to learn, problem-centered learning need, and motivation to learn are constitutive of the design of his learning.

The net outcome of a reset Nigerian educational system is a new system that is grounded in, and driven by, Kolb's (1984) theory of experiential learning. The new system will engender a "holistic integrative perspective on learning that combines experience, cognition, and behavior" so that education in Nigeria becomes "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). No longer will education in Nigeria be teacher-centered, outcome-oriented, and inclined toward passive reception of information. Instead, it will become a student-driven and -directed process, allowing knowledge to be "continuously derived from, and tested out in, the experience of the [Nigerian] learner" (Kolb, 1984, p. 27). Kolb's (1984) four-stage learning cycle will become an integral part of Nigeria's pedagogical system that will result in the transformation of experience through reflection, the use of general concepts for active experimentation, and the emergence of new experience. The new Nigerian educational system will seek to empower indigenous knowledge as a core curricular goal, and the benefit of such empowerment is one that Ezeanya-Esiobu (2019) has eloquently captured:

Empowering indigenous knowledge as part of the education curriculum will demystify knowledge to Africans who have been conditioned since colonial times to not identify their culture and learning with science, technology, the humanities, and arts. The effect will be that education will become "easy" and accessible to many and can be readily applied to real-life situations. The outcome will be unprecedented innovation and creativity and accelerated scientific and technological advancements across Africa" (p. 111).

Implementation Challenges

To achieve this new pedagogical paradigm, a range of practical challenges that have perennially beset the Nigerian educational system need to be overcome. Two of these challenges bear specific mention: (1) poor funding, and (2) poor teacher training.

Poor funding

For several decades, the funding of education in Nigeria has remained notoriously low and inadequate (Nwachukwu, 2014; Nwagwu, 2010). Education has continued to receive very miserly yearly budgetary allocations, way below UNESCO's (2015) recommendation of between 15 and 20 percent of yearly national budget. Even with the gyrations in education budget between fiscal years 2000 and 2021, Nigeria's highest allocation to education as a percentage of its total national budget remains way below the UNESCO recommendation. From 8.7% in 2000; 5.2% in 2004; 10.6% in 2014; and 4% in 2016 to 6.3% in 2021, the funding of education remains a major concern. Without adequate

funding of education, policies and initiatives to move the education system in new directions are almost guaranteed death on arrival. Little wonder UNESCO (2012) notes that Nigeria has some of the worst education indicators in the world. Nigeria can overcome this perennial scourge of poor funding in the education sector, which makes it difficult to implement innovative ideas and reforms of education, by committing to a sustained 2% yearly increase in its budgetary allocation to education.

Teacher Education

Apart from inadequate funding of education in Nigeria, there is also the challenge of finding the right breed of teachers to implement the proposed epistemological and pedagogical paradigm. MacKinnon and Scarff-Seatter (1997) see it as the formidable task of translating a learning theory into a theory of teaching, which raises questions about “what teachers need to know and be able to do” (Abdal-Haqq, 1998). Abdal-Haqq (1998) sees a unique challenge for teacher educators, who, among other tasks, would need to “balance the need to acknowledge the different discipline-specific requirements of teaching with the need to model constructivist methods in teacher education courses and practicums” (p. 5). But this is a challenge that is not limited to constructivist pedagogy, as other allied and alternative, nontraditional methods, including andragogy, experiential learning, and indigenous epistemologies, present similar challenges.

There is also the valid concern about a teaching method that embraces students’ understandings and neglects the so-called “right” answers (Richardson, 1997). Abdaq-Haqq (1998) fears that when such neglect for right answers occurs, “student knowledge becomes idiosyncratic; 30 different students may arrive at 30 different understandings or interpretations of a concept, all of which are not equally appropriate” (p. 5). If any of these nontraditional constructivist approaches are not implemented appropriately, it may lead to what MacKinnon and Scarff-Seatter (1997) call the abandonment teaching style. To avoid these pitfalls in the proposed new direction for Nigeria’s educational system, it is important that teacher educators model constructivist approaches that “engage students in interdisciplinary exploration, collaborative activity, and field-based opportunities for experiential learning, reflection, and self-examination” (Abdaq-Haqq, 1998, p. 5). This will ensure that future teachers are knowledgeable in these strategies and are able to employ them in schools. Another challenge that Nigerian educators may face in implementing this new pedagogical direction is the temptation to regard constructivism as the only valid pedagogical theory. It is just one of the many ways of conceptualizing knowledge.

Conclusion

Nigeria’s educational system is dated. Sixty-one years after independence, Nigeria’s educational system—philosophically, epistemologically, and pedagogically—is still, essentially, colonial. From curriculum content to systems of teaching and learning, Nigeria continues to perpetuate a system that was designed to infantilize the learner as a weak and empty vessel that needs to be filled with external content. The learner’s experience is totally devalued, debased, and discounted. Kolb’s (1984) experiential learning theory, in line with allied constructivist epistemology, honors the experience of the learner and makes it an essential aspect of learning. To embrace this critically needed indigenous knowledge system, colonial educational legacy needs to be dismantled. Two major challenges exist in this effort. Poor and inadequate funding for education needs to be addressed, and there is the need to reorient Nigeria’s teacher education system to make this new direction possible.

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Building and Enhancing Research, Teaching
and Service Capacity of Host Universities:
What Works?

Over 30 Years Engaging with Higher Educational Institutions in Ghana: Lessons and What Works

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Introduction and Contextual Information

My career as a scholar/academic, educator, and practicing consultant spans three distinct areas in the social sciences: labor relations, law, and public policy. I have worked on international organizations such as the Organisation of African Unity (OAU), the African Union (AU), the United Nations, the International Money Fund, the World Bank, and the World Trade Organization. More recently, I have worked on capital/human resources (what I call “brain power”/ knowledge workers) in energy and natural resources in Ghana/Africa in a post-fossil fuel world of green energy and technology. My work as a public intellectual and a diaspora African is driven by the following intertwined factors:

1. A desire to link what I do with what happens in the real world
2. Being in close touch with phenomena that I study, teach, and publish about
3. Ensuring that my work not only contributes to knowledge generation but also benefits the over 1.2 billion Africans who inhabit Africa
4. My personal/professional mantra is that although I am based in the United States, I cannot teach, write, publish, and consult about Africa without visiting, staying in, and at times living in Africa, to gain real-life/practical experience, insights, and lessons
5. My specialization as a public policy expert means that to be effective, I must be practice-centered in my approach; and to be in a position to impact my areas though opportunities in Ghana/Africa, I must be in close and constant touch and be directly engaged and familiar with pertinent developments—as I say, “You can’t do Africa without being there.”

Highlights of Previous Work and Experience Relating Directly to Africa with a Focus on Ghana

The following highlights constitute the backdrop to my over 30 years of teaching, researching/publishing, and consulting about Africa. Going back to my graduate PhD student days, in 1985–1986 I utilized an Institute of International Education fellowship as a professional intern at the International Labour Organization (ILO) in Geneva, Switzerland, to learn firsthand how the ILO worked. I also used this unique opportunity to collect materials that I sent to Boston through diplomatic pouch for my PhD dissertation.

Upon my first academic appointment:

1. I became one of the first, if not the first, faculty member at Northeastern University (my home institution) to officially accompany a student for research in Africa in the early 1990s.

2. I organized and was part of the leadership of a delegation to Ghana that resulted in Northeastern University’s first memorandum of understanding (MoU) for international faculty/student exchange with an African university.
3. I spent summers from 1991 to 2003 doing fieldwork on the OAU-AU, Ghana/Africa’s labor relations and foreign policies, and since 2009, conducting studies on oil and other resource extraction.
4. I consulted for the government of Ghana, labor unions, and private employers to create/draft laws, policies, and practices that suited Ghana and met ILO standards. I joined the deliberations of the national labor policymaking body, the National Advisory Committee on Labor, from 1991 to 2003.
5. I had my first academic sabbatical at the University of Ghana, Legon, Department of Sociology, in 1996 and two subsequent sabbaticals plus a Fulbright award from 2003 to 2019 at the University of Cape Coast.
6. In 2013–2014, I was appointed as Consultant to the Vice-Chancellor and Office of Quality Assurance, to enhance capacity at the University of Cape Coast. Professor Kofi Awusabo-Asare and I adopted the concept “positive opportunism” to promote the mentoring of young faculty, research, and publications. Our objective was to institutionalize best practices to boost capacity at Ghanaian universities in areas of teaching, research, and the functional salience of academic work.
7. From 1989 starting with the University of Ghana, I initiated and led private efforts to donate books to libraries at universities in Ghana, mainly the University of Ghana and the University of Cape Coast and since 2019 the University of Energy and Natural Resources (UENR) in Sunyani.
8. In early 2021, I donated furniture worth over \$2,500 to the University of Ghana’s Department of Sociology. In the summer of 2021, I donated copies of 2000 to 2018 editions of *Africa Bibliography* (Cambridge University Press) to UENR’s library to enhance research/scholarly productivity.
9. My 13-month Fulbright award at the University of Cape Coast (2011–2012) culminated in my contributing as a key resource person to the creation of Ghana’s first university-affiliated Institute for Oil and Gas Studies (at the University of Cape Coast), as well as drafting Ghanaian oil laws and creating the Public Interest and Accountability Committee (PIAC). The PIAC is hailed by numerous world leaders as an innovative and important solution to the resource curse (Africa Progress Panel, 2013).

Three Carnegie African Diaspora Fellowships in Ghana

I have successfully completed/collaborated with the Carnegie African Diaspora Fellowship Program (CADFP) three times at three separate Universities in Ghana:

1. University of Ghana, 2015
2. University of Cape Coast, 2017
3. UENR, Sunyani, 2021

Highlights of my Latest Carnegie African Diaspora Fellowship at UENR (June to August 2021)

I was appointed as a visiting professor/Carnegie African Diaspora Fellow at UENR from June to August 2021. I collaborated with Professor Yaw Ofose-Kusi, Dean, School of Business/Management Sciences, my main host, and Dr. Emmanuel Opoku Marfo, Head, Entrepreneurship, my second host and faculty mentee. We collaborated on capacity building, emphasizing human resource/capital development through education, training, and employment in green energy and technology in a post-fossil fuel Ghana/Africa. I spent most of my time at the Sunyani campus of UENR in Ghana. I am pleased to report that my colleagues/main hosts and numerous UENR faculty, administrators, and I collaborated so successfully that except for one objective, we achieved all the goals we set for my fellowship at UENR. The only goal we did not accomplish was getting an MoU with a U.S.-based university signed. However, I had discussions with my colleagues at UENR and provided a template for drafting an MoU for faculty and student exchanges.

Although due to COVID-19 constraints, I spent only 67 instead of the originally planned 90 days at UENR, my fellowship was a resounding success (Panford, 2021b).

Key Accomplishments/Highlights

Three Official Public Lectures/Presentations

Under the auspices of Professor Elvis Asare-Bediako, Vice-Chancellor of UENR, we launched the maiden lecture for the university's series of invited lectures, for which I keynoted. This lecture was covered by national media, including Ghana's popular Joy FM radio station and UENR's campus radio station (Panford, 2021a).

I published the paper "Practical tips for managing sources/bibliography on Africa" and presented it to UENR library staff/faculty and graduate students. I also donated copies of *Africa Bibliography* (Cambridge University Press) and political science books on Africa to the library.

I gave a presentation to the School of Business/Management Sciences, other faculty, and the university attorney: "New curriculum in energy and natural resources in light of the

FIGURE 1

Gallon of crude oil obtained by Professor Kwamina Panford from Ghana's third commercial oil field, Sankofa. This is used to demonstrate the physical properties that make Ghanaian crude the Mercedes Benz/luxury type of oil on the world market.



imperatives of global decarbonization, cuts in global warming, and increased green energy/technology."

I had informal discussions with many UENR faculty, the acting Pro-Vice-Chancellor, Business School faculty, Engineering and Environment faculty, and the International Relations Head on Internationalizing Programs/Activities at UENR. I also had several meetings with the Vice-Chancellor and other senior leaders, including the Registrar, on the future roles of UENR in Ghana's energy and resource sectors.

I collaborated with my UENR colleagues to produce briefing notes on triple threats facing the Ghanaian economy for the Vice-Chancellor's meeting with the CEO of Ghana's national oil company, the Ghana National Petroleum Corporation. We laid out how China could threaten Ghana and the Ivory Coast's roles as the world's leading cocoa bean producers, how bad policies and environmental practices could prevent Ghana from maintaining its position as Africa's top gold producer, and the urgent need for Ghana and other African oil producers to start policies and practices to match the challenges posed by a post-fossil fuel world—a world that does not use hydrocarbons for cooking, warming, cooling, as an industrial source of energy, or in internal combustion vehicle engines.

Lastly, upon invitation, I created briefing notes on electric car infrastructure for the Ghanaian Minister of Energy to help guide national policies, legislation, and practice in anticipation of future transportation that will hinge largely on electric powered cars instead of today's gas guzzling automobiles.

Contributions to Curriculum Development and Proposal with Bibliographies from Three Africa Experts on Oil/Gas and Other Natural Resources

Using the official mandate of UENR to enhance natural resource management and benefits to Ghanaian society and based on discussions with my UENR colleagues (faculty and administrators), I proposed and submitted the idea for and provided a roster for key resource persons and experts I dubbed “Master Class Teachers,” an external board, and “Financial Friends of UENR” to supplement funding from the government of Ghana and internally generated funds to meet more of its resource needs. For instance, I proposed using experts/practitioners I called Master Class Teachers to be hosted on the UENR campus to teach special classes or topics aimed at bringing their wealth of experience to the classroom, emphasizing practice and problem solving to make UENR education unique in terms of experiential learning and salience to national development, especially in natural resource extraction and utilization.

In further pursuit of the objective of experiential education/training, during my latest CADFP project at UENR, I initiated, organized, and led faculty and a graduate assistant to one of Ghana/Africa’s important gold mines: the Newmont Ahafo gold mine at Kenyasi in Ghana. My colleagues and I went a mile underground to observe firsthand and to experience real-life gold mining. We wore all the protective equipment miners wear, and we were treated as miners for a day. We observed and even touched actual gold-bearing rocks. We learned that at that section of the underground mine, rocks contained 5–6% gold. (See photos of visit to mine.) This visit allowed my colleagues and I to observe and experience the

original source, the technology, and the labor that allowed Ghana to overtake South Africa as Africa’s top gold producer.

I also reviewed a proposal for UENR’s New Energy/Natural Resource Center. In addition, I provided Vice-Chancellor Asare-Bediako a template for an energy/natural resource center created by Professors Awusabo-Asare (University of Cape Coast) and Edward Kutsoati (Tufts University) and I in 2010. The purpose was to furnish a model for UENR’s proposed center.

Special Work with Women

During my CADFP project, I mentored/worked with five women, including one of Ghana/Africa’s new generation of women petroleum engineers and an undergraduate engineering major. My plan is to connect the undergraduate student with female university presidents or other leaders in engineering universities, such as Professor Gilda Barabino of Olin College of Engineering in Boston, to advance her education and hence career. The other women I worked with included a PhD candidate, an applicant to UENR’s master’s program in natural resources, and a Northeastern University student who recently completed her master’s degree in international development at King’s College, London.

Faculty Mentoring

In addition to my junior host, Dr. Opoku Marfo, I met frequently with approximately 10 faculty members to discuss publishing, promotion, and other career-related matters. For example, we discussed strategies relating to boosting scholarly productivity through conferences and publications, as well as securing funding through grant applications and expanding professional networks within and outside of Ghana/Africa.

FIGURE 2

Professor Panford, 4th on left front row; Ms. Ama Asafo-Adjei, Head Librarian; Professor Yaw Ofosu-Kusi, Dean, School of Business Management; Mr. Solomon Panford, Registrar; and other UENR colleagues after Professor Panford’s lecture and donation of bibliographic materials including political science books and copies of *Africa Bibliography* (Cambridge University Press).



Ingredients for Success

A convergence of my own passion, the interests of the CADFP, and my host and home institutions have driven my accomplishments. My long track record of over 30 years giving back and impacting university education, as well as training in Africa focusing on Ghana (my birthplace), also played huge roles in my success. My work relies on original materials in situ, mostly in Ghana. (I have used opportunities for fieldwork in Senegal, Zimbabwe, and South Africa, including invitation from the African Union to observe its founding in Durban in 2002.) I focus on Ghana to deepen my impact and roles via collaboration. I rely heavily on fieldwork in Ghana and other countries for my research/scholarship, teaching, and service because I am guided by the principle that “I can’t deal competently with Ghana/other African countries if my work is not rooted in or linked directly with what’s happening in Ghana/Africa”—hence my passion/preference for fieldwork in especially Ghana and the rest of Africa.

I have diligently meshed the objectives of CADFP and my host and home institutions. CADFP prefers Fellows who excel at collaboration. My home institution, Northeastern University, seeks experience-based or translational research and teaching, whereas my host institutions prefer Fellows with backgrounds and experiences pertinent to Ghana’s

FIGURE 3

Professor Panford (middle), with Dr. Emmanuel Opoku Marfo, Head of Entrepreneurship and Paul Hammond, lecturer in Accounting (left) at UENR. Waiting to get COVID-19 tests at Sunyani Regional Hospital for a day’s visit to the Newmont Ahafo gold mine at Kenyasi on August 18, 2021.



education/training, research, and community engagement needs. My diverse interdisciplinary background (social sciences, law, and public policy work in a broad range of subjects, including natural resources and international organizations, as well as senior-level management and consultancy experiences in critical areas such as labor relations plus oil/gas and energy) facilitates collaborating with faculty with varying needs. I have utilized my oil research/publications and consultancy work to help found an oil and gas institute at the University of Cape Coast. My grant writing, publications, and senior academic administration experience (including chairing a department and serving as Vice-Provost) have made me highly valued by senior-level faculty and top university administrators in Ghana and other parts of Africa.

Although I am an academic, I have developed a deep and wide network of labor, industry, and other practitioners, including trade union leaders, policymakers such as high-level employees of Ghana’s Petroleum Commission, and others such as one of the lab technologists who handled samples from Ghana’s first commercial oil find that led to Ghana’s first commercial oil production at Jubilee Oil Field. (See photograph of oil from Ghana’s third oil field that I acquired for teaching/demonstration purposes.) This is one of many examples of how I use practical items from the field to support my teaching/research and consultancy work. Included in my circle of practitioners is a CEO of AngloGold Ashanti, through whom I organize tours of gold and diamond mines, including a five-mile underground visit to see gold extraction at one of Africa’s important gold mines at Obuasi in 2017 during my second CADFP project.

I have also arranged for and led participation by Ghanaian faculty in Ghana’s annual international Oil and Gas Summit in Accra and an official briefing by Ghana’s Petroleum Commission at the head office in Accra. The latter is a treasure trove of data and information on the Ghanaian oil industry not available in the public domain.

We found that our approach to handling our three critical functional areas in the academy—research, teaching, and service—as closely intertwined has worked very well. These functional areas are deemed and treated as inseparable and essential to Ghana/Africa’s higher education needs.

Key Lessons

The big lesson, driver, and main mantra of my successful collaboration and work in Ghana is “You attract bees with honey, not vinegar.” This means collaboration anchored in a positive predisposition, a “can-do” attitude with a heavy dose of humility: leading from behind and by example. Colleagues in Ghana (typically heads of departments, deans, and vice-chancellors) and I apply the term “positive opportunism” to jointly resolve institutional challenges in a truly mutually beneficial partnership. In working on

FIGURE 4

Professor Panford (2nd from left, standing) with UENR colleagues in a safety capsule one mile underground at the Newmont Ahafo gold mine at Kenyasi.



establishing an oil and gas studies program at the University of Cape Coast, together we leverage my experience in oil and gas, links in industry, and access to publications/data/information to establish a center that teaches theories as well as trains students in community engagement and applies practical knowledge from industry to connect classrooms/students/faculty and even administrators to key industry personnel and institutions. This ensures that faculty publications will be driven by practical knowledge/experience. Industry experience enhances teaching and boosts successful grant writing. In addition, experience-based industry research and teaching enhance problem solving capacities of our host institutions, which allows them to fulfill their mandates to facilitate national development.

Lastly, mutual trust and respect are essential ingredients. Someone earns trust and respect through their capacity to deliver and build a good and long track record. They have to concretely show what they can do and have done. This is the way to attain buy-in from colleagues at host institutions in Africa. In my case, for example, since 1989 I have donated books, had several sabbaticals, and provided many important pro bono services to the government of Ghana and universities (dating from 1980–1981 as a graduate student in Canada to the present in legislative drafting in labor and oil) through CADFP and a Fulbright award as a senior scholar/visiting professor. I always first inquired about the needs of my host institutions and how best to meet them, being mindful not to overpromise.

FIGURE 5

Professor Panford (2nd from right) and UENR colleagues and the mine chaperone getting ready to enter the underground mine at the Newmont Ahafo gold mine at Kenyasi on August 18, 2021.

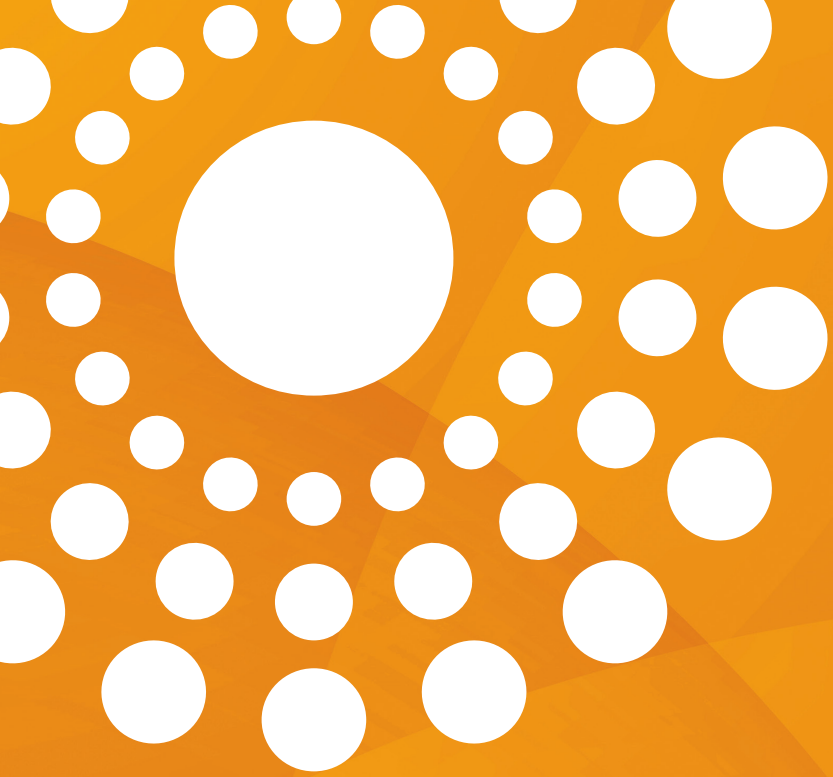


Conclusion

One must understand the society/country in which one is collaborating and be mindful of the true meaning of collaboration, which I define as genuine teamwork plus collegiality. The following traits are paramount: humility, flexibility, and successfully balancing being nice and culturally sensitive while accomplishing important work on time and on budget. Even if you were born, educated, or worked in Africa before emigrating, one should be ready to be treated by some (not everyone) at your host institution as a foreigner, even if you strenuously strive to see yourself as African. Go prepared for a challenging, exhilarating, and life-changing experience supported by CADFP! With diligence and thoughtful care, you will succeed like most CADFP Fellows.

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