The Itinerant Curriculum as a Key to Responsiveness in the Era of the Fourth Industrial Revolution in Nigerian Higher Education

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Abstract. The current age of the Fourth Industrial Revolution (4IR) brings together digital, physical, and biological awareness in ways never before seen. The transition has contributed to new technology and developments, such as robotics, the Internet of Things, augmented reality, and artificial intelligence. As a nation, Nigeria is still behind with preparations for its future through appropriate, unique educational practices in this era for its citizens. This is because the quality of Nigeria's higher education curriculum has not improved much. To boost the responsiveness of Nigeria's curriculum in this technological era, this theoretical paper explores the itinerant curriculum as an alternative direction to other highlighted alternatives in the literature. The paper explains how the itinerant curriculum can be used to achieve economic, cultural, disciplinary, and learning responsiveness in the era of the 4IR. The paper concludes that the itinerant curriculum is an important tool that can help Nigerian higher education achieve curriculum responsiveness.

Keywords: curriculum responsiveness; Fourth Industrial Revolution; itinerant curriculum; Nigerian higher education

1. Introduction

The Fourth Industrial Revolution (4IR), which gained official traction in 2016, has paved the way for digital, biological, and physical transformation in our world. It has also allowed for the growing utilization of new technologies, such as artificial intelligence (AI), cloud computing, robotics, 3D printing, the Internet of Things (IoT), and advanced wireless technologies. The 4IR is the current and developing environment in which disruptive technologies and trends are changing the way we live and work (Fomunyam, 2019). Fomunyam (2019) explained that the 4IR comes with high digitization and other features such as mobile supercomputing, intelligent robots, self-driving vehicles, changes to the neuro-technological brain, and genetic engineering.

Despite the enormous benefits which the 4IR has brought and will continue to bring to our modern generation, Nigeria is still behind with preparations for its future, due to lack of relevant unique educational practices for its populace. This is because very little has changed in the Nigerian higher education curriculum, which is therefore very insignificant to the current realities (Agwu, 2019). Agwu (2019) continued that the current higher education curriculum used in higher education in Nigeria is very old, obsolete, and mostly irrelevant to the demands of the 4IR. This is confirmed by Igwe et al. (2021), who argued that most of the content of the curriculum cannot equip students with the necessary skills to perform in the emerging organizational workplace and settings. Nigerian higher education in this era of knowledge economy is still focused intensely on abstract knowledge acquisition. This has gravely affected the quality of education, as graduates lack the skills necessary to operate seamlessly in this era of digitization. This explains Agwu's (2019) assertion that the underdevelopment of Nigeria has often been related to the lack of investment in human development and the problems associated with educational reforms. A resultant effect here is the churning out of graduates into a knowledge economy of the twenty-first century. These graduates see the practicality of acquired knowledge as the greatest form of learning compared to other forms of economy which focus intensively on the acquisition of abstract knowledge. The question yet to be answered is: What type of curriculum will pragmatically improve the quality of graduates and make for responsiveness in the Nigerian society in the current era?

As highlighted earlier, the curriculum used in Nigerian higher education needs change/reform to make for better graduates who will be employable in the changing place of work (Ogunode & Musa, 2020). One of the approaches that can be used to resolve this challenge is the itinerant curriculum approach. The itinerant curriculum in the higher education sector in Nigeria will ensure its relevance in the present industrial and technological era. In addition, the itinerant curriculum will promote a global mindset, giving scholars the edge to be fully grounded for the future workplace, and the ability to deal with global situations regardless of where they are. The itinerant curriculum for Nigerian higher education will help scholars imbibe indigenous expertise, traditions, values, and adoption and adaptation of global best traditions to local settings where possible. Therefore, this paper explores how the itinerant curriculum can be used as a pathway in ensuring that Nigerian curricula become responsive to this current era of rapid industrialization, in light of the four dimensions of responsiveness (i.e., economic, cultural, disciplinary, and learning responsiveness).

This paper is split into sections for proper articulation. The first section of the paper concentrates on the 4IR and the impact it has and can have on higher education in Nigeria, while the second part is used to deconstruct the itinerant curriculum. The third section describes responsiveness as a concept, while the fourth part deals with the itinerant curriculum and how it can be used to achieve responsiveness in Nigerian higher education. The paper ends with a conclusion.

2. Nexus Between the 4IR and Higher Education in Nigeria

Before the advent of the 4IR, there were the First, Second, and Third Industrial Revolutions. The First Industrial Revolution used water and steam power to mechanize production (Schwab, 2016) and brought about cultural changes as people migrated from rural areas to live in big cities. It also sparked new innovations with regard to modes of transport and a better way of life. The Second Industrial Revolution was another great technological and social leap forward. The advent of public vehicles and aircraft contributed to new developments in steel manufacturing, petroleum, and electricity (Mohajan, 2020). The emergence of new technology contributed to the development of two world-changing products: public transport and aircraft. The third revolution brought forth the rise of electronics, telecommunications, and, of course, computers (Fomunyam, 2019). Through the new technologies, the Third Industrial Revolution opened the doors to space expeditions, research, and biotechnology. The end of the Third Industrial Revolution ushered in the 4IR.

The 4IR (sometimes referred to as Industry 4.0) is changing society like never before, building on the foundations of the first three industrial revolutions. The 4IR has brought and will continue to bring about technological breakthroughs in fields such as AI, robotics, the IoT, autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing (Schwab, 2016). Consequently, essential features of the 4IR are the possibilities of billions of people being connected by mobile devices with unprecedented processing power, storage capacity, and access to knowledge. According to Fomunyam (2019), the 4IR is a way of describing the blurring of boundaries between the physical, digital, and biological worlds. It is a fusion of advances in AI, robotics, the IoT, 3D printing, genetic engineering, quantum computing, and other technologies. It is the driving force behind many goods and services which are increasingly becoming central to everyday life (Schwab, 2016). Think of global positioning systems (GPSs) that suggest the quickest route to a destination, voice-activated virtual assistants such as Apple's Siri, customized Netflix recommendations, and the ability of Facebook to remember your face and tag you on a friend's picture.

The 4IR as perfect technological storm paves the way for dramatic changes in how we live, and profoundly disrupts almost every sector of the economy, including higher education, and this transformation is taking place at an unprecedented rate. However, as a result of the unresponsive curriculum, the present Nigerian higher education graduate does not have the requisite skills and knowledge to adapt and keep adapting in the ever-changing world of work. Until recently, Nigerian educational regulators also ensured that all higher education institutions strictly comply with and teach moribund and outdated curricular material that is substantially inconsistent with the needs of students in the 4IR. Affirming this, the Deputy Vice Chancellor of Crawford University, Igbesa, Ogun State, Prof. Patrick Yalokwu, posited that Nigeria's education curricula are outdated and cannot prepare students for the present day, having been developed more than 30 years ago (Asabor, 2017). The greater percentage of higher education learning in Nigeria

is abstract rather than practical, and more practical learning is needed in this era of digitization.

Looking at the changes currently happening by reason of the 4IR, there is need for curricular change or reform in Nigeria in order to meet the demands of the new world of work (Enoch, 2020). In other words, Nigerian higher education has an important role in churning out active citizens who would lead in this era of the 4IR, particularly in terms of job creation. It is believed that specialist roles, such as AI, machine learning, and big data specialists; process automation experts; information security analysts; user experience and human-machine interaction designers; robotics engineers; and blockchain specialists will be in very high demand in this era of digitization. Enoch (2020) confirmed this by arguing that it is evident that professionals with a combination of science, technology, and social sciences skills will be in high demand in this era of the 4IR.

The active participation of Nigeria in the 4IR depends largely on the dynamism of its universities and various institutes of learning. Inwalomhe (2019) stressed the importance of developing digital skills for Nigeria's younger generation to respond to the challenges posed by the digitization of the labor market, education, and training. This needs to become a joint responsibility of employers, employees, policymakers at local and national level, and especially higher education and educators. This partnership should begin with a change in the educational curricula to ensure that responsiveness is achieved at all levels and under all circumstances. One of the approaches to achieve this is by engaging the itinerant curriculum. To this end, this paper sees the itinerant curriculum as a possible and successful pathway which can ensure that the higher education curriculum achieves the necessary dimensions of responsiveness in this era of the 4IR.

3. Deconstructing the Itinerant Curriculum

Itinerant Curriculum Theory (ICT) offers a way to think about curricula from an information ecology perspective and moves the curriculum field down a radically new, innovative, and inter- and transnational direction (Oliveira, 2017). ICT tries to map out an itinerant path to solve a problem and adds new terrains and theoretical circumstances. ICT advocates breaking the yokes of Western academicism – challenging Western epistemicide curricula and advising on the need to accept and integrate non-Western epistemes. ICT, according to Paraskeva (2016), is:

> *"a new path that is sentient of the functionalism of both dominant and counter-dominant Western Eurocentric positions, of the richness of non-Western epistemological platforms, of the fallacy of the history fabricated by Western Eurocentric dominant and specific dominant traditions, of the fascism of the Western Eurocentric epistemological coloniality that failed, and it failed greatly, not only because of its crude limitations and fallacies but also given the immense power of non-Western epistemological ways of reading and being in the world that always challenge Western Eurocentric dominant position."* (p. 16)

This means that ICT can create curricula guided by emancipatory epistemologies of contrast and reverberating otherness that give room to (re)imagine what is

more, reforming the unbending and reductive ideologies that threaten our education and lives. Thus, through such emancipatory work, African lecturers can open themselves and their students to new ways of working through their differences, identifying, opposing, and undermining old ways of knowing that once made their lives quiet and invisible. ICT is thus a progressive way to reform the Western-centric curricula. ICT is motivated by the importance of non-Western curricula in the fight for a more appropriate and socially responsible curriculum and education. ICT is an unblemished claim against dominant multiculturalist forms that are:

> *"Eurocentric, a prime expression of the cultural logic of national or global capitalism, descriptive, apolitical, suppressing power relations, exploitation, inequality and exclusion and have been legitimizing a monoculture of scientific knowledge that needs to be defeated and replaced by an ecology of knowledges."* (de Sousa Santos, 2007, p. 3)

In a nutshell, ICT challenges the coloniality of power, being, knowledge, and labor. ICT advocates deterritorialization and discusses the difficulties of English linguistic hegemony and avoids epistemicide. It is therefore assumed that if the curriculum achieves deterritorialization, challenges English linguistic hegemony, and avoids epistemicide, then the outdated, obsolete, and irrelevant curriculum currently used by Nigerian higher education would be able to respond to the 4IR dynamics.

Crispin (2019) argued that deterritorialization in Nigeria would entail the eradication from their native places and communities of any social, political, or cultural activities. Therefore, deterritorializing the Nigerian higher education curriculum simply means eradicating from the curriculum all limiting artefacts which are considered irrelevant in today's ecosphere. Educational deterritorialization is an intervention that encourages chaos, reflection, analysis, breakdown of values, restoration, defragmentation again, but with new shades, aspects, and characteristics (Barone et al., 2015). The deterritorialization of Nigerian higher education would focus on breaking cultural, political, and social barriers both locally and internationally to build systems that are socially just and responsive.

The problem of English linguistic hegemony is another key tenet of ICT. The dominance of English has been documented. Fontana (1993) argued that the ultimate hegemonic structure demands that the leading structure maintain its role through the willingness and consent of the minority community. Furthermore, this consent is obtained through the creation of mass consent, a collective confidence in the naturalness and correctness of that social order. The manufacturing of this consent is largely focused on systemic, clear media and institutional persuasion, and this persuasion can penetrate ideas and values of normalcy in everyday life, so that they permeate and direct human interaction. According to Tietze and Dick (2012), hegemony means the rule of one social group over another that is achieved when the dominant group successfully projects its own particular ways of seeing the world and human and social relationships. This happens in such way that those who are actually subordinated by these views come to accept them as being "common sense" or natural. The dominated group

internalizes the norms and ideology of the dominant group, even though this is not necessarily in their interests.

Linguistic hegemony has been established and characterized as what is accomplished when dominant groups establish consensus by persuading others to adopt their normative or paradigmatic language norms. According to Wiley (2000), linguistic hegemony is often said to be achieved when some people or their agents can force others who fail to meet certain expectations to see their failure as the product of the inadequacy of their own language. English is a global language that has challenged every chance of achieving the highest status a language can achieve, namely integration into the education systems of most countries around the world. As a study subject, it is the most widely taught foreign language in almost all countries worldwide, and a medium of instruction in about 55 countries (Dearden, 2015). Breaking this hegemony in favor of African languages, among other languages, would go a long way in ensuring responsiveness.

4. Understanding Responsiveness

Moll (2004) explained that curriculum responsiveness is the ability of curricula taught in schools or universities to address student needs as well as societal circumstances. This means that for a curriculum to be responsive, graduates should become productive members of the society by continually solving societal problems with relative ease. Curriculum responsiveness within this context would mean the ability of the higher education curriculum in Nigeria to produce graduates that have the capacity to be productive in the era of the 4IR.

Fomunyam and Teferra (2017) argued that for a curriculum to achieve responsiveness in this 4IR era, it has to be economically, culturally, disciplinary, and learning responsive. Economic responsiveness deals with the ability of a curriculum to train skilled professionals in different sectors of the economy (Fomunyam & Teferra, 2017). Therefore, a curriculum is said to be economically responsive when graduates are highly skilled and ready for the job market. By being ready for the job market, they are able to develop long-lasting solutions to organizational problems and to create new jobs where needed. An economically responsive curriculum will not just satisfy the current job market but will be able to proffer solutions to anticipated organizational problems and contribute immensely to the development of the general economy.

It has become very pertinent that African higher education curricula become economically responsive to the 4IR (Fomunyam & Teferra, 2017). This is because in this era of technological advancement, organizations will be confronted by new technological challenges that will threaten, affect, and change their business processes from little automation to highly automated business processes. To this effect, this will make organizations yearn for employees that are highly skillful and that have the capacity to operate in automated organizations. Economic responsiveness therefore moves beyond offering a degree in particular fields of study such as management or computer programming to how wholly or sophisticatedly skilled these professionals are (Moll, 2004). If they can move beyond dabbling with the problems in the field to developing solutions, then the

curriculum can be said to be economically responsive. To this effect, revolutionary individuals need to be trained to be more than just fit to take on the economy. They also need to be able to respond to the economic challenges of the time through job creation, inventions, and innovative approaches to better manage resources and avoid waste. Economic responsiveness in the curriculum therefore goes beyond satisfying the job market at the present but creating sustainable solutions to future challenges as well as the growth of the economy (Fomunyam & Teferra, 2017). What you learn, therefore, and how you learn it contribute to the deconstruction of the hegemonic processes that have been keeping the nation in an underdeveloped state.

On the other hand, cultural responsiveness is the ability of the curriculum to access and respond to the cultural dissonance in the classroom (Moll, 2004). Classrooms are always divided along cultural lines, and this could be in the form of race, ethnicity, religion, age, and sometimes gender. Ladson-Billings (1995) argued that culturally responsive pedagogy is a student-centered approach to teaching that includes cultural references and recognizes the importance of students' cultural backgrounds and experiences in all aspects of learning. To this end, a culturally responsive classroom will promote engagement by embracing classroom diversity and nurturing students' cultural strengths. Culturally responsive teaching is concerned with using cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant and effective for them. Thus, a culturally responsive classroom will see diversity and cultural differences as assets and values; challenge racial and cultural stereotypes, prejudices, racism, injustice, and oppression; and promote social justice and academic equity.

Globalization and internalization have made the classroom more culturally diverse as ever experienced before, which makes it important for classrooms to be culturally responsive. Researchers have found that culturally responsive classrooms motivate students to learn and help them become effective learners. Moll (2004) argued that a nation such as Nigeria with a corrosively discriminating past requires a curriculum that would not only respond to cultural challenges but also recognize the diversity within the classroom. This recognition empowers the teacher to tap into the diverse social and cultural capital within the classroom to enhance the learning experience. Gumbo and Williams (2014) added that cultural responsiveness is the teacher's ability to demonstrate knowledge of the cultural characteristics of different groups within the classroom, and how these cultural differences affect the teaching and learning process. Knowledge is built on experiences, which itself are culturally shaped. As such, recognizing the cultural differences in the classroom from a curricular standpoint is a way of decolonizing the educational space and giving everyone a voice.

Third, disciplinary responsiveness is a type of responsiveness that is very cogent in this era of the 4IR. Ferdinand (2009) argued that disciplinary responsiveness is the ability of curricula to be up to date with the research in the field as well as promote new discoveries within the discipline. This means that for a curriculum to be disciplinary responsive, it must continually incorporate new knowledge in

the field into the curriculum. A disciplinary responsive curriculum allows for specialization and depth of content knowledge; is specific, current, and factual; and develops skills in students as it emerges from experts of the discipline. As a result of the current technological advancement, there is the need for new knowledge to be continually embedded in the curriculum, for it to remain responsive to the drastic changes in the workplace. Hence, Moja (2004) explained that disciplinary responsiveness will ensure that what is happening locally and internationally as far as any discipline is concerned is duly embedded in the curriculum. This will encourage students to think globally and act locally to develop the discipline and solve current and anticipated organizational problems.

A higher education curriculum is intricately bound up with a community of scholars or scholarship who produce new knowledge according to the dictates of the discipline. However, most academic disciplines or curricula are often highly systematized forms of inquiry that evade everyday-life practices for which education is supposed to prepare people and inform and challenge them (Moll, 2004). For the higher education curriculum to be disciplinary responsive within the context of Nigeria, it should not only be up to date in relation to research in the field but structured in ways that are applicable to everyday life, especially since knowledge is largely for application. Disciplinary responsiveness will as well encourage students to think globally and act locally to develop the discipline.

Finally, learning responsiveness, otherwise called pedagogical responsiveness, is the ability of the curriculum to respond to the needs of the student (Fomunyam & Teferra, 2017). Learning has to take into serious consideration the individual needs of students, without which students may find it difficult to learn. The idea here is to help students develop their academic, social, and emotional skills in a learning environment that is developmentally responsive to their strengths and needs. In this age of technological advancement, it is important that learning becomes responsive to the respective needs of students, so that students do not become disinterested in class lessons. Students need to be excited and keen to learn the rudiments of becoming successful employees in the future workplace. According to Moll (2004), students entering university are at a disadvantaged one way or another, especially since they have to adapt to an institutional and epistemic context unfamiliar to them. Making the curriculum responsive to their needs fosters the course for decolonization, especially since decolonizing the mind is the first step to ensure freedom and critical engagement to whatever material it receives.

To this effect, the ultimate question is: How can higher education curricula in Nigeria achieve economic, cultural, disciplinary, and learning responsiveness to prepare students in Nigeria for the 4IR? This paper proposes the itinerant curriculum as an alternative curriculum pathway to making Nigerian higher education responsive to the demands of the 4IR.

5. The Itinerant Curriculum as a Key to Responsiveness in the 4IR Era
Paraskeva (2016) argued for three key factors within the frame of ICT: deterritorialization of the current curricula, challenging of English linguistic

hegemony, and prevention of epistemicide. This section discusses these three factors in line with the responsiveness agenda. To deterritorialize Nigeria's higher education curriculum for responsiveness will require moving away from Eurocentric viewpoints and breaking all boundaries and barriers which have held knowledge within the curriculum stagnant. Deterritorialization of the curriculum will create room for disciplinary responsiveness. In concurrence, Fomunyam (2019) argued that when this happens, we will begin to see less of biology, mathematics, and English and more of big data, innovative studies, and decision sciences in the next 10 years. Deterritorialization will create room for the continuous renewal of the curriculum, making it fit for purpose as well as for the current dispensation. In support, Mustapha (2022) cited the Nigerian Minister of Higher Education, who purported that:

> *"It has become important that the education sector should be increasingly more relevant and the changing role of the teacher being a facilitator rather than absolute harbinger of knowledge … the type of curriculum that will now focus more on skills, entrepreneurship, we want to enhance employability. As we have been preaching, we don't want to produce graduates that are looking for government employment."* (p. 1)

Deterritorialization of the curriculum will make room for new possibilities and innovation within the curriculum in particular and higher education in general to engineer the development of new skills which hitherto has been impossible. The Nigerian Minister of Communication and Digital Economy, Professor Isa Pantami (cited in Mustapha, 2022), concurred with this when he argued that:

> *"We always complain about unemployment, I agree that there is unemployment, but the percentage is not as we think. The significant challenge we have in Nigeria is the problem of unemployability, this is the major problem particularly when it comes to sciences, engineering, technology. We need to provide the relevant skills so that they will be able to confront any challenge and can be able to apply for any job globally. Today if you apply for a job in a global tech giant, they hardly ask you about the university you attended or class of degree but are interested in knowing your hard skills and soft skills this is what they are interested in."* (p. 1)

Secondly, dismantling the hegemony of English language will cater for pedagogical and cultural responsiveness. Mustapha (2014) identified language ecology as being a counterstrategy to English hegemony. Suarez (2002) proposed for the sensitivity and resistance of individuals to linguistic hegemony and the preservation of language heritage (language usage driven by antihegemonic ideologies). Although it might appear at first that resisting linguistic hegemony is resisting the dominant language which might be detrimental in the now, the future possibilities for such resistance are endless. Suarez's (2002) paradoxical strategy of linguistic-hegemony resistance advises that in order to be successful, resistance necessitates acquiescence to this hegemony on a certain level, namely proficiency in the dominant language. At the same time, this resistance fuels the conviction towards heritage-language maintenance. As such, it is important to promote the local languages of Nigeria within the purview of Suarez's paradox of linguistic hegemony (Mustapha, 2014). Language is the principal tool for

pedagogy or learning and also resides at the very heart of culture. As such, breaking the hegemony of English would ensure not only that cultural capital is tapped to its fullest but also that knowledge construction is at its best as all students are able to participate.

Mustapha (2014) argued that the increased usage of African languages would contribute to the growth of more inclusive individuals, both culturally and educationally. This is because those educated in their mother tongues tend to have a more positive self-image and greater respect for other languages and their speakers. In reference to language and education, Matola et al. (2019) argued that language is the vehicle through which meaning is constructed. Since English is the medium of instruction for universities in most parts of Africa, students are therefore forced to construct meaning in English regardless of their level of proficiency with the language. If new skills are going to be developed and students are expected to be at their best, then the hegemony of English must be broken. This will give room for a multiplicity in mediums of instruction for the construction of meaning such that teaching and learning can be more effective and cultural capital can be engaged with at its best. Kembo (2000) added that bilingualism or the use of multiple languages in the teaching and learning sphere has been known to produce more culturally adaptive students who are more socially integrated. The growth in languages has also been known to spark technological advancements, such as in the cases of China, Germany, Japan, Spain, and France, among other countries.

Lastly, putting an end to epistemicide is necessary to ensure that Nigerian higher education is sensitive to the 4IR. Applying ICT would mean drastically altering the curriculum to bring in alternative knowledges which have been relegated to the fringes, or in the process of epistemicide either as way of maintaining neo-colonialism or hindering economic advancement. Masaka (2018) argued that:

> *"It appears to be beyond questioning that the epistemicide that has been instituted by some people from some quarter has stunted the growth and flourishing of the epistemological paradigm of the indigenous people of Africa. This is exemplified by its near total exclusion from the school and university curricula. At worst, Africa's contribution to the knowledge canon has been denied altogether with the dominant culture presented as the only authentic producer of knowledge."* (pp. 284–285)

With the destruction of the African knowledge canon, it becomes increasingly impossible to mastermind economic transformation, because the knowledge which was supposed to orchestrate said transformation has been destroyed. This is confirmed by de Sousa Santos (2005), who argued that:

> *"In the name of modern science, many alternative knowledges and sciences have been destroyed, and the social groups that used these systems to support their autonomous paths of development have been humiliated. In short, in the name of science, epistemicide has been committed, and the imperial powers have resorted to it to disarm any resistance of the conquered peoples and social groups."* (p. xviii)

Bringing an end to epistemicide will create room for economic responsiveness, as the right kind of knowledge needed for skills development locally will be liberated and made available. Ntihirageza and Ibrahima (2022) concluded that if epistemicide is not ended, the continuous development of Africa is impossible. Epistemicide is partly what is hindering the development of the right kind of skills needed in this era of the 4IR, and putting an end to it would be a major step towards achieving economic responsiveness.

6. Conclusion

The purpose of this paper was to promote the adaptation of the itinerant curriculum in higher education in Nigeria to achieve responsiveness in this era of the 4IR. The itinerant curriculum enables responsiveness at all levels and in all dimensions. If the Nigerian higher education system is going to meet up with the demands of the age, changes are needed in the curriculum to drive the process. Enacting the itinerant curriculum becomes much more critical with the advent of the 4IR, which has generated euphoria for market-driven economies and technological growth. According to Schwab (2016), there will be a demand for professionals who can blend digital skills with traditional-subject enterprise. The Nigerian higher education curriculum needs to be structured to encourage cognitive flexibility and emotional intelligence, as these are the skills vital for the future. The ability and resilience to jump into different skill-based opportunities requires cognitive flexibility, and such flexibility does not come from the type of curriculum currently in place. The curriculum must be culturally attuned, creating adaptive and flexible minds, as these are the demands of the projected fast-paced future. To achieve this objective of curriculum responsiveness to the 4IR, the itinerant curriculum must be adopted.

7. References

Agwu, E. (2019). *The Nigerian archaic academic curriculum and the need for a review*. Lagos Business School Insight. https://www.lbs.edu.ng/lbsinsight/the-nigerian-archaic-academic-curriculum-and-the-need-for-a-review/

Asabor, M. (2017, December 7). Nigeria's education curricula outdated. *Nigerian Tribune*. https://tribuneonlineng.com/nigerias-education-curricula-outdated/

Barone, D. A. C., Zaro, M. A., & de Musacchio, C. (2015). Delocalization and spatialization of the classroom: Deterritorialization in education. *American Journal of Educational Research, 3*(11), 1417–1428. https://doi.org/10.12691/education-3-11-11

Crispin, D. (2019). The deterritorialization and reterritorialization of artistic research. *IMPAR: Online Journal for Artistic Research, 3*(2), 45–59 https://doi.org/10.34624/impar.v3i2.14146

de Sousa Santos, B. (2005). General introduction: Reinventing social emancipation: Toward new manifestos. In B. de Sousa Santos (Ed.), *Democratizing democracy: Beyond the liberal democratic canon* (Vol. I; pp. xvii–xxxiii). Verso. http://www.boaventuradesousasantos.pt/media/General%20Introduction.pdf

de Sousa Santos, B. (Ed.). (2007). *Another knowledge is possible*. Verso https://www.versobooks.com/books/325-another-knowledge-is-possible

Dearden, J. (2015). *English as a medium of instruction: A growing phenomenon*. British Council. https://www.britishcouncil.es/sites/default/files/british_council_english_as_a_medium_of_instruction.pdf

Enoch, J. (2020, April 28). Nigeria and the Fourth Industrial Revolution. *TEKIDIA*. https://www.tekedia.com/nigeria-and-the-fourth-industrial-revolution/

Ferdinand, D. S. (2009). *Workforce education and development curriculum responsiveness to culturally and internationally diverse graduate students: A mixed methods study* [Doctoral dissertation]. Carbondale Southern Illinois University. https://opensiuc.lib.siu.edu/dissertations/77/

Fomunyam, K. G. (2019). Education and the Fourth Industrial Revolution: Challenges and possibilities for engineering education. *International Journal of Mechanical Engineering and Technology, 10*(8), 271–284. https://iaeme.com/Home/article_id/IJMET_10_08_022

Fomunyam, K. G., & Teferra, D. (2017). Curriculum responsiveness within the context of decolonisation in South African higher education. *Perspectives in Education, 35*(2), 196−207. https://doi.org/10.18820/2519593X/pie.v35i2.15

Fontana, B. (1993). *Hegemony and power: On the relation between Gramsci and Machiavelli*. University of Minnesota Press. http://www.jstor.org/stable/10.5749/j.cttts8xb

Gumbo, M. T., & Williams, P. J. (2014). Discovering Grade 8 technology teachers' pedagogical content knowledge in the Tshwane district of Gauteng province. *International Journal of Educational Sciences, 6*(3), 479–488. https://uir.unisa.ac.za/bitstream/handle/10500/28124/Gumbo%20%26%20Williams%20%282%29.pdf?sequence=1&isAllowed=y

Igwe, P. A., Hack-Polay, D., Mendy, J., Fuller, T., & Lock, D. (2021). Improving higher education standards through reengineering in West African universities: A case study of Nigeria. *Studies in Higher Education, 46*(8), 1635–1648. https://doi.org/10.1080/03075079.2019.1698534

Inwalomhe, D. (2019, January 28). Nigeria and the potential of 4th Industrial Revolution. *The Guardian*. https://guardian.ng/opinion/nigeria-and-the-potential-of-4th-industrial-revolution/

Kembo, S. (2000). Language in education and language learning in Africa. In V. Webb, & S. Kembo (Eds.), *African voices: The introduction to the languages and linguistics of Africa* (pp. 286–311). Oxford University Press. https://www.amazon.com/African-Voices-Introduction-Languages-Linguistics/dp/0195716817

Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, *34*(3), 159–165. https://www.jstor.org/stable/1476635?origin=JSTOR-pdf#metadata_info_tab_contents

Masaka, D. (2018). The prospects of ending epistemicide in Africa: Some thoughts. *Journal of Black Studies, 49*(3), 284–301. https://doi.org/10.1177%2F0021934717753731

Matola, N., Fomunyam, K. G., Sibusiso, M., & Govender, V. (2019). Contextual decolonisation of higher education in South Africa. In G. F. Kehdinga (Ed.), *Decolonising higher education in the era of globalisation and internationalisation* (pp. 161–179). Sun Media. https://doi.org/10.18820/9781928424277

Mohajan, H. (2020). The Second Industrial Revolution has brought modern social and economic developments. *Journal of Social Sciences and Humanities 6*(1), 1–14. https://mpra.ub.uni-muenchen.de/98209/

Moja, T. (2004). Globalisation: A challenge for curriculum responsiveness. In H. Griesel (Ed.), *Curriculum responsiveness: Case studies in higher education* (pp. 21–38). South African Universities Vice-Chancellors Association. https://www.worldcat.org/title/curriculum-responsiveness-case-studies-in-higher-education/oclc/61182915

Moll, I. (2004). Curriculum responsiveness: The anatomy of a concept. In H. Griesel (Ed.), *Curriculum responsiveness: Case studies in higher education* (pp. 1–20). South African Universities Vice-Chancellors Association file:///C:/Users/King%20Maker/Downloads/Moll-curriculumresponsiveness2004.pdf

Mustapha, S. (2014). Linguistic hegemony of the English language in Nigeria. *Íkala, Revista de Lenguaje y Cultura, 19*(1), 83–97
https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1068.7067&rep=rep1&type=pdf

Mustapha, T. (2022, June 10). Nigeria develops new curriculum for higher education. *Voice of Nigeria.* https://von.gov.ng/nigeria-develops-new-curriculum-for-higher-education/

Ntihirageza, J., & Ibrahima, A. (2022). Education and epistemicide in Africa: Towards an Ubuntu-based comprehensive model of education. In J. Ntihirageza, & A. Ibrahima (Eds.), *Handbook of research on protecting and managing global indigenous knowledge systems* (pp. 275–293). IGI Global. https://doi.org/10.4018/978-1-7998-7492-8.ch015

Ogunode, N. J., & Musa, A. (2020). Higher education in Nigeria: Challenges and the ways forward. *Electronic Research Journal of Behavioural Sciences, 3*(1), 84–98. https://ssrn.com/abstract=3695914

Oliveira, I. B. (2017). Itinerant curriculum theory against epistemicides: A dialogue between the thinking of Santos and Paraskeva. *Journal of the American Association for the Advancement of Curriculum Studies, 12*(1), 1–22.
https://doi.org/10.14288/jaaacs.v12i1.189708

Paraskeva, J. M. (2016). *Curriculum epistemicide: Toward an itinerant curriculum theory.* Routledge. https://www.book2look.com/embed/9781317562016

Schwab, K. (2016). The Fourth Industrial Revolution: What it means, how to respond. https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/

Suarez, D. (2002). The paradox of linguistic hegemony and the maintenance of Spanish as a heritage language in the United States. *Journal of Multilingual and Multicultural Development, 23*(6), 512–530. https://doi.org/10.1080/01434630208666483

Tietze. S., & Dick, P. (2012). The victorious English language: Hegemonic practices in the management academy. *Journal of Management Inquiry, 20*(10), 1–13. https://doi.org/10.1177%2F1056492612444316

Wiley, T. G. (2000). Language planning and policy. In S. L. McKay, & N. H. Hornberger (Eds.), *Sociolinguistics and language teaching* (pp. 103–147). Cambridge University Press. file:///C:/Users/King%20Maker/Downloads/sociolinguistics-and-language-teaching-cambridge-applied-linguistics.pdf