

Article

A journey through time: Exploring Afro-futurism and Igbo cultural heritage in elementary education

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CITATION

Okafor AY. A journey through time: Exploring Afro-futurism and Igbo cultural heritage in elementary education. *Forum for Education Studies*. 2024; 2(4): 1552.
<https://doi.org/10.59400/fes.v2i4.1552>

ARTICLE INFO

Received: 24 July 2024
Accepted: 14 August 2024
Available online: 15 October 2024

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Abstract: This study explored the significance of including the study of some unrecognized Igbo cultural heritage into the primary education curriculum through the lens of Afrofuturism/African futurism. Drawing from data sourced from interviews conducted among individuals aged 75 years and above, this study illuminates the cultural, nutritional, and educational dimensions of integrating these elements into early education. From an Afrofuturist perspective, education serves as a vehicle for cultural preservation, empowerment, and envisioning alternative futures rooted in African heritage. The inclusion of this yet to be recognized aspect of Igbo cultural heritage in the curriculum not only imparts knowledge of traditional culinary practices and medicinal uses but also fosters a sense of cultural pride and connection among younger generations. By engaging these Igbo cultural heritage with students at a young age, they will develop a deeper understanding of their cultural identity and heritage, which will contribute to a more inclusive and diverse educational experience. More so, the study highlights the potential benefits of integrating indigenous knowledge systems into formal education, promoting sustainability, environmental stewardship, and community resilience. Through hands-on learning experiences related to agriculture, nutrition, and cultural studies, students are equipped with practical skills and critical thinking abilities essential for navigating future challenges like how to improve scientifically the use of the seeds and vegetables mentioned for the betterment of humans' health as well as checkmate the abuse of them through unconscious overdose usage by people which leads to the damages of the organs of the body. In conclusion, integrating the study of indigenous vegetables and seeds into the primary education curriculum offers a transformative opportunity to cultivate cultural identity, foster intergenerational knowledge transfer, and advance Afrofuturist/African futurist visions of inclusive, empowered futures for African societies.

Keywords: Afrofuturism; Igbo culture; elementary education; cultural heritage; time journey

1. Introduction

Afrofuturism can be said to be the study of the uniqueness of people, however, black race in general. Also, it is termed a race-specific response to the conceptual change of people's culture with the quest to recover some of their lost cultures, to archive them and to modernize or update them to fit into the modern way of life. The advent of the concept "Afrofuturism" is rooted in the current positive waves emanating from some authors, artists, musicians, and thinkers who are African American, African, and Black diasporic to showcase the beauty and experiences of African culture. Also, it is a body of creative work and academic thought that imagines greater justice and a freer expression of black subjectivity in the future or in alternative times, places, or realities which includes literature, visual art,

photography, film, multimedia art, performance art, music, and theory, however, this study opines that something vital is missing out. Furthermore, each subject of discussion targets a particular culture, thereby unveiling what has gone into extinction or is already in existence for a specific culture and making it known to other races or cultures.

In the complexity of African cultures, the Igbo people of Nigeria stand out for their rich heritage, celebrated traditions, and culinary delights. Yet, in the dynamic landscape of modern education, the essence of these cultural treasures often fades into the background. As we journey into an era defined by Afrofuturism, where African narratives intersect with technology, innovation, and imagination, it's imperative to anchor our youth at least from the primary education level in the roots of their identity. Primary schools serve as the foundation where young minds first encounter the world beyond their immediate surroundings and also the right time to form a child for the future. During this stage of life do we have the opportunity to weave the intricate threads of Igbo culture into the fabric of their learning experience. Often times, the inculcation of the culture only centers on the fashion, ways of greeting, music, language, food, among others which is studied on the periphery without the children having an indebt knowledge of their cultural heritage.

However, vital things are actually missing out in the study of the Igbo culture which is the crux of this work. It is said that we are what we eat and this fact introduces us to the concept of food. Food, in its essence, transcends mere sustenance; it is a vessel of heritage, storytelling, connection to one's roots and health benefits. By integrating comprehensive education on Igbo cuisine from the primary school curriculum, we not only preserve a vital aspect of African heritage but also empower future generations to embrace their cultural identity with pride and resilience which will further the usefulness of some of the food ingredients and their health benefits. This article explores the significance of teaching children about Igbo culture through its culinary traditions, illuminating how this approach serves as a catalyst for fostering Afrofuturism in the hearts and minds of young learners. In essence, teaching children about Igbo culture also through its food from primary school level is not merely an exercise in culinary education; it is a transformative journey that shapes their understanding of self, community, and the world around them. That is, introducing them the nitty-gritty's of ever thing about their culture from the early stage will enable them to ponder from early stage on how to explore things in their culture for a favorable tomorrow.

Back in the days, our forefathers live longer than what we experience today. People suffer lately from so many illnesses that have never been in existence and from some researches already carried out, it has to do with the things we consume which can be in the form of edibles and drugs. In the quest for wealth, a lot of fake drugs have been in the system without the producers considering the harm it is causing to the consumers. On this note lies the essence of going back to our root, the Igbo culture, aiming at some of the things our forefathers use in treating some of the illnesses suffered then that are still in existence, inculcating them in the curriculum for future development of these items for the good and benefits of not just the Igbo people, but the whole world at large. Some of these items are in the form of vegetables and seeds, often used for cooking. Some are after products of some items

used for cooking. This will be explained in detail later in this work. By embracing this approach, we pave the way for a future where Afrofuturism flourishes, and African voices resonate with strength and authenticity on the global stage.

Afrofuturism cannot be discussed in isolation of a particular culture or race. Therefore, this study focuses on the Igbo people. The Igbo people are an ethnic group native to the southeastern part of Nigeria, in West Africa. It consists of five states Anambra, Enugu, Abia, Imo and Ebonyi. They are one of the largest ethnic groups in Nigeria, and their language Igbo is one of the country's three major languages. The history of the Igbo people can be traced back to the 9th century when they were a part of the Nri Kingdom in what is now Anambra State. The Nri Kingdom was a center of religious and political power, and its influence extended across much of what is now southeastern Nigeria. In the 19th century, the Igbo people were heavily affected by the transatlantic slave trade, with many being taken as slaves to the Americas. This led to the loss of many of the Igbo people's cultural artefacts and traditions. In the 20th century, the Igbo people played a significant role in Nigeria's struggle for independence from British colonial rule. Many prominent leaders of the independence movement were Igbo, and the Igbo people played a significant role in shaping Nigeria's political landscape in the years following independence.

Today, the Igbo people are known for their entrepreneurial spirit and contributions to Nigerian culture. They are also known for their rich cultural traditions, including music, dance, and art. Their culture also extends to what they eat, how each state prepares its food and their belief in the works and efficiency of each cooking item or ingredient. Though in the study of Igbo culture, sometimes food, the state or town that is known of each meal are discussed but in this context what I will call edibles some of them are used for preparing these Igbo delicacies that are highly medicinal are always left out. For instance, there are some seeds and vegetables known for curing some illnesses people encounter today which are hardly planted not to talk of using them I am positively convinced that including the study of these in the academic curriculum will spark a child's interest in future for medical development. Sometimes people use them without knowing their health benefits, perhaps sometimes, misuse them. On the other hand, some people see them and because they are ignorant of the health benefits, they do not make use of them. This is the reason why there is a need to make known some of these vegetables and seeds peculiar to the Igbo people, their health benefits and how they are prepared.

Therefore, the present study is pioneering in its integration of Afro-futurism—a forward-looking cultural movement—with traditional Igbo heritage, providing a unique framework for elementary education. This study is original as it bridges the gap between futuristic African diasporic perspectives and indigenous knowledge systems, a combination that has been largely unexplored in educational research. The value lies in its potential to reshape curricula by introducing culturally responsive pedagogy that empowers young learners with a strong sense of identity and creativity. By embedding Afro-futurism and Igbo cultural heritage in education, the research fosters a deeper understanding of African heritage while encouraging innovative thinking, thus contributing to the development of well-rounded, culturally aware students. This approach also promotes inclusivity and diversity, aligning with

contemporary educational goals of equity and representation.

2. Theoretical background

This study is guided by Afrofuturism and culturally responsive pedagogy as its theoretical framework. Afrofuturism is a theoretical framework introduced by cultural critic Mark Dery in his 1994 essay, "Black to the Future." It merges African cultural heritage with futuristic and speculative elements to explore how African traditions and histories can be reimagined in future contexts. Afrofuturism envisions how integrating science fiction, technology, and futuristic visions with traditional African cultural practices can foster empowerment and cultural revival. The theory emphasizes reinterpreting African history and culture through futuristic lenses, using speculative fiction and futuristic narratives to revitalize and preserve African cultural practices. It envisions future scenarios where African and diasporic communities are empowered by incorporating their heritage with modern advancements. In the context of the present study, Afrofuturism supports the integration of Igbo cultural heritage into primary education. It provides a framework for how traditional Igbo culinary practices and knowledge can be reimagined within a futuristic educational framework. This approach not only preserves and celebrates Igbo heritage but also empowers students with a sense of cultural pride and relevance to contemporary and future contexts.

Culturally responsive pedagogy (CRP) was developed by Gloria Ladson-Billings, particularly through her influential 1995 work, "Toward a Theory of culturally relevant pedagogy." This theory emphasizes the importance of tailoring educational practices to reflect and incorporate the diverse cultural backgrounds of students [1]. CRP asserts that learning is most effective when students' cultural identities are acknowledged and integrated into the curriculum, creating a more engaging and inclusive educational environment. The central tenets of CRP include the incorporation of cultural references within the curriculum to make learning more relevant and relatable for students. It also emphasizes maintaining high academic expectations while providing support that considers students' cultural contexts, and fostering critical consciousness by encouraging students to understand and challenge social injustices. In this study, CRP provides a framework for integrating Igbo cultural heritage into the curriculum. By incorporating Igbo traditions and knowledge into lessons, CRP ensures that education is not only culturally relevant but also empowering. This approach helps students connect with their heritage while promoting a sense of identity and belonging, effectively complementing the visionary aspects of Afrofuturism by making cultural integration practical and impactful in the classroom.

Together, these frameworks underscore the importance of integrating cultural heritage into education to promote a more inclusive, culturally relevant, and forward-thinking educational experience. They support the study's aim to use Afrofuturism to envision educational futures that respect and utilize traditional knowledge while preparing students for future challenges.

2.1. Literature reviews

Afrofuturism is a concept that encompasses a range of cultural, philosophical, and historical ideas. At its core, it explores the intersection of African diaspora culture with technology, aiming to connect people who have been separated by space and time through a shared interest in envisioning the future. This movement reimagines the past, present, and future of black people in order to provide a vision for the future and make sense of the present. Afro-futurism and Igbo cultural heritage represent two dynamic cultural frameworks that hold significant potential for transformative educational practices. Afro-futurism, as a cultural and artistic movement, imagines a future shaped by the African diaspora, blending science fiction, historical narratives, and African traditions [2]. On the other hand, Igbo cultural heritage, rich in language, folklore, and traditions, offers a deep reservoir of indigenous knowledge [3]. Integrating these frameworks into elementary education presents an innovative approach to culturally responsive pedagogy.

Afro-futurism has gained increasing attention in educational discourse, particularly for its potential to empower marginalized communities by envisioning alternative futures [4]. Scholars argue that Afro-futurism can be a powerful tool in education, fostering creativity and critical thinking among students by challenging traditional narratives and promoting a vision of the future where African diasporic perspectives are central [5], incorporating Afro-futurism into the curriculum allows students to engage with complex themes of identity, technology, and social justice, making learning more relevant to their lived experiences. However, there is limited empirical research on the application of Afro-futurism in elementary education specifically. The existing studies largely focus on secondary and higher education contexts, where students can engage more deeply with the abstract and speculative nature of Afro-futurist thought [6]. This gap suggests a need for further research on how Afro-futurism can be adapted for younger learners, potentially through age-appropriate narratives, art, and media that inspire imagination and a sense of belonging.

Igbo cultural heritage is deeply rooted in the oral traditions, language, and social structures of the Igbo people, one of the largest ethnic groups in Nigeria [7]. Education within Igbo communities traditionally emphasized moral values, communal responsibilities, and the transmission of cultural knowledge through storytelling, proverbs, and rituals [8]. In recent years, there has been a growing interest in incorporating Igbo cultural heritage into formal education as a means of preserving these traditions and fostering a strong cultural identity among Igbo youth [9]. Research on the integration of Igbo cultural heritage in education highlights the benefits of using indigenous knowledge systems in the classroom. For instance, Mgbeahurike [10] found that students who were exposed to Igbo language and folklore as part of their curriculum demonstrated improved cultural awareness and academic performance. Furthermore, Ojinnaka et al., [11] suggests that incorporating Igbo cultural practices into education not only enhances students' sense of identity but also promotes values such as respect, community, and resilience. Despite these findings, the literature reveals a lack of comprehensive studies on the systematic integration of Igbo cultural heritage in elementary education outside of Nigeria. Most

existing research focuses on secondary education or adult learners, with few studies examining how younger children engage with and benefit from Igbo cultural content in their early years of schooling.

The potential for integrating Afro-futurism and Igbo cultural heritage in elementary education lies in their complementary strengths. Afro-futurism offers a futuristic and imaginative perspective that can engage students’ creativity and critical thinking, while Igbo cultural heritage provides a grounding in indigenous knowledge and values [12]. Together, these frameworks can create a holistic and culturally responsive curriculum that fosters both a strong cultural identity and a forward-looking mindset among students. Studies have shown that culturally responsive pedagogy, which includes the integration of students’ cultural backgrounds into the curriculum, leads to improved academic outcomes and increased student engagement [13]. By incorporating Afro-futurism and Igbo cultural heritage into elementary education, educators can create learning environments that are not only more inclusive but also more effective in addressing the diverse needs of their students.

However, the literature also indicates several challenges to this integration. One major challenge is the lack of curriculum resources and teacher training on Afro-futurism and Igbo cultural heritage [14]. Without adequate support, teachers may struggle to effectively incorporate these frameworks into their classrooms. Additionally, there is a need for more research on the specific pedagogical strategies that can be used to teach Afro-futurism and Igbo cultural heritage to younger students, particularly in multicultural and multi-ethnic contexts. A literature matrix is presented in **Table 1**, which can help in comparing and contrasting different studies or works.

Table 1. Literature matrix.

Author(s)	Year	Focus area	Key concepts and findings	Contribution to Afrofuturism/Igbo culture	Comments/notes
Dery, Mark	1994	Afrofuturism	Coined the term “Africanfuturism,” focusing on speculative fiction that addresses African-American themes in the context of 20th-century technoculture. Discussed the impact of historical erasure on the ability of Black communities to envision futures.	Established Afrofuturism as a critical framework for understanding the intersection of Black culture and technology. Emphasized the importance of creating future narratives for Black people.	Dery’s foundational work laid the groundwork for subsequent explorations of Afrofuturism.
Eshun, Kodwo	2003	Afrofuturism	Described Afrofuturism as a program for recovering histories of counter-futures created to antagonize Afrodiasporic projections. Emphasized Africa as a site for futuristic interventions impacting political and social power.	Expanded the ideological impact of Afrofuturism beyond the sci-fi context. Highlighted the political and social dimensions of the movement.	Eshun’s work broadened the scope of Afrofuturism, linking it to political and social activism.

Table 1. (Continued).

Author(s)	Year	Focus area	Key concepts and findings	Contribution to Afrofuturism/Igbo culture	Comments/notes
Morris	2012	Afrofuturism and Black Feminism	Aligned Afrofuturism with Black feminist thought, underscoring the centrality of Blacks to future knowledge and cultural production. Highlighted resistance to tyranny.	Integrated Afrofuturism with Black feminist perspectives, emphasizing the role of Black women in future-making and resistance.	Morris connected Afrofuturism with broader social justice movements.
Yaszek	2006	Afrofuturism	Defined Afrofuturism as a cultural aesthetic and philosophy that explores the intersection of African diaspora culture with technology. Aimed to connect those separated by space and time through a shared cultural heritage.	Provided a contemporary definition and framework for understanding Afrofuturism in the 21st century.	Yaszek updated and expanded the conceptualization of Afrofuturism.
Womack, Ytasha	2013	Afrofuturism	Comprehensive examination of Afrofuturism's history and cultural significance across literature, music, film, and visual art. Highlighted its impact on contemporary culture and artistic expression.	Showcased the breadth and diversity of Afrofuturism across various artistic forms.	Womack's work is pivotal in understanding the cultural impact of Afrofuturism.
Afigbo, Adiele	1972	Igbo culture	Examined the origins, traditions, and societal structures of the Igbo people. Discussed cultural diversity among Igbo subgroups and the historical development of Igbo society.	Provided a comprehensive historical and cultural analysis of the Igbo people, contributing to the understanding of African cultural dynamics.	Afigbo's work is foundational in Igbo studies.
Shaw, Thurstan	1977	Igbo archaeology	Focused on the archaeological heritage of the Igbo people, particularly the Igbo-Ukwu site. Analyzed artifacts to reconstruct socio-economic, political, and religious life.	Advanced knowledge of Igbo history and material culture through detailed archaeological analysis.	Shaw's work is a significant contribution to African archaeology.
Ugonna, C.C.	2005	Igbo-Igala borderland	Explored the interplay between religion, social structures, and colonialism in the Igbo-Igala borderland. Discussed indigenous resistance to colonialism.	Highlighted the agency of indigenous African communities in navigating colonialism while preserving cultural heritage.	Ugonna's work contributes to postcolonial studies and African history.
Eze, Chielozone	1993	Igbo literature	Showcased the diversity of Igbo storytelling and poetic traditions. Organized thematically to highlight various dimensions of Igbo life.	Provided an anthology that preserves and promotes Igbo cultural heritage through literature.	Eze's anthology is a valuable resource for understanding Igbo literary traditions.
Isichei, Elizabeth	1983	Igbo inter-group relations	Examined inter-group relations among the Igbo and neighboring ethnic groups. Discussed the impact of colonialism on these relations.	Provided insights into the historical, social, and political interactions shaping southeastern Nigeria.	Isichei's work is critical for understanding inter-group dynamics in the region.
Achebe, Chinua	1958	Igbo culture in literature	"Things Fall Apart" explores Igbo traditions, social structures, and the impact of colonialism. Highlights traditional values and spiritual practices.	Offered profound insights into Igbo culture and the effects of colonialism through fiction.	Achebe's novel is seminal in African literature.

Table 1. (Continued).

Author(s)	Year	Focus area	Key concepts and findings	Contribution to Afrofuturism/Igbo culture	Comments/notes
Nwapa, Flora	1966	Igbo women's roles	"Efuru" and "Idu" explore gender roles, marriage, spirituality, and social dynamics in Igbo culture.	Portrayed the complexities of Igbo women's experiences and cultural practices.	Nwapa's novels are pioneering works in African women's literature.
Adichie, Chimamanda	2006, 2003	Igbo culture and war	"Half of a Yellow Sun" and "Purple Hibiscus" explore Igbo family structures, cultural practices, and the impact of war and colonialism.	Highlighted the resilience of Igbo culture and identity in the face of conflict and change.	Adichie's novels provide a modern perspective on Igbo life.
Ike, Chukwuemeka	1976, 1965	Igbo traditional institutions	"Sunset at Dawn" and "Toads for Supper" explore traditional institutions, gender roles, and the impact of colonialism on Igbo culture.	Provided insights into the functioning of traditional Igbo institutions and the cultural conflicts brought by colonialism.	Ike's works are important for understanding postcolonial Igbo society.
Emecheta, Buchi	1979, 1974	Igbo Motherhood and Gender	"The Joys of Motherhood" and "Second Class Citizen" explore motherhood, gender roles, and the impact of colonialism on Igbo women.	Highlighted the pressures of traditional expectations and the effects of colonial rule on Igbo women.	Emecheta's novels are key texts in African women's literature.

The literature matrix in **Table 1** explores the development and contributions of Afrofuturism and Igbo culture through various scholarly works. Mark Dery's seminal work coined the term "Afrofuturism," establishing it as a critical framework for understanding the intersection of Black culture and technology, particularly in light of historical erasure [15]. Kodwo Eshun expanded this framework, linking it to political and social activism [16]. Ytasha Womack's comprehensive examination highlighted Afrofuturism's cultural impact across multiple artistic domains [12]. Morris integrated Black feminist perspectives into Afrofuturism [17], while Yaszek provided a contemporary definition of Afrofuturism, emphasizing its role in connecting African diaspora culture with technology [18].

In contrast, the exploration of Igbo culture spans various dimensions. Adiele Afigbo provided a comprehensive analysis of Igbo society [19], while Thurstan Shaw focused on archaeological findings at Igbo-Ukwu [20]. Ugonna and Elizabeth Isichei examined the interplay between colonialism and indigenous resistance, highlighting the resilience of Igbo cultural heritage [21,22]. Literary works by Achebe, Nwapa, Adichie, Ike, and Emecheta depict the rich tapestry of Igbo life, gender roles, and the impact of colonialism, offering both historical insights and contemporary perspectives [8,23–27]. These contributions collectively provide a multifaceted understanding of Afrofuturism and Igbo culture, emphasizing their importance in global and African studies.

3. Method/methodology

The study employed a semi-structured interview approach to collect in-depth qualitative information from informants aged seventy-five (75) years and older, aiming to capture their extensive knowledge and experiences related to Igbo cultural heritage. The semi-structured format allowed for flexibility in the interviews, enabling the researchers to probe deeper into specific topics while ensuring that all

key areas of interest were covered. This method facilitated rich, detailed responses and provided a nuanced understanding of how traditional practices and knowledge could be integrated into modern education. To identify and select participants, the study utilized random sampling techniques. From each of the five states within southeastern Igbo land—Anambra, Enugu, Abia, Imo, and Ebonyi—two informants, one man and one woman, were randomly chosen to ensure gender balance and regional representation. This process involved reaching out to local community leaders and elders to assist in identifying potential informants who met the age criteria.

The research instrument used was a detailed interview guide designed to explore various aspects of Igbo cultural heritage, including traditional culinary practices, medicinal uses of local ingredients, and cultural narratives. The guide featured open-ended questions to elicit comprehensive responses and allowed the interviewers to adapt their questions based on participants' responses. The final sample comprised ten informants, equally divided by gender, ensuring diverse perspectives from both male and female elders. Each participant was interviewed individually, and the sessions were recorded with their consent for accuracy. The interviews were transcribed and analyzed to identify common themes and insights that could inform the integration of Igbo cultural heritage into the primary education curriculum. This rigorous approach ensured that the data collected was both representative and rich in cultural detail, contributing valuable insights into the study's objectives.

4. Results

4.1. Seeds and vegetables and their health benefits

Everything we eat has a particular function in our body. This is the reason for the study of balanced diet in the school. Also, this brings about the slogan, "You are what you eat". Every human being tries to feed well to avoid being ill, however, some factors around us always pose us to suffer one sickness or the other at some point in our lives. The biggest challenge in treating some of these illnesses is getting the original or unadulterated drugs to cure this illness. Igbo culture is so enriched with some vegetables and seeds used for cooking everyday meals which also are highly medicinal. The sad note is that deliberate interest and observation made on these useful plants are poor. The use of traditional medicine has undoubtedly become a fast-growing global phenomenon. **Table 2** underscores the interconnectedness between Afrofuturism and seeds, vegetables, highlighting their potential to promote health, resilience, and cultural empowerment within Black communities.

Medicinal plants are sources of important therapeutic aid for alleviating and managing diseases in the form of traditional medicine. They serve as vaccines and processed drug sources for modern orthodox or certified medicine. Traditional medicine is popular in Nigeria. A reasonable number of people can get basic traditional healthcare services in Nigeria and have access to basic drugs mainly of plant origin. Introducing this in the educational curriculum at the early stage of children's education will not just expose them to the nitty gritty of their culture, but spur them into pondering how to scientifically improve these vegetables and seeds to

fit into modern technology. How to convert these Igbo natural resources to benefit the Igbo people, Africans and the whole world at large. It can also be an avenue for improving the economy of the country. Let us look at these seeds and the vegetables in **Table 3**.

Table 2. Linking Afrofuturism to seeds, vegetables, and health benefits.

Afrofuturism aspect	Link to seeds & vegetables	Health benefits	Implications
Coined term “Afrofuturism” [15]	Emphasizes reclamation of traditional agricultural practices, including seed-saving and vegetable cultivation, as futuristic acts of cultural preservation and sustainability.	Promotes consumption of diverse, nutrient-rich vegetables and seeds, contributing to improved health outcomes and food sovereignty in Black communities.	Encourages the integration of traditional agricultural knowledge with contemporary technological advancements to ensure a sustainable future for Black communities.
Afrofuturism as a program for recovering counter-futures [16]	Advocates for the use of innovative agricultural techniques and technologies to envision alternative food futures that prioritize community well-being and environmental sustainability.	Enhances access to fresh, locally-grown produce, reducing food insecurity and promoting holistic health among Afrofuturist communities.	Suggests the importance of Afrofuturism as a framework for imagining and implementing transformative agricultural practices that address systemic health disparities and promote food justice.
Alignment with Black feminist thought [17]	Centers Black women’s contributions to agriculture and seed stewardship, recognizing their historical role in sustaining communities and advocating for equitable access to resources.	Empowers Black women as agents of change in promoting healthier food systems and challenging patriarchal structures that limit their autonomy and well-being.	Highlights the intersectional nature of food justice and the need for Afrofuturist praxis that prioritizes gender equity and social justice in agricultural development.
Cultural aesthetic exploring diaspora culture [18]	Celebrates the cultural significance of seeds and vegetables as symbols of resilience, renewal, and cultural continuity within African diasporic communities.	Cultivates a sense of cultural identity and belonging through the preservation and revitalization of traditional foodways, strengthening community bonds and promoting mental well-being.	Encourages Afrofuturist artists, activists, and scholars to explore the potential of food as a medium for cultural expression and resistance, fostering solidarity and collective healing through shared culinary experiences.

Table 3. Seeds and the vegetables.







Igbo name	Botanical name	Picture
Ụtazi	<i>Gongronema latifolium</i>	
Ụzịza	<i>Piper guineense</i>	

Table 3. (Continued).

Igbo name	Botanical name	Picture
Udah	<i>Xylopia aethiopica</i>	
Akwu ojukwu	<i>Elaeis guineensis</i>	
Onugbu	<i>Vernonia amygdalina</i>	
Ude aki	Black palm kernel oil	

4.2. Utazi (*Gongronema latifolium*)

It is a leaf universally known in Igbo culture. It is regularly used to prepare nsala soup and pepper soup; however, some people further use to also prepare other soups like egusi, okro and ogbono soup. Furthermore, the health benefit attached to it made extensive use of it to eat roasted yam and plantain mixed with red oil, pepper, salt and ukpaka. More so, it is used to spice up one of the most interesting meals in Igbo culture, abacha (African salad).

Scientific health benefits: Utazi leaves are rich in antioxidants, which help to neutralize harmful free radicals in the body. Compounds found in Utazi leaves have been shown to possess anti-inflammatory properties, which may help alleviate symptoms of inflammatory conditions like arthritis. It is believed to stimulate digestion and alleviate symptoms of indigestion, bloating, and constipation. Some studies suggest that Utazi helps to regulate blood sugar levels. That is, it is thought to achieve this by improving insulin sensitivity and glucose metabolism. Utazi exhibits antimicrobial properties against various pathogens, therefore likely help in fighting

infections and boosting the immune system. It aids in weight management due to its ability to improve digestion and metabolism. Additionally, its low calorie and high fiber content make it a healthy addition to meals for those looking to maintain a healthy weight. It is a good source of vitamins, minerals, and other nutrients, including vitamin C, vitamin A, calcium, iron, and potassium, among others.

Local health benefit: From the interview conducted, there are varied views of the health benefits of this leaf ranging from treating loss of appetite, intestinal worms, stomach ache, to controlling of diabetes, it heals cough and catarrh. It takes care of typhoid and malaria.

Uziza (Piper guineense): *Piper guineense* is a climbing plant native to West Africa, particularly Nigeria, where it is widely used as a culinary spice and traditional medicine. Both the leaves and seeds of the Uziza plant are utilized for various purposes. It is also one of the most cherished food ingredients used in preparing a lot of Igbo culture food. It is used in preparing yam porridge and soups like oha, nsala, ogbono, vegetables and egusi.

General health benefits: It contains bioactive compounds with anti-inflammatory properties. This makes it beneficial for managing conditions such as arthritis and inflammatory bowel diseases. It contains antimicrobial properties, which may help fight against bacteria, viruses, and fungi. It is believed to stimulate digestion, and relieve indigestion, bloating, and stomach upset. It helps to alleviate pain associated with conditions such as headaches, toothaches, and menstrual cramps. It is believed to have aphrodisiac properties, enhancing libido and sexual performance. However, scientific evidence supporting this claim is limited. Uziza leaves and seeds are rich in vitamins, minerals, and antioxidants, including vitamin C, vitamin A, calcium, iron, and magnesium. It also helps to regulate metabolism and promote fat burning, although more research is needed to confirm these effects. Uziza is used to alleviate symptoms of respiratory conditions such as coughs, colds, and bronchitis. Its expectorant properties may help loosen mucus and facilitate easier breathing. Some studies suggest that Uziza may have cardiovascular benefits, including lowering blood pressure and improving heart health. These effects may be attributed to its antioxidant and anti-inflammatory properties.

Local health benefit: Based on the informants, it is often used by nursing mothers, mostly a few months after child delivery to clean up their womb as well as a case of miscarriage. It is also believed to mitigate menstrual cramps.

4.3. Uda (*Xylopiya aethiopica*)

Xylopiya aethiopica is a plant native to West Africa, particularly Nigeria, where it is extensively used in traditional medicine and culinary practices. The plant is also known by various other names including Ethiopian pepper, Guinea pepper, and Negro pepper. Both the fruit and seeds of Uda are utilized for their medicinal properties. It is a pod seed used for preparing a white porridge yam for a newly delivered pregnant woman. Since not everyone likes to eat yam, some use it to prepare chicken, beef or fish pepper soup for the woman.

General health benefits: Uda is commonly used to aid digestion and alleviate digestive issues such as indigestion, bloating, and stomach upset. It possesses

carminative properties, which help to relieve gas and promote the expulsion of intestinal gases. It reduces inflammation in the body and alleviate symptoms associated with inflammatory conditions such as arthritis, rheumatism, and gastrointestinal disorders. It possesses antimicrobial properties, which make it effective against various pathogens including bacteria, fungi, and viruses. It is used traditionally to treat infections, wounds, and other microbial-related ailments. It is known for its analgesic properties and is often used to relieve pain associated with headaches, toothaches, muscle aches, and menstrual cramps. It is rich in antioxidants, and play a crucial role in reducing the risk of chronic diseases such as cancer, cardiovascular disease, and neurodegenerative disorders. Also, it is used traditionally to alleviate respiratory symptoms such as coughs, colds, bronchitis, and asthma. Its expectorant properties may help loosen mucus and facilitate easier breathing. In some traditional medicine practices, Uda is used to regulate menstrual cycles and alleviate menstrual irregularities. It may help balance hormonal levels and reduce symptoms associated with menstruation. Uda is believed to have aphrodisiac properties and is used to enhance libido and sexual performance in some cultures. It may also support fertility and reproductive health.

Local health benefit(s): the informants are all of the opinions that the use of uda is the most effective means of cleaning the womb after child delivery. Someone opines that it is used for treating infections like gonorrhea and syphilis.

4.4. Akwu ojukwu (*Elaeisguineensis*)

Elaeisguineensis is a particular species of African palm fruit. It is widely cultivated for its fruit, which yields palm oil, a staple ingredient in various cuisines and industries. While palm oil itself is primarily known for its culinary uses, it also offers several potential health benefits when consumed in moderation. Akwu also is one of the richest farms produces of the Igbo people. No family in Igbo land do not have a palm tree. We have various types of akwu: akwu osukwu, akwu okporoko and akwu ojukwu. One general feature they all have is that we generate red oil and other produce from them all. However, our focus is on akwu ojukwu.

General health benefits: It contains tocotrienols and tocopherols, which are forms of vitamin E and potent antioxidants. Despite some controversy surrounding palm oil's impact on heart health due to its saturated fat content, research suggests that when consumed as part of a balanced diet, palm oil may not significantly raise cholesterol levels or increase the risk of cardiovascular disease. Some studies even indicate that palm oil's unique fatty acid composition, particularly its high levels of oleic acid, may have beneficial effects on cholesterol levels and overall heart health. The presence of vitamin E, vitamin K, and beta-carotene play essential roles in maintaining healthy skin, vision, blood clotting, and immune function. As a calorie-dense food rich in healthy fats, making it an excellent source of energy for individuals with high energy needs, such as athletes or those engaged in physically demanding work.

Local health benefit(s): It is believed to be anti-poison, though not long-term poison. It is also used to heal swollen legs (Ule okpa).

4.5. Onugbo (*Vernonia amygdalina*)

Vernonia amygdalina is a green leafy vegetable known for its bitter taste. Mostly in Anambra state, one among the five Igbo states, no Igbo cultural occasion takes place without preparing onugbu soup. This shows the extent of regard given to this leaf. Despite its bitter taste, it is highly valued for its numerous health benefits.

Scientific health benefits: Onugbo contains essential nutrients such as vitamins A, C, and K, as well as minerals like calcium, potassium, magnesium, and iron. These nutrients are vital for overall health and well-being. The presence of potent antioxidants like flavonoids, polyphenols, and vitamins help to neutralize harmful free radicals in the body which may cause chronic diseases such as cancer, heart disease, and diabetes. The vitamins and minerals found in Onugbo, particularly vitamin C, can help strengthen the immune system, making the body more resistant to infections and diseases. Onugbo is believed to have digestive benefits due to its bitter taste because bitter foods stimulate the production of digestive enzymes and bile, which aids in digestion. It helps to regulate blood sugar levels, which is beneficial for individuals with diabetes or those at risk of developing the condition. Traditionally, it has been used in African herbal medicine to support liver health. It is believed to have detoxifying properties that help rid the body of toxins and promote liver function. Finally, due to its low calorie and high fiber content, it helps to promote feelings of fullness and reduce calorie intake, thereby potentially aids in weight loss.

Local health benefit(s): It is used for treating stomach-related illnesses. It is also used to cure malaria and typhoid, though in the mixture of Utazi.

4.6. Ude Aki (*Black palm kernel oil*)

Black palm kernel oil is an edible oil derived from the palm tree. It is rich in nutrients, and antioxidants, and has been used for centuries in African traditional medicine. Ude Aki is a nutrient-dense oil that can be a great addition to a healthy diet and lifestyle. It is an oil generated from the palm nut. The process for this oil is somehow rigorous. For instance, first of all, the palm nut has to be plucked from the tree. To avoid waste, it goes through the process of producing red oil from the palm nut. Furthermore, the nuts will be smashed, after which the seed of the nuts will be separated from the shell, roast the seed and then cold press the oil out from the seed.

Scientific health benefits: include improving heart health, boosting the immune system, and promoting healthy skin and hair. Black palm kernel oil is also a great source of vitamin E, which is essential for maintaining healthy skin and preventing premature ageing.

Local health benefits: It has been shown to have anti-inflammatory properties, which may help reduce inflammation in the body. It is used for the treatment of convulsions. It douses high fever.

5. Discussion

The integration of Afro-futurism and Igbo cultural heritage in elementary education provides a powerful framework for exploring traditional knowledge through a futuristic lens. Afro-futurism, a cultural aesthetic that blends African

history with futuristic concepts, offers a unique opportunity to reclaim and reimagine African traditions within contemporary contexts [28]. This aligns with the goals of Igbo cultural education, which seeks to preserve and transmit indigenous knowledge to younger generations [29]. By incorporating Afro-futurism into the elementary curriculum, educators can create a bridge between the past, present, and future, offering students a comprehensive understanding of their cultural heritage while inspiring innovative thinking [12].

In contrast to conventional educational approaches that often marginalize indigenous knowledge, Afro-futurism emphasizes the reclamation and integration of traditional practices as acts of cultural preservation and sustainability [30]. Love, [31] argue that Afro-futurism celebrates the resilience and renewal within African diasporic communities, which parallels the importance of preserving traditional Igbo practices like seed-saving and vegetable cultivation. These practices are not only vital for cultural continuity but also contribute to food sovereignty and improved health outcomes within Black communities [6]. Jernigan et al., [32] highlights the role of Afro-futurism in envisioning alternative futures that prioritize community well-being and environmental sustainability, further supporting the integration of traditional agricultural knowledge into modern educational practices.

The exploration of Igbo cultural heritage through Afro-futurism also aligns with the intersectional nature of food justice. Carter [3] emphasizes the contributions of Black women to agriculture and seed stewardship, which are crucial in ensuring food security. In elementary education, this could translate into recognizing the role of women in sustaining communities and advocating for equitable access to resources [33]. By centering the contributions of Black women in the curriculum, educators can empower students to see themselves as agents of change, promoting healthier food systems and challenging patriarchal structures that limit autonomy [13].

Moreover, introducing Igbo traditional vegetables and seeds into the curriculum can serve as a practical application of these concepts. For instance, the medicinal properties of plants like Utazi (*Gongronema latifolium*) and Uziza (*Piper guineense*) offer tangible examples of how traditional knowledge can contribute to modern health practices [2]. In contrast, conventional education often overlooks such indigenous resources, limiting students' exposure to their cultural and health benefits. This approach to education not only preserves cultural knowledge but also fosters a sense of identity and belonging among students [34]. Dost and Mazzoli [5] argue that Afro-futurism allows for the integration of traditional knowledge with contemporary technological advancements, ensuring a sustainable future for Black communities. By embedding these practices in elementary education, students are encouraged to think critically about their cultural heritage and its relevance in today's world.

The study of seeds and vegetables, particularly within the context of Igbo culture, reveals their significant role in both nutrition and traditional medicine [35]. Igbo culture is rich in the use of medicinal plants, which are integral to daily meals and have profound health benefits [6]. This section explores how these natural resources can be utilized to enhance health and well-being, emphasizing their importance in education. In contrast to the growing global reliance on pharmaceutical drugs, traditional Igbo medicine offers a sustainable alternative

through the use of locally available plants [13]. For instance, the widespread use of Utazi (*Gongronema latifolium*) in Igbo culture highlights its multifaceted health benefits, including its antioxidant, anti-inflammatory, and digestive properties. These benefits align with the global trend towards natural remedies, yet, as noted by informants, there remains a lack of deliberate interest in these plants [5,36]. Recent studies have emphasized the potential of integrating traditional medicinal knowledge into modern health practices [7, 14], a concept that is echoed in the growing global acceptance of traditional medicine [37].

The medicinal properties of these plants are not just theoretical; they are supported by both scientific and local evidence [4]. For example, Uziza (*Piper guineense*) is widely recognized for its antimicrobial and anti-inflammatory properties, making it a valuable resource in managing conditions like arthritis and digestive disorders [10]. Similarly, Uda (*Xylopiya aethiopica*) is noted for its analgesic and antioxidant properties, which contribute to its effectiveness in traditional medicine [11]. This finding agrees with recent studies that emphasize the role of plant-based diets in promoting health and preventing chronic diseases [38]. In contrast to the processed and often adulterated foods found in modern diets, these traditional vegetables offer a natural and nutrient-rich alternative. For instance, Akwu ojukwu (*Elaeis guineensis*), despite controversies surrounding palm oil, is a rich source of vitamin E and other nutrients when consumed in moderation [9]. Similarly, Onugbo (*Vernonia amygdalina*) is valued for its immune-boosting and digestive benefits, while Ude Aki (*Black palm kernel oil*) is recognized for its anti-inflammatory and heart health benefits [39,40].

Integrating the teaching of these vegetables and seeds into the educational curriculum from an early stage can have far-reaching implications [41]. It can enhance students' understanding of their cultural heritage, promote healthier dietary habits, and encourage the scientific exploration of traditional knowledge [1]. In contrast to the conventional focus on western dietary practices, this approach recognizes the value of indigenous knowledge and its potential to contribute to global health initiatives [42].

5.1. The importance of including the teaching of these vegetables and seeds in the curriculum starting from primary education

Integrating the teaching of indigenous vegetables and seeds like onugbu, udah, utazi, uziza, akwu ojukwu, and ude aki, among others into the primary education curriculum holds several benefits:

Increased awareness: By incorporating indigenous vegetables and seeds into the curriculum, children are exposed to the rich cultural and medicinal significance of these plants. This exposure not only helps them understand the traditional uses and healing properties of these indigenous resources but also fosters a sense of appreciation for their heritage. Furthermore, this early exposure can ignite a sense of curiosity and interest in scientific research among students, encouraging them to explore the potential of these resources in greater depth.

Ethnobotanical studies: Integrating indigenous vegetables into the curriculum can provide valuable opportunities for ethnobotanical studies. This approach can

inspire research projects focusing on ethnobotany, which involves examining the traditional knowledge and uses of plants by different cultures. Through this lens, students can delve into the medicinal properties of these vegetables, identify bioactive compounds, and explore their potential therapeutic applications. This hands-on exploration can foster a deeper understanding of the cultural and scientific significance of indigenous plants and their potential contributions to modern medicine.

Collaborative research: Schools have a unique opportunity to establish close partnerships with local communities, traditional healers, and research institutions to conduct in-depth research on indigenous vegetables. By taking a collaborative approach, schools can facilitate the sharing of knowledge between traditional and scientific communities, leading to a deeper understanding of the therapeutic properties and cultural significance of these plants. This collaborative effort not only promotes the exchange of valuable information but also fosters a sense of mutual respect and appreciation for traditional knowledge and practices.

Herbal medicine research: Integrating indigenous vegetables into educational curricula is crucial for advancing herbal medicine research. By incorporating these plants into academic programs, we can provide a platform for scientists to conduct in-depth studies on the efficacy, safety, and optimal dosage of herbal medicine formulations derived from these indigenous vegetables. This research can lead to a better understanding of how these plants can be used to treat various health conditions. Furthermore, such integration may offer valuable insights into potential treatments for organ damage caused by the misuse or overdose of pharmaceutical drugs.

Toxicological studies: Investigating the safety profiles of indigenous vegetables and seeds through toxicological studies is crucial for understanding their potential side effects and interactions with medications. By delving into the risks associated with improper usage or overdose, we can work towards mitigating health hazards and promoting safe consumption practices. This research will be essential for ensuring the well-being of individuals who consume these indigenous vegetables and seeds.

Pharmacological studies: Research into the pharmacological mechanisms of action of bioactive compounds found in indigenous vegetables is a crucial area of study. Understanding how these compounds exert their therapeutic effects on specific organs and biological systems can provide valuable insights into developing evidence-based treatments. This research has the potential to significantly impact healthcare and overall well-being by contributing to the development of new and effective treatments.

Public health initiatives: The scientific research on indigenous vegetables yields valuable insights that can be leveraged to shape public health initiatives promoting their safe utilization. Educational campaigns play a crucial role in raising awareness about best practices related to dosage, preparation methods, and potential contraindications. By disseminating this information, the risk of organ damage and adverse health outcomes associated with their consumption can be significantly reduced.

Cultural sensitivity: Integrating indigenous knowledge into scientific research is

a crucial step towards fostering cultural sensitivity and respect for traditional healing practices. By recognizing the deep wisdom and insights of indigenous communities, researchers can form more meaningful and ethical collaborations. This approach ensures that studies not only benefit local populations but also contribute to the advancement of scientific knowledge on a global scale.

Economic empowerment: Incorporating indigenous crops into the curriculum is a promising way to promote economic empowerment. Students can gain knowledge about the different crops that grow in their local area and the opportunities associated with them. This knowledge could empower communities, especially those in rural areas, to capitalize on local resources for economic development. For instance, students could learn about the various techniques for farming, processing, and marketing these crops, which could create jobs and generate income for the community. Furthermore, promoting the cultivation of indigenous crops could reduce dependence on imported goods, resulting in savings and boosting the local economy. By integrating indigenous crops into the curriculum, students can develop a deeper understanding of their local environment and the economic potential that lies within it.

5.2. Limitations of the study

- 1) **Geographical and cultural specificity:** The research primarily centers on Igbo culture and Nigerian contexts, which may limit its applicability to other African cultures and diasporas. This focus might not capture the diverse manifestations of Afrofuturism and African futurism across different regions.
- 2) **Educational implementation:** The study's practical implementation in elementary education may be constrained by the varying educational standards, curriculums, and resources available in different schools.
- 3) **Data collection methods:** Depending on the methods used (e.g., interviews, surveys, observations), there may be biases or limitations in the data collected. For example, if interviews were conducted, the responses might be influenced by the participants' willingness to share openly or the interviewer's biases.
- 4) **Temporal constraints:** Given that the study explores a relatively new area, the findings may be limited by the current state of research and understanding in the fields of Afrofuturism, African futurism, and Igbo cultural heritage.
- 5) **Participant diversity:** The study's findings might be limited by the diversity of the participants involved. If the sample was not representative of the broader population, the conclusions might not be universally applicable.

5.3. Recommendations for future research

- 1) **Expand cultural contexts:** Future research should explore Afrofuturism and African futurism in the context of other African cultures and diasporas. This would provide a more comprehensive understanding of how these movements manifest across different regions and communities.
- 2) **Longitudinal studies:** Implement longitudinal studies to assess the long-term impact of integrating Afrofuturism and Igbo cultural heritage into elementary education. This would help in understanding the sustained effects on students'

cultural identity, creativity, and academic performance.

- 3) Comparative studies: Conduct comparative studies between schools that have implemented these cultural elements and those that have not. This would highlight the differences in educational outcomes and the potential benefits of such curricular additions.
- 4) Development of educational materials: Research should focus on developing and testing specific educational materials and teaching methods that effectively incorporate Afrofuturism and Igbo cultural heritage. This would provide practical tools for educators to use in their classrooms.
- 5) Teacher training and development: Investigate the best practices for training teachers to effectively integrate these cultural elements into their teaching. Understanding the support and resources teachers need will be crucial for successful implementation.
- 6) Policy and curriculum development: Advocate for policy changes and curriculum development at regional and national levels to support the integration of Afrofuturism and African cultural heritage into mainstream education. This would institutionalize the efforts and ensure broader reach and impact.

6. Conclusion

Lately, there has been a surge of scholarly interest in Afrofuturism/African futurism concerning cultural and artistic movements. These movements explore themes of African identity, history, and potential futures. Afrofuturism is a creative blend of science fiction, fantasy, and African diasporic culture. This movement is often traced back to the works of artists such as Sun Ra and Octavia Butler. Its primary aim is to imagine alternative realities where Black people are central to narratives of progress and innovation. By doing so, Afrofuturism seeks to reframe narratives of African identity, envisioning futures that celebrate and empower diverse African cultures and traditions. On the other hand, African futurism is a similar movement that focuses more specifically on imagining futures rooted in African cultures and traditions. It emphasizes the diverse perspectives and experiences across the continent. By exploring these potential futures, African futurism encourages critical thinking and creativity, inspiring social change and contributing to a more inclusive and culturally rich society.

In the context of Nigerian culture, particularly the Igbo people, Afrofuturism and African futurism intersect with the rich history and traditions of this ethnic group. The Igbo people have a vibrant cultural heritage, characterized by their language, beliefs, art, and cuisine. For instance, indigenous vegetables and seeds like onugbu, uziza, utazi, akwu ojukwu, udah, and ude aki have significant cultural and nutritional value within Igbo cuisine and traditional medicine practices. Incorporating the study of these floras into the academic curriculum aligns with the promotion of African culture, specifically Igbo culture, within educational settings. By including indigenous vegetables and seeds in the curriculum, students gain knowledge about their cultural heritage, which also spurs them to practice skills related to agriculture, nutrition, health, and sustainability. Furthermore, integrating

these elements into education fosters a sense of pride and connection to one's cultural roots, promoting cultural preservation and identity affirmation among younger generations.

The findings of this study contribute to new knowledge by demonstrating how Afro-futurism can be effectively integrated into elementary education to enrich students' understanding of Igbo cultural heritage. By merging futuristic narratives with traditional cultural elements, the study highlights innovative ways to make cultural education relevant and engaging for young learners. This approach not only preserves cultural heritage but also empowers students to envision their future within the context of their rich cultural past. The study also advances the field of culturally responsive pedagogy by showing how it can be adapted to include Afro-futurist principles, offering a fresh perspective on how to tailor education to diverse cultural backgrounds. These findings provide educators and curriculum developers with practical strategies for incorporating Afro-futurism into educational settings, ultimately contributing to a more inclusive and culturally aware educational landscape.

The implications for further research are profound. Future studies could explore the long-term impacts of integrating Afro-futurism and Igbo cultural heritage on students' academic performance, cultural identity, and creative thinking. Comparative studies across different cultural contexts could also provide insights into how such integrative curricula can be adapted globally, enriching multicultural education. For educational practice, this research suggests the need for curriculum developers to consider culturally responsive pedagogy that incorporates indigenous knowledge systems and futuristic perspectives. Educators could benefit from professional development programs focused on these themes, enhancing their ability to deliver inclusive and culturally relevant education. Additionally, this study encourages the creation of teaching materials and resources that reflect diverse cultural narratives, ultimately fostering an educational environment that celebrates diversity, promotes equity, and prepares students for a globalized world.

Conflict of interest: The author declares no conflict of interest.

References

1. Ladson-Billings G. *Culturally relevant pedagogy: Asking a different question*. Teachers College Press; 2021.
2. Chukwu E, Dogbe W. The cause and effect of the nutrition transition in Nigeria: analysis of the value of indigenous knowledge and traditional foods in Enugu State, Igboland. *Journal of Ethnic Foods*. 2023; 10(1). doi: 10.1186/s42779-023-00198-z
3. Carter A. *Sowing Seeds of Sovereignty: A Qualitative Exploration of Chapter Leader Experiences Who Belong to an African, Caribbean, and Black Women's Agriculture Advocacy Collective*. *Journal of Racial and Ethnic Health Disparities*. Published online September 5, 2023. doi: 10.1007/s40615-023-01777-1
4. Dean M. *Exploring Ethnobotanical Knowledge: Qualitative Insights into the Therapeutic Potential of Medicinal Plants*. *Golden Ratio of Data in Summary*. 2024; 4(2): 06-18. doi: 10.52970/grdis.v4i2.491
5. Dost G, Mazzoli Smith L. Understanding higher education students' sense of belonging: a qualitative meta-ethnographic analysis. *Journal of Further and Higher Education*. 2023; 47(6): 822-849. doi: 10.1080/0309877x.2023.2191176
6. Gutierrez BV, Kaloostian D, Redvers N. Elements of Successful Food Sovereignty Interventions within Indigenous Communities in the United States and Canada: A Systematic Review. *Current Developments in Nutrition*. 2023; 7(9): 101973. doi: 10.1016/j.cdnut.2023.101973

7. Ikhoyameh M, Okete WE, Ogboye RM, et al. Integrating traditional medicine into the African healthcare system post-Traditional Medicine Global Summit: challenges and recommendations. *The Pan African Medical Journal*. 2024; 47. doi: 10.11604/pamj.2024.47.146.43011
8. Achebe C. *Things Fall Apart*. Penguin Books; 1958.
9. Alagbe OA, Alagbe GO, Adekunle EA, et al. Ethnomedicinal Uses and Therapeutic Activities of Piper Guineense: A Review. *Journal of Applied Sciences and Environmental Management*. 2021; 25(6): 927-937. doi: 10.4314/jasem.v25i6.6
10. Mgbeahuruike EG. Evaluation of the Medicinal Uses and Antimicrobial Activity of Piper guineense [PhD thesis]. University of Helsinki; 2019.
11. Ojinnaka MC, Odimegwu EN, Chidiebere FE. (2016). Comparative Study on the Nutrient and Antinutrient Composition of the Seeds and Leaves of Uziza (Piper Guineense). *IOSR Journal of Environmental Science, Toxicology and Food Technology*. 2016; 10(08): 42-48. doi: 10.9790/2402-1008014248
12. Womack Y. *Afrofuturism: The world of black sci-fi and fantasy culture*. Lawrence Hill Books; 2013.
13. Bryan E, Alvi M, Huyer S, et al. Addressing gender inequalities and strengthening women's agency to create more climate-resilient and sustainable food systems. *Global Food Security*. 2024; 40: 100731. doi: 10.1016/j.gfs.2023.100731
14. Amabie T, Izah SC, Ogwu MC, et al. Harmonizing Tradition and Technology: The Synergy of Artificial Intelligence in Traditional Medicine. In: *Herbal Medicine Phytochemistry*. Springer International Publishing; 2024. pp. 2103-2125.
15. Dery, M. *Flame wars: the discourse of cyberculture*. Duke University Press; 1994.
16. Eshun K. Further Considerations of Afrofuturism. *CR: The New Centennial Review*. 2003; 3(2): 287-302. doi: 10.1353/ncr.2003.0021
17. Morris SM. Black Girls Are from the Future: Afrofuturist Feminism in Octavia E. Butler's *Fledgling*. *WSQ: Women's Studies Quarterly*. 2012; 40(3-4): 146-166. doi: 10.1353/wsq.2013.0034
18. Yaszek L. Afrofuturism, science fiction, and the history of the future. *Socialism and Democracy*. 2006; 20(3): 41-60. doi: 10.1080/08854300600950236
19. Afigbo. *The Igbo People: Their Origin and Culture Area*. Ethiope Publishing Corporation; 1972.
20. Shaw T. *Igbo-ukwu: An Account of Archaeological Discoveries in Eastern Nigeria*. Oxford University Press; 1977.
21. Isichei E. *The Igbo and Their Neighbours: Inter-group Relations in Southeastern Nigeria to 1953*. University Press; 1983.
22. Ugonna, N. *The Igbo-Igala Borderland: Religion and Social Control in Indigenous African Colonialism*. University of California Press; 2005.
23. Adichie CN. *Purple Hibiscus*. Algonquin Books; 2003.
24. Emecheta B. *Second Class Citizen*. George Braziller Inc; 1974.
25. Ike C. *Toads for Supper*. Toads for Supper; 1965.
26. Ike C. *Sunset at Dawn*. University Press, Nigeria; 1976.
27. Nwapa F. *Efuru*. Waveland Press, Inc; 1966.
28. Wallace C. Why "Black Panther" is a defining moment for Black America. *The New York Times*. 2018.
29. Sions H. Teaching about racially diverse artists and cultures [PhD thesis]. Virginia Commonwealth University; 2019.
30. Winchester WWIII. Black Panther, engineering, and Afrofuturism. Available online: <https://www.aaihs.org/black-panther-engineering-and-afrofuturism/> (accessed on 2 June 2023).
31. Love B. We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom. Beacon Press; 2019.
32. Jernigan VBB, Taniguchi T, Nguyen CJ, et al. Food Systems, Food Sovereignty, and Health: Conference Shares Linkages to Support Indigenous Community Health. *Health Promotion Practice*. 2023; 24(6): 1109-1116. doi: 10.1177/15248399231190360
33. Suarez-Balcazar Y, Balcazar F, Miranda DE, et al. Promoting justice through community-based research: International case studies. *American Journal of Community Psychology*. 2022; 69(3-4): 318-330. doi: 10.1002/ajcp.12584
34. Fong CJ, Owens SL, Segovia J, et al. Indigenous cultural development and academic achievement of tribal community college students: Mediating roles of sense of belonging and support for student success. *Journal of Diversity in Higher Education*. 2021.
35. Vázquez-Villegas P, Ruiz-Cantisani MI, Caratozzolo P, et al. Preserving World Cultural Heritage: Social Justice and Sustainability Competencies via Socially-Oriented Interdisciplinary Education. *Journal of Teacher Education for Sustainability*. 2022; 24(1): 49-72. doi: 10.2478/jtes-2022-0005
36. Ani O, Omenyi S, Achebe C. The Effects of Antiretroviral Drugs on the Absorbance Characteristics of HIV-Infected Blood.

- Journal of Biomedical Science and Engineering. 2015;8(09):571.
37. Oladunjoye IO, Tajudeen YA, Oladipo HJ, et al. Planetary Health and Traditional Medicine: A Potential Synergistic Approach to Tackle Antimicrobial Resistance. *Challenges*. 2022; 13(1): 24. doi: 10.3390/challe13010024
 38. Mbah CA, Anibeze CIP, Ndukwe GU, et al. Effects of Ethanolic Leaf Extract of Piper Guineense (Uziza) On the Liver of Paraquat Induced Adult Male Wistar Rats. *Japan Journal of Clinical & Medical Research*. 2022.
 39. Mahmud TMM. A review: medicinal values, agronomic practices and postharvest handlings of *Vernonia amygdalina*. *Food Research*. 2019; 3(5): 380-390.
 40. Ikotun AA, Awosika OO, Oladipo MA. The African black soap from *Elaeis guineensis* (Palm kernel oil) and *Theobroma cacao* (Cocoa) and its transition metal complexes. *African Journal of Biotechnology*. 2017; 16(18): 1042-1047. doi: 10.5897/ajb2015.14975
 41. Ługowska A. (2014). The art and craft divide—on the exigency of margins. *Art Inquiry. Recherches Sur Les Arts*. 2014; 16: 285-296.
 42. López V, Pereira A, Rao SS. Baltimore Uprising: Empowering Pedagogy for Change. *Art Education*. 2017; 70(4): 33-37. doi: 10.1080/00043125.2017.1317555