Use of Interactive Radio Instructional Broadcast for Primary School Pupils in Lagos State

Dipo-Adedoyin Olubunmi Felicia
Department of Mass Communication, Lagos State University of Science& Technology Ikorodu, Lagos, Nigeria
Email: dipoadedoyin.@lasustech.edu.ng

Abstract

This study examines the use of Interactive Radio Instruction Broadcast (IRIB) as a tool for enhancing primary education in Lagos State, Nigeria. Amid challenges such as overcrowded classrooms, inadequate teaching personnel, and disruptions to traditional learning systems, especially during crises like the Covid-19 pandemic, radio has re-emerged as a viable medium for delivering education to hard-to-reach and underserved populations. This research investigates the accessibility, content quality, learner engagement, and educational outcomes associated with IRI among primary school pupils in Lagos State. The paper is a conceptual paper that utilises secondary data from the existing literature like scholarly books, journal articles, internet materials and media publications. The paper employs the Pedagogical Content Knowledge (PCK). This theory is relevant to this study as it charts a framework to understand how teachers can effectively integrate subject knowledge with appropriate instructional strategies when using Interactive Radio Instruction (IRI) for primary school pupils in Lagos State. The paper argued that while IRI holds significant promise in promoting foundational literacy and numeracy skills, its impact is moderated by factors such as fund, parental support, broadcast duration, electricity supply and poor signals. The paper concludes that the use of Interactive Radio Instructional Broadcast (IRIB) has proven to be a valuable educational tool for reaching primary school pupils in Lagos State, particularly in contexts where access to conventional classroom learning is limited. This paper underscores the potential of radio as a cost-effective, scalable, and inclusive medium for delivering foundational education, especially in underserved and low-resource communities.

I. Introduction

Broadcasting, a powerful medium of mass communication, has long been recognized for its potential to reach a large and heterogeneous audience simultaneously (Okeke et al., 2021). It serves as a vital instrument in spreading information, influencing public opinion, and entertaining listeners. However, beyond these conventional roles, broadcasting has also demonstrated its effectiveness as a veritable tool in education. In congruence with this viewpoint, Olumorin et al., (2018) observed that the accessibility and reach of broadcasting enables it to deliver educational content to learners in various locations, irrespective of their socio-economic background. This makes broadcasting a valuable resource in enhancing educational equity, especially in regions with limited access to formal education. The connection between radio and education in Nigeria dates back to 1933,

when radio broadcasting first began. The British Broadcasting Corporation (BBC), through its West African Overseas Service, aired formal educational programmes via radio. Adelabu et al (2017), confirmed this in their summation "ensuring learning and adult literacy were parts of the missions of the colonial masters at the inception of broadcasting in Nigeria". British Broadcasting Corporation's (BBC) programmes dominated the airwaves at the inception of radio broadcasting in Nigeria.

Radio has proven to be medium for learning due to its affordability, portability, and ability to reach remote and underserved areas (Okeke et al., 2021). Supporting this assertion, Sanusi (2021) posits that educational radio programmes can be tailored to suit different age groups and learning needs as it can be a proper tool to provide instructions in various subjects, reinforce classroom learning, and even offer vocational training. In the view of Okeke, (2021), radio in Nigeria has long been recognized as a potent tool for education, particularly in reaching remote and underserved communities where access to formal schooling may be limited. The utilization of radio for educational purposes in Nigeria has been multidimensional, including various initiatives and programmes aimed at both formal and informal education. Radio has served as a platform for broadcasting formal educational programmes aimed at primary, secondary, and even tertiary levels of education. These programmes according to Okeke, are often structured to align with the national curriculum, covering subjects such as mathematics, science, language arts, and social studies. Educational radio broadcasts typically feature experienced instructors delivering lessons in an engaging and accessible manner, supplemented by audiovisual aids where possible.

Bhaskar and Sukmaya (2017) posit that radio plays a pivotal role in the field of education in general, and distance education in particular both in developed and developing countries of the world. Both countries have benefitted greatly from the use of radio in the field of education. Ijeh (2023) recalled how the late Obafemi Awolowo led Western Nigerian Regional Government in 1959 conceived the idea of the Western Nigeria Television (WNTV) for the purpose of formal education in the region. During this period, the regional ministry of education through its broadcasting unit was adequately equipped with facilities to produce series of educational broadcasts. It was a laudable effort that set the pace for other regional governments as they quickly bought into the idea, consequently leading to the creation of both radio and television stations by all the regional governments. He added that in the 60s and 70s, Nigerian Broadcasting Service (now Radio Nigeria) created and transmitted classroom subjects as educational packages to teach some of the conventional school subjects in the arts and sciences.

Ijeh (2015) described educational broadcasting as the exploration of the dynamics of the broadcast media of radio and television to promote the effectiveness of education. He explains education as the process whereby the environment of an individual is deliberately managed to enable him learn something that will make him able to give out or engage in specific behaviors under specific conditions. In the process of giving education, building knowledge of facts, relations, rules and principles of one kind or another into the mind of the learner take place. Edwards and Helvie-Mason (2010), defined educational broadcasting as the process by which educators and learners stimulate meanings in their minds mutually, using verbal and non-verbal messages transmitted by radio and television to impact the learning environment in order to facilitate learning. Educational broadcasting is a concerted effort made to apply the philosophy and rudiments of broadcasting to enhance teaching and learning. This agrees with the understanding of education as a deliberate activity. It is possible to learn from any broadcast programme even though that

programme may not be classified as educational, but a broadcast that is initiated, planned, and produced in line with educational criteria will achieve educational objectives more than a normal broadcast programme.

By and large, educational broadcasting is not strange to the Nigerian society; it is one of the gains of the colonial government to the Nigerian people. Thus, educational broadcasting has contributed immensely to the development of education in Nigeria. In his submission on what radio and television can do for education, Onabajo (2005) avers that radio and television are the most powerful means of education man has ever developed. He added that there is a general acceptance to the fact that they can make a profoundly significant contribution to an improved quality of education for children, youths and adults. Obiora and Okika (2023) assert that the National Educational Research and Development in Nigeria aims to ensure equal opportunities for all Nigerians at the basic, secondary, and tertiary education levels, both within and outside the formal school system.

Instructional media according to Asemah cited in Ogbole (2019, p. 20) is a ''field involved in facilitating human learning through systematic identification, development, organization and utilization of a full range of learning resources and through the management of these resources.'' He emphasized that the reference to resources here among other things is the use of the radio broadcast which is known to bring messages and lessons to learners through audio spectrum. Instructional media has also been likened to instructional programming through which educative materials are passed across in broadcast messages to students and other learners with the aim of enhancing their learning outcomes. Such programming is often employed either in a classroom setting or outside the classroom in various formats to drive home the point being illustrated by the teacher.

Olakulehin (2016) posits that instructional radio involves using audio technology to provide educational opportunities for students. He reiterated how the use of instructional radio had been found to be very appropriate in such settings where the education system is not very strong, qualified lecturers are scarce, and instructional materials have to be provided on a large scale. Instructional radio programmes have been used to supplement and enrich traditional ways of education. It is an innovative teaching method that allow learners to effectively engage with educational content through various interactive elements such as phone-in, short messaging services (SMS) and online radio platforms among others (World Bank 2018).

Sadiman et al cited in Diah (2018) avers that radio ''is the instructional media that uses listening skill. The idea from this media is showed in verbal and non-verbal''. Based on the ground conceptualization of audio instructional media, it is safe to say that radio is the main source of this form of media. Radio has been said to be a very effective means of passing across educative messages. This comes from its ability to cover distance with electromagnetic spectrum as well as the fact that it is relatively affordable and available to students despite their economic status. Furthermore, the fact that most radio sets do not necessarily need electricity makes it so much desirable to use in furthering educational agenda. The effectiveness of radio in education comes from the fact that it can serve the purpose of both formal and informal education. Its affordability makes it even more appealing. Similarly, radio is reliable in any part of the world and in any climate condition. This is why it is regarded as a miniature transistor device that steps down signals to audiences in far and near places. The potency of radio in education is seen from the fact that it has been employed within a wide variety of instructional design contexts. In some cases, it is supported by the use of printed material, by local discussion group, and by regional study centres. It is sometimes so designed to permit and encourage listeners'

reaction and comments. Evaluations are also carried out with the feedbacks received (Olalekan, 2022).

1.1 Objectives of the Paper

1. To examine the historical antecedent of educational broadcasting
2. To interrogate radio broadcasting and education in Nigeria

II. Review of Literatures

2.1 Theoretical Framework

The study is anchored on Pedagogical Content Knowledge (PCK). Pedagogical Content Knowledge (PCK) is a theory in the field of education that seeks to integrate both content knowledge and pedagogical knowledge to improve teaching effectiveness (Rollnick & Mavhunga, 2017). It emphasizes that effective teaching requires not only a deep understanding of the subject matter but also the ability to convey that knowledge in ways that are accessible, engaging, and meaningful to students. The development of Pedagogical Content Knowledge (PCK) can be traced to the efforts of Dr. Lee Shulman in 1986, who introduced the concept as part of his work on teachers' knowledge. Shulman recognized that effective teaching requires more than just knowing the content or having general pedagogical skills. He proposed that teachers need to combine their deep understanding of the subject matter (content knowledge) with pedagogical knowledge (how to teach) to be most effective in the classroom (Cam & Erdamar, 2021).

Pedagogical Content Knowledge (PCK) is a theory that is based on two major domains: Content Knowledge (CK) and Pedagogical Knowledge (PK). The theory suggests that for effective teaching, educators must not only possess deep knowledge of the subject matter (CK) but also understand the best ways to teach it, which involves methods, strategies, and techniques tailored to students' needs (PK) (Sarkar et al., 2024). Content Knowledge (CK) refers to a teacher's mastery of a specific subject and its fundamental concepts. It encompasses a deep understanding of the discipline, including its principles, theories, and structures. A teacher with strong content knowledge can present information accurately, make connections between different topics, and clarify misconceptions (Maiwada et al., 2025). This knowledge forms the foundation of effective teaching, ensuring that students gain a comprehensive understanding of the subject matter.

Pedagogical Knowledge (PK), on the other hand, involves the ability to effectively deliver content using appropriate teaching strategies. It includes expertise in lesson planning, classroom management, student engagement techniques, and assessment methods. A teacher with strong pedagogical knowledge can adapt instruction to suit diverse learning styles, create an interactive learning environment, and use effective questioning techniques to promote critical thinking. This intersection of content and pedagogy forms PCK, which allows teachers to effectively communicate complex concepts in ways that are accessible and engaging for their students.
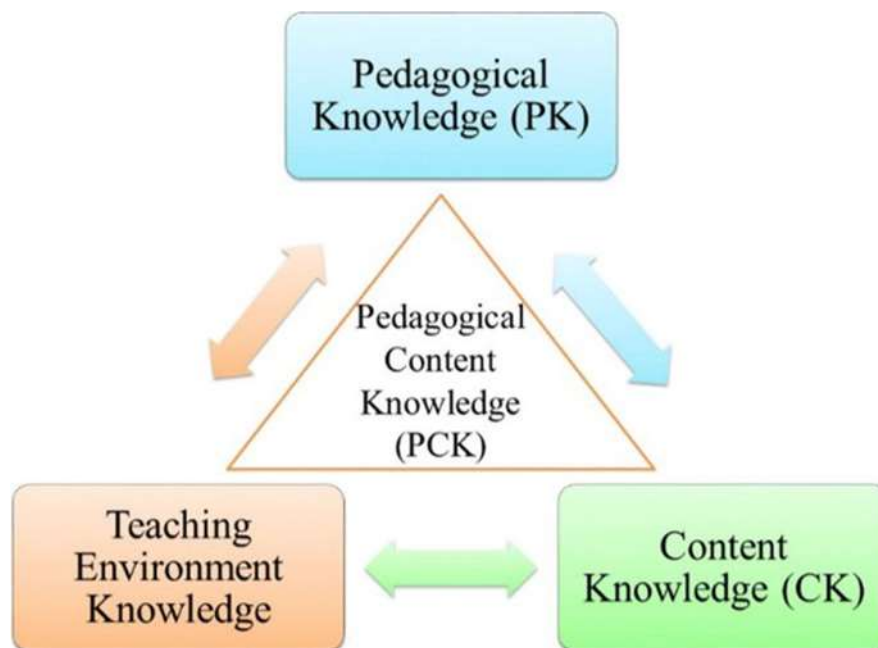
Figure 1. Pedagogical Content Knowledge
Source: (Cam & Erdamar, 2021).

One of the key strengths of PCK is that it enhances teaching effectiveness by ensuring that educators not only understand their subject matter but also know how to teach it in ways that make learning meaningful for students (Kultsum, 2017). It helps teachers anticipate common misconceptions and tailor their instructional strategies to address them. PCK also promotes adaptability, allowing educators to modify their teaching methods based on students' needs, learning styles, and classroom dynamics.

Despite its strengths, PCK has some limitations. One challenge is that developing strong PCK takes time, experience, and continuous professional development, which not all teachers may have access to. Also, PCK can vary significantly among educators, making it difficult to standardize or measure. Another limitation is that some teachers may struggle to balance deep content knowledge with effective pedagogical strategies, leading to either overly complex explanations or overly simplified lessons that fail to challenge students. Also, PCK may not fully account for external factors like classroom resources, curriculum constraints, or students' socioeconomic backgrounds, which can impact teaching effectiveness.

This theory is relevant to this study as it charts a framework to understand how teachers can effectively integrate subject knowledge with appropriate instructional strategies when using Interactive Radio Instruction (IRI) for primary school pupils in Lagos State. PCK highlights the importance of not just delivering content through radio broadcasts but also ensuring that the instructional design is engaging, clear, and suited to the learning needs of young pupils. Since IRI relies on structured audio lessons, teachers must adapt their pedagogical approaches to facilitate active learning, encourage participation, and reinforce concepts through follow-up activities. The PCK provides a framework for educators to bridge the gap between content delivery and effective teaching methods, ensuring that radio instruction is not just informative but also interactive and impactful for pupils' comprehension and retention.

2.2 History of Educational Broadcasting

The story of educational broadcasting began in the early part of the 20th century, with radio being the first major tool used to share lessons across long distances. At that time, many students could not attend schools regularly due to distance or poor infrastructure. Radio programs were introduced to provide these students with learning opportunities, especially in subjects like science, languages, and history. Studies have acknowledged the importance of these early efforts. As noted by Gagliardi and Perrotta (2017), educational broadcasting through radio aimed to support formal education and offer flexible learning solutions, especially in rural areas. These early broadcasts helped to show that learning could happen outside traditional classrooms.

Television brought a new wave of educational broadcasting, especially during the 1950s and 1960s. The use of visuals along with sound allowed for a more engaging learning experience. During this period, many governments and public broadcasters created educational TV programs to teach children and adults basic knowledge and social values. According to Umo and Omenugha (2019), television became an important part of national education systems in many countries because of its ability to simplify complex topics and reach a wider audience. These programs were often aired in the mornings or evenings, making it possible for both students and working adults to benefit from them.

In developing nations, educational broadcasting was also seen as a tool for social change. Governments used both radio and television to teach people about health, agriculture, and family planning, especially in rural areas. This approach helped to reduce the cost of education while reaching more people. In Nigeria, for example, the use of educational media increased in the 1970s and continued to grow with support from international organizations. As stated by Okonkwo et al. (2020), educational broadcasting has played a strong role in improving literacy and awareness in underserved communities. Even though there were challenges such as lack of electricity and equipment, the programs laid the groundwork for future media-based education efforts.

Europe has a rich and diverse history of educational broadcasting, shaped by strong public media systems and government involvement (Onyejelem et al., 2024). Across the continent, educational broadcasting has served as a bridge between formal education and the wider public, providing access to learning through both traditional and digital platforms. European countries have generally recognized the value of using television and radio to support national education goals, especially for students in remote or underserved communities. In recent years, the role of educational broadcasting became even more critical, particularly during the COVID-19 pandemic when schools were forced to close. This shift led many European countries to expand and modernize their educational media services in order to ensure that learning continued outside the classroom.

In the United Kingdom, the British Broadcasting Corporation (BBC) played a leading role in the development of educational broadcasting. Since the 1920s, the BBC has produced school radio and television programs designed to support classroom teaching. In modern times, the BBC has adapted by offering educational content through its online platform, BBC Bitesize. This platform became especially popular during the COVID-19 lockdowns when schools were closed. According to Johnson and Weber (2020), the BBC's quick response to the pandemic showed the power of public broadcasters in supporting national education goals. The BBC's long history and ability to evolve with technology make it a key example of educational broadcasting in Europe.

In Germany, educational broadcasting has also been part of the national strategy to support learning. Public broadcasters like ARD and ZDF have created content for schools and the general public, especially on topics such as history, culture, and science. During

the pandemic, these broadcasters partnered with education ministries to create special programs for students learning from home. As noted by Bruckner and Schumacher (2021), Germany's experience showed the importance of cooperation between media and education sectors in times of crisis. These programs were broadcast on television and also uploaded online, helping students of all backgrounds to continue learning.

France has also made strong efforts in using broadcasting for education. The French public broadcaster, France Télévisions, launched a dedicated educational block called "La Maison Lumni" during the COVID-19 crisis. This project was aimed at students who lacked access to the internet and digital devices. According to Bernard et al. (2021), La Maison Lumni provided daily lessons in subjects like maths, French, and geography. It was praised for helping students stay connected to learning, especially in low-income areas. This shows that even in modern Europe, television remains an important tool for education, especially when digital access is not equal across all regions.

In Asia, Japan has been one of the pioneers in educational broadcasting. The country started using radio for education in the 1930s and later developed strong television programs through NHK, the national broadcaster. Today, NHK continues to run educational channels like NHK Educational TV, which offers programs for students of all levels. During the COVID-19 pandemic, NHK played a key role in delivering lessons to students stuck at home. According to Sakamoto (2020), NHK's quick shift to digital platforms alongside its traditional broadcasts helped reduce learning loss during school closures. Japan's consistent investment in educational broadcasting has made it a model for combining old and new media in learning.

In India, educational broadcasting has been used as a way to reach learners in both urban and rural areas. The government launched the Gyan Darshan and Swayam Prabha TV channels to provide school and university-level lessons in different subjects and languages. These platforms were especially helpful during the pandemic, as millions of students relied on TV rather than the internet for their studies. As reported by Singh and Sharma (2021), the large number of students without internet access made satellite-based educational broadcasting a vital solution. These efforts show how television can still be powerful in a country with digital inequality.

China has also made major moves in educational broadcasting, combining traditional media with modern technology. The country's national broadcaster, CCTV, runs educational programs while digital platforms like China Education Network Television (CETV) offer online classes and resources. During the COVID-19 outbreak, China's Ministry of Education launched a national online learning platform supported by state broadcasters to reach millions of students across the country. According to Zhou and Li (2021), this wide use of media showed how quickly educational broadcasting can adapt in times of emergency. China's example highlights how public policy and media systems can work together to support learning at a large scale.

In South America, countries like Brazil have used educational broadcasting as a tool to promote learning in both urban and rural areas. Brazil's Ministry of Education has worked with public and private broadcasters to deliver lessons to students, especially in low-income regions. TV Escola, a government-run channel, has been a key part of this effort. During the COVID-19 pandemic, the channel expanded its services to include online streaming and social media, helping more students continue their education. As explained by Carvalho and Diniz (2021), educational broadcasting in Brazil plays an important role in reaching students who lack internet access and supports classroom teaching across diverse regions.

In North America, the United States has a long history of educational broadcasting through organizations like PBS (Public Broadcasting Service). PBS has produced well-known educational programs for children, such as Sesame Street, and continues to offer free learning materials through its website and local stations. During the COVID-19 lockdowns, PBS partnered with schools to offer daily televised lessons and learning guides. According to Taylor and Hall (2020), this partnership helped ensure that students from low-income families, especially those without internet, could still access quality educational content. The U.S. model shows how educational broadcasting can remain relevant by combining television with online tools.

Canada has also used educational broadcasting to support learning across its provinces. Provincial broadcasters such as TVO in Ontario and Télé-Québec in Quebec have produced content for students at different levels. During school closures, these broadcasters worked with local education ministries to provide daily lessons on television and digital platforms. As stated by McKenzie and Allen (2020), Canada's approach to educational broadcasting is built on strong collaboration between public broadcasters and the school system. This helped reduce learning gaps during the pandemic, especially for students in remote and Indigenous communities where access to digital devices was limited.

In Africa, educational broadcasting has been a vital tool for promoting access to education, especially in rural and underserved communities. Many countries began using radio and television in the 1970s and 1980s to fight illiteracy and provide basic education. In modern times, this effort has continued with both traditional and digital platforms being used. In Nigeria, for example, government initiatives like the Universal Basic Education Commission (UBEC) have worked with broadcasters to air lessons in core subjects through radio and TV (Okonkwo, 2020). These efforts are particularly important for children in areas where schools are either too far or poorly equipped.

During the COVID-19 pandemic, many African countries turned again to radio and television to support learning while schools were closed. In Kenya, the Kenya Institute of Curriculum Development (KICD) launched daily radio lessons and TV programs to reach learners across the country. These programs were delivered in both English and local languages to ensure wider understanding. As reported by Wamalwa and Omollo (2021), this approach helped bridge the digital divide by reaching students who had no internet or smart devices. Although not all learners could benefit equally, educational broadcasting proved to be a low-cost and effective alternative during emergencies.

In South Africa, educational broadcasting has also played an important role in improving learning outcomes. The South African Broadcasting Corporation (SABC), in partnership with the Department of Basic Education, created the Woza Matrics campaign in 2020 to support Grade 12 learners preparing for exams. These televised lessons were supported with online videos and study materials. According to Mnguni and Moyo (2021), this initiative showed that a strong collaboration between government and media can provide educational support on a large scale.

Nigeria has a long history of using educational broadcasting to reach learners across different regions, especially in rural and underserved areas (Oreoluwa et al., 2024). Since the 1970s, the government has used both radio and television to support formal and non-formal education. One of the earliest efforts was the School Broadcasting Unit, which aired lessons through the Nigerian Television Authority (NTA) and Radio Nigeria. In recent years, the Universal Basic Education Commission (UBEC) and the Nigerian Educational Research and Development Council (NERDC) have continued this effort by producing educational content for primary and secondary school students (Okonkwo,

2020). These programs are usually aired in the morning or evening to reach both school-going children and adult learners.

During the COVID-19 lockdown, Nigeria expanded its educational broadcasting efforts in response to school closures. Several state governments launched learning programs on local radio and television stations. Lagos State, for example, started the Learn at Home initiative on Lagos Television (LTV), where teachers taught core subjects like Mathematics, English, and Basic Science on TV (Akinwale & Oduwole, 2021). These programs also aired on radio to reach students without access to television or the internet. According to Wodi and Okocha (2021), this approach helped many students stay connected to learning, though it also revealed gaps in access to electricity, media devices, and consistent programming (Vitalis et al., 2023).

Despite the challenges, educational broadcasting in Nigeria continues to be a powerful tool for bridging educational gaps. Many education experts believe that radio and TV can be used more effectively if there is better funding, teacher training, and community awareness. Oladipo and Bello (2022) noted that if these platforms are properly integrated into the national education plan, they can support lifelong learning and reduce dropout rates. With a young and growing population, Nigeria has great potential to strengthen educational broadcasting by combining traditional media with digital tools, mobile apps, and interactive learning programs that can reach students wherever they are.

With the rise of digital technology in the late 20th century and early 2000s, educational broadcasting started to shift from traditional radio and television to digital platforms. This change allowed for greater interaction and flexibility in learning. Learners could now access educational content on their own time through recorded programs, websites, and later, mobile apps. As observed by Dwyer (2016), digital broadcasting created new spaces for distance education and self-paced learning, especially for working adults and students in remote areas. The internet also made it easier for institutions to share educational content widely and at a lower cost.

The growth of online platforms has also changed how people define educational broadcasting today. It now includes podcasts, webinars, livestreams, and interactive video series that are created not just by governments or schools but also by individuals and organizations. According to Fombona, Pascual, and López (2017), these new forms of broadcasting have made learning more accessible and personal. They also allow for feedback, questions, and participation, which were not possible with early radio and TV formats. Many students now use platforms like YouTube and educational podcasts to support their classroom learning or gain new skills outside of school settings.

In recent years, educational broadcasting has taken on new meaning during global emergencies, such as the COVID-19 pandemic. During school closures, many governments returned to using television and radio to reach students who had no access to the internet. In Nigeria and other African countries, this method helped bridge the gap in learning during the lockdown (Ilesanmi, Adebayo, & Afolabi, 2021). These efforts showed that even in the digital age, traditional broadcasting methods still play an important role in education. The experience also encouraged more investment in media-based learning tools and highlighted the need to improve access to both technology and electricity in rural areas.

III. Research Methods

3.1 Radio Broadcasting and Education in Nigeria

Dipo-Adedoyin (2016) posits that radio broadcasting is one of the gains of colonization to the Nigerian society. The development of radio broadcasting in Nigeria has come a long way transforming from the Radio Diffusion System in the 1930s to a digitalized and nationwide 24 hours services at the present time. It is a mass medium that speaks to a large, far-flung audience. Radio broadcasting is the transmission of audio content to a broad audience via radio waves. This method of communication has been a cornerstone of mass media since the early 20th century, delivering news, music, educational programmes, and entertainment to listeners worldwide. Radio passes for one of the traditional means of mass communication which over time has been proven to be both effective and accessible to the general public. It is regarded as an audio spectrum through which information is stepped down to the target audiences in a heterogeneous manner and has been noted to serve various purposes in the society.

According to Egbuchulam cited in Boniface et al., (2023, p. 22) "radio is a mobilizer and a formidable factor in the new world order in economy, technology and politics". This is perhaps why radio is believed to exert a positive influence in all human endeavor. Similarly, regardless of the rapid advancement in technology in recent times, radio is still noted to be of utmost importance in delivering educative, enlightening and entertaining information across climes. This relative importance attached to radio as a medium of mass communication is premised on its unique qualities such as accessibility, affordability and portability among others. This has given radio the opportunity to contribute immensely to the society.

Furthermore, contemporary studies have noted that radio, like other means of information dissemination has the ability to influence public perception and the thought patterns of people in the society. Beyond this, there are emerging research evidence that points to the fact that as a purveyor of information, radio serves as a public sphere mechanism, through which interactive programmes to promote public participation in social courses and community development can be achieved. In Nigeria, radio has lived up to expectations in reaching the people with daily information, even in the face of emerging communications paradigm shift through the advent of social media. Sequel to this fact, contemporary researches have pointed out that about 77.4% of Nigerians spread across various socio-demographics listen to the radio for news at regular intervals (Vitalis et al., 2024). One key area radio has functioned in Nigeria, and especially in Lagos state, is in its use as a platform for enhancing learning.

Educational broadcasting is a purposeful endeavor that allows educators to impart knowledge to learners via radio and television, positively influencing learning environments. Over the years, the concept has been defined by different scholars. According to Ijeh and Ufuophu-Biri (2021), educational broadcasting is the creation and delivery of radio and television programmes aimed at imparting formal, non-formal, and informal knowledge to the audience. In a similar vein, Nabueze et al. (2012) articulate that educational broadcasting refers to the dissemination of educational content through radio and television platforms, intended to enlighten targeted audiences on specific fields of knowledge or to enhance existing knowledge in those areas. Expounding further, Nkwam-Uwaoma (2016) contends that educational broadcasting involves the dissemination of educational content or programs via radio waves from television or radio stations, as well as other broadcast devices to reach audiences both near and far. The aforementioned definitions bring to the foreground that educational broadcasting serves as a veritable tool

for disseminating knowledge through radio and television to cater to diverse learning needs of audiences.

Educational broadcasting programmes can take various formats such as live broadcasts or pre-recorded materials like audio/video tapes, CDs, and DVDs for repeat transmissions or offline consumption by learners at their convenience. Also, educational broadcasting includes edutainment content, which combines entertainment with education. Aghadiegwu and Ogbonna (2015) notes that the educational potential of broadcasting was recognized early on and significantly contributed to the industry's expansion. During the Covid-19 lockdowns, many countries worldwide turned to educational broadcast programs to sustain their educational systems. In Nigeria, radio and television stations broadcast school subjects to learners at home during the 2020 Covid-19 lockdown in many states. Although not all educational sectors may have benefited from these broadcasts, the gesture served national interests and development.

The concept of educational broadcasting dates back to the origins of broadcasting itself. Adelabu et al. (2017) affirm this, noting that the mission of ensuring learning and adult literacy was a key focus for colonial authorities at the beginning of broadcasting in Nigeria, with the British Broadcasting Corporation (BBC) initially dominating the airwaves. The BBC began broadcasting educational programmes for schools in 1920, and in 1924, it aired its first adult education program.

Formal educational broadcasting in Nigeria entails the intentional planning, creation, production, and airing of radio and television programs aimed at delivering knowledge according to established school curricula. These programmes are aligned with approved syllabi and aimed at helping learners prepare for specific examinations, reflecting a commitment to enhancing learning outcomes through broadcasting. Educational broadcasting in Nigeria has a rich history that traces back to the early 20th century, aligning with global trends in instructional broadcasting. It began with European initiatives in the 1920s, notably the British Broadcasting Corporation's (BBC) school broadcasting for children in 1924, followed by Germany in 1926 and the United States in 1928. However, it was the Colombian broadcasting system in 1928 that greatly popularized educational broadcasting during that era.

Formal educational broadcasting in Nigeria emerged around 1932 with the establishment of the first radio receiving station in Lagos. This marked a significant impact on education, particularly with the introduction of educational broadcasts in English Language. Initially, these broadcasts were limited, with programs airing once a week in the early 1940s under the Radio Distribution Service (RDS) (Ijeh, 2019). The landscape evolved with the creation of the Nigeria Broadcasting Service (NBS) in 1951, followed by the Nigeria Broadcasting Corporation in 1957. However, it was the year 1959 that marked a pivotal moment in Nigeria's broadcasting history, with the commissioning of the first television station in Africa, notably in the Western Region under Chief Obafemi Awolowo's leadership.

Regional governments, inspired by the Western Region's pioneering efforts, established their radio and television stations, fully funded and devoid of private participation. These stations played a crucial role in delivering educational content, not only in English but also in major indigenous languages like Igbo, Hausa, and Yoruba, aiming to foster greater understanding and attitude change towards education (Babalola, 2012). The Federal Government of Nigeria's direct involvement in educational broadcasting began in 1964 with the establishment of the Schools Broadcast Unit (SBU) in Lagos. This unit produced television programs aligned with the curriculum and

recommendations of the Ministry of Education, signaling a formalized approach to educational broadcasting.

The founding of the National Educational Technology Centre (NETC) in 1984 in 1984 marked a significant milestone as it aimed to standardize educational broadcasting nationwide. With objectives ranging from training educational broadcasters to producing and transmitting educational programmes on radio and television, NETC shaped the landscape of formal educational broadcasting in Nigeria. Educational broadcasting can either come as formal or informal programmes. While formal education programmes use broadcasting to achieve instructional goals that align with formal education standards, informal education programmes deal with general issues that maybe for enlightenment, mobilization, community development or to provide information on government policies and programs.

3.2 Radio as an Educational or Instructional Media

The use of media for the purpose of teaching is not new. It is a concept that has been used in contemporary times to enhance the demonstration of teaching and understanding on the part of students. Various scholars have attempted to conceptualize instructional media. Ajelab cited in Abdul and Danladi (2017, p. 6) avers that ''the more modern term used for apparatus; teaching aid; and audio-visual is educational media or instructional materials''. This points to the fact that instructional media is a modernized form of teaching. It is the use of media facilities to facilitate the process of teaching and learning''. In like manner, Wamalwa (2016, p. 17) explains that instructional media are media that are ''used by teachers to communicate instructional information or ideas to students in the most effective way for enhanced learning. Media also refers to any kind of format used to convey information''.

Instructional media according to Asemah cited in Ogbole (2019, p. 20) is a ''field involved in facilitating human learning through systematic identification, development, organization and utilization of a full range of learning resources and through the management of these resources.'' Reference to resources here among other things is the use of the radio broadcast which is known to bring messages and lessons to learners through audio spectrum. Perhaps, the position of Brown and Agba (2015, p. 36) on instructional media gives a better perspective. They note that instructional media ''often refer to radio [...] broadcasting, providing materials related to courses of study''. Instructional media has also been likened to instructional programming through which educative materials are passed across in broadcast messages to students and other learners with the aim of enhancing their learning outcomes. Such programming is often employed either in a classroom setting or outside the classroom in various formats to drive home the point being illustrated by the teacher.

It can therefore be said that teachers are central to the use of instructional or educational media to teach students. Affirming this position, Nurhayati cited in Silmi (2017) avers that ''appropriate technique and media chosen by the teachers in teaching process can lead students to achieve the goal of learning''. Several other scholars have made efforts to capture the role played by teachers in enhancing students learning through the use of instructional media. Chief among them is Wamalwa (2016) who posits that:

> Enhanced learning is a product of the interplay of several factors that involve the teacher, teaching strategies, the lesson objectives, content and mode of delivery with the aid of appropriate instructional media or teaching material for learners to achieve in an enhanced experience, the expected learning. Enhanced learning by students

therefore, is a product of how the teacher makes use of instructional media to aid the students to conceptualize, concretize and retain what they have learned (p. 11).

Premised on the above position, it can be inferred that when teachers are familiar with how to employ instructional media for teaching, students are bound to do better in their subjects which in turns enhances their overall academic performance and this can be attributed to the interactive and explanatory nature of media materials used for teaching and learning. However, there is often a misconception when instructional media for learning purposes is mentioned as more often than not, reference is made to teaching students how to use computers. The utilization of instructional media goes beyond this to cover the use of media facilities in helping teachers prepare and execute lessons for better comprehension of students. However, this is strictly dependent on the level of experience on how to make use of the various instructional media for teaching and learning by teachers.

According to Sadiman et al, cited in Diah (2018, p. 12) avers that radio ''is the instructional media that uses listening skill. The idea from this media is showed in verbal and non-verbal''. Based on the ground conceptualization of audio instructional media, it is safe to say that radio is the main source of this form of media. Radio has been said to be a very effective means of passing across educative messages. This comes from its ability to cover distance with electromagnetic spectrum as well as the fact that it is relatively affordable and available to students despite their economic status. Furthermore, the fact that most radio sets do not necessarily need electricity makes it so much desirable to use in furthering educational agenda.

The effectiveness of radio in education comes from the fact that it can serve the purpose of both formal and informal education. Its affordability makes it even more appealing. Similarly, radio is reliable in any part of the world and in any climate condition. This is why it is regarded as a miniature transistor device that steps down signals to audiences in far and near places. The potency of radio in education is seen from the fact that it has been employed within a wide variety of instructional design contexts. In some cases, it is supported by the use of printed material, by local discussion group, and by regional study centres. It is sometimes so designed to permit and encourage listeners' reaction and comments. Evaluations are also carried out with the feedbacks received.

IV. Conclusion

The use of Interactive Radio Instructional Broadcast (IRIB) has proven to be a valuable educational tool for reaching primary school pupils in Lagos State, particularly in contexts where qualified teachers are scarce and to further reinforce what have been taught in classrooms. This paper underscores the potential of radio as a cost-effective, scalable, and inclusive medium for delivering foundational education, especially in underserved and low-resource communities. However, the success of IRI is contingent on several critical factors, including the availability of radio sets, consistent power supply, the timing and quality of broadcasts, and the involvement of caregivers and educators in reinforcing learning. While IRIB cannot replace face-to-face instruction, it serves as a vital complementary approach that can bridge learning gaps, sustain educational continuity during emergencies, and support lifelong learning goals. For sustained impact, there is a need for strategic investment in content development, teacher training, and monitoring frameworks, alongside policy support that integrates IRIB into the broader basic education delivery system in Nigeria.

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