

Breaking Educational Barriers through Literacy-by-Radio Accessibility and Learning-Dynamics

By

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Abstract

Despite the literacy efforts in Nigeria, adult and youth no-literacy remain prevalent across many African nations, including Nigeria. As of 2018, an estimated 60 million Nigerians lacked basic literacy skills due to factors such as political instability, insecurity, poor funding for non-formal education and reliance on traditional face-to-face teaching methods. Literacy-by-Radio (LbR) offers an innovative solution to bridge this gap by delivering accessible and flexible literacy education to underserved populations. This empirical study examined the accessibility and learning process of the LbR programme in Nigeria. It investigated the user-friendliness of the programme and the processes through which learners acquire reading, writing and numeracy skills. A mixed-methods (QUAN+qual) design was employed, involving 142 adult learners across six LbR centres in Ogun State Nigeria. Data were collected using structured questionnaires (Learning Process, $\alpha=0.87$; User-Friendliness and Access, $\alpha=0.78$), in-depth interviews and focus group discussions. Quantitative data were analysed using descriptive and inferential statistics, while qualitative responses were thematically analysed. Findings indicate that the LbR programme is both accessible and effective in acquiring literacy, numeracy and computing skills. Learners reported high engagement levels and significant improvement in basic competencies. Recommendations include expanding radio access, enhancing interactivity, updating curricula, providing facilitator training and integrating supplementary digital and print resources to strengthen learner engagement and educational outcomes.

Keywords: Educational Barriers, Literacy-by-Radio, Accessibility, Learning-Dynamics

Introduction

Despite numerous regional and international literacy initiatives, a number of African nations remain entangled in the quagmire of youths and adult illiteracy. For instance, in Nigeria, the National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC), under the guidance of its Executive Secretary, approximated that in 2018, there were around 60 million adults and young individuals who lacked literacy skills. The aforementioned estimation encompasses individuals who have discontinued their education and adult individuals with low literacy levels due to ongoing political and civil unrest, violence, abductions and conflicts,

coupled with insufficient financial support for literacy initiatives (Tabiedi, 2017). the insufficient funding for informal education, coupled with minimal or non-existent encouragement, support for learning and adherence to traditional face-to-face style of teaching-learning are the major elements contributing to the escalating non-literacy levels (Newman, 2018). Meanwhile Literacy-by-Radio (LbR) can be the answer to ensuring effective acquisition of literacy competencies. Thus a dire need to examine the accessibility and learning process in the LbR programme,

Objectives of the Study

This study evaluated the ease of accessibility and process of Learning to Read, Write & Compute in the LbR programme. The specific objectives are to:

- i. ascertain the extent to which the LbR programme is user friendly and accessible among adult learners in Ogun State,
- ii. determine the process of learning to read, write and compute in the LbR programme.

Literature Review

Radio broadcast in Nigeria

Meanwhile, the Radio broadcast has emerged during the 20th century, initially attracting a limited audience. Early radio stations, including those in Pittsburgh and Detroit, were scarce. In 1922, the global count of radio station transmitters stood at merely 30, yet by 1942, radio had integrated into the everyday lives of people. The 2022 global theme for World Radio Day is centred on radio and trust, emphasising the accessibility and sustainability of radio stations, as outlined by UNESCO (2022). Throughout history, radio has remained a preferred mass communication medium due to its accessibility to both the general public and the scholarly community. It has the capacity to transcend geographical boundaries and engage a substantial audience, proving to be a valuable tool for educational purposes. Moreover, it was recognised as a powerful means to enhance education by combining technology with written materials. The evolution of educational radio took off steadily with the introduction of BBC talk shows in 1924, marking the inception of educational programme on the radio. Consequently, radio has played a

fundamental role in education from its early days. Over time, radio has evolved and diversified through the introduction of various services to the public, including community radio, narrowcast radio and the emergence of internet radio in today's world.

The contemporary world resides within a media-centric society where radio broadcasts wield a disproportionately significant influence; promoting literacy via radio can facilitate the acquisition of literacy skills among adult learners. Radio, being a potent medium, holds the capability to disseminate information to a vast audience at a minimal cost, making the utilisation of radio and television as instructional tools one of the optimal approaches to engage with adult learners. Consequently, radio receivers represent indispensable educational assets that should be present in literacy centres to cater to the requirements of adult learners in the current era (Banerji, Berry and Shotland, 2017). Stakeholders at regional and global echelons express apprehension regarding the escalating prevalence of illiterate adults in developing countries and its repercussions on societal and economic well-being. Given that literacy is correlated with heightened levels of respect, self-worth, financial stability and improved public health, it is recognised as an inherent human entitlement (Bardin, 2020). Hence, it is unsurprising that the fourth of the seventeen Sustainable Development Goals (SDGs) advocates for widespread access to high-caliber, comprehensive and unbiased education by 2030 (SDG Compass, 2019).

The Literacy-by-Radio in Nigeria

In Nigeria, radio broadcasts are now being used in adult literacy programmes to impart literacy and numeracy skills to adults who have not been able to attend formal schooling. Additionally, radio programmes are directed at young adults, especially those lacking access to schools or formal education, aiming to assist learners in building essential literacy and numeracy skills. Several literacy-by-radio initiatives involve local community engagement in content development and delivery to ensure cultural relevance and engagement with the targeted learners. Nigeria, being linguistically diverse with numerous local languages, should take into account the utilisation of local languages in LbR to enhance accessibility and relevance to the local populace (Adams, 2019).

Nigeria understudies the countries that have used radio for mass literacy delivery including Cuba, Sudan, Australia and Canada while the Cuba Literacy-By-Radio (LbR) was eventually adopted

and adapted into the Nigeria context. The Cuban Method adopted by Nigeria is a matching approach; it is mixed because concepts and components from many literacy teaching strategies were combined. It acknowledges the reality that culture and education are intertwined and that education cannot be divorced from culture. The adopted LbR method of learning, reading and writing through the radio is carried out in two phases and it adapts its procedures to the culture of the place where it is performed. The two phases are the radio listening session and the in-person session. The reading and writing exercises, which, based on the learner's requirement and motivation, start with the major topic. The topic and the main image at the top of the primer page from which sentences are constructed are tightly related. Instead of utilising numbers to identify the pages on the primer, various symbols to be taught to the learners are utilised. The keywords are identified prominently in the sentences and the keywords include the vowels or letters to be learned in each lesson. Every state in Nigeria has a distinctive emblem that stands for something historically significant that is specific to that state, such as a place, an item, an occasion and so on (Coiro, Knobel, Lankshear and Leu, 2018).

Literacy-by-Radio transcends the conventional scope of literacy and numeracy by encompassing digital literacy and basic computing skills, which are vital in the digital era to facilitate information access and participation in the digital economy. Various organisations and governmental bodies frequently evaluate the efficacy of LbR in terms of literacy and numeracy advancements, enabling the refinement and enhancement of programme content and delivery methods. Despite the potential of radio-based literacy programmes to reach underserved populations, challenges related to limited access to radios, electricity and broadcasting infrastructure in certain areas must be effectively tackled. These programmes are often viewed as a supplementary approach to formal education, assisting individuals in acquiring foundational skills and nurturing a passion for learning. LbR has played a pivotal role in broadening educational opportunities, particularly for individuals encountering obstacles to traditional schooling, thereby contributing to the enhancement of literacy and numeracy levels and equipping individuals with the necessary skills to more actively engage in economic and social spheres (Adams, 2019).

Literacy-by-Radio and the 3Rs Competencies in Nigeria

The utilisation of Literacy-by-Radio (LbR) as a tool for enhancing literacy, numeracy and computing competencies in Nigeria involves the delivery of educational content and opportunities for individuals, especially those in remote or underserved areas, to obtain crucial literacy and numeracy skills. Radio, being a widely accessible medium in Nigeria, is even available in rural and remote regions where access to conventional educational resources may be limited, thus having the capacity to reach a broad and diverse audience. The design of LbR caters to various age groups, particularly targeting adults (Adedigba, 2017). The content of LbR typically encompasses various subjects such as reading, writing, arithmetic and fundamental computing skills, with an interactive approach that encourages active participation among learners.

Process of Learning in the LbR Programme

After listening to three lessons, learners are expected to attend the face-to-face meeting, which is a contact session. The contact session is an opportunity for the facilitator and learners to interact face-to-face at a location and time decided upon by both parties. The facilitator works with the adult learners to address any potential learning issues identified during the radio broadcasting session (Olaniran, 2012; Arulchelvan and Viswanathan, 2016). The approach is mixed because concepts and components from many methodologies are combined. In this approach, the instructor begins with a major subject based on the demands and motivations of adult learners. Usually, the content is directly tied to the large picture at the top of the primer page from where one creates a sentence.

Examples of symbols in the LbR primer include white, which has long represented purity and tranquillity in Western culture; and green, which represents agriculture and fertility in Nigeria. Therefore, each page of the radio primer is marked with a symbol in the LbR programme. Each state is represented on the primer by a symbol, such as the nation's food basket is a representation of the state of Benue (Abell, 2018; NMEC Facilitators' Guide, 2008). The symbols are larger than logos in the LbR primer and are located above the logos on the left-hand side of each page. Logos are images that show what learners should do, and because they direct the adult learners to the primary activities, logos are significant. When learners first view the logos, they can tell or respond to the activities on their own with little or no help.

Matching Alphabet-to-Letter in the LbR Programme

The keyword in the LbR primer includes the vowel or letter that will be taught in each lesson. A vowel or letter is typically linked to the alphabetic number that corresponds to it. Additionally, a reference table with the letter's position on the alphabet and its number is included at the end of the primer to make it easier for the learners to build relationships. The radio broadcast covers a variety of topics, such as basic literacy, the value of education, especially for adults, learner enrolment, retention, completion and transition rates, education for girls, family life education, civic education, community development, environmental education, the creation of cooperative societies and the empowerment of women through income-generating activities and health-related issues like HIV/AIDS, STDs and a host of other conditions (Berman, 2018).

Theoretical Framework

This study was underpinned by the New Literacies Dual-Level Theory by Donald J. Leu in 2017. The Theory is founded on the idea that literacy today has a deictic nature and has significant ramifications for literacy theory, research and instruction that the profession has to start addressing. According to the notion, literacy is a term whose meanings shift quickly as their situation does. As an example, the meaning of tomorrow changes to today every 24 hours because it is a deictic phrase. The theory underlined that because we live in a time of quickly evolving information and communication technologies, which each call for new knowledge, competencies and technologies, literacy has evolved over the years. Being fully literate yesterday in a world defined primarily by relatively static book technologies does not necessarily mean that one is fully literate today, where we encounter new technologies like Google Docs, Skype, iMovie, Contribute, Basecamp, Dropbox, Facebook, Google, Foursquare, Chrome, educational video games and thousands of mobile apps. Even more cutting-edge technologies that have not yet been developed today but will be developed in the future to satisfy future demands will define what it means to be literate in the future.

As a result, the term new literacies refers to the idea that literacy is constantly evolving. The theory aims to define who we are and who we will be in the future, as well as the social forces at play, the new emerging technologies and the changes that will result when these forces are combined with the important social forces. The theory addresses the changes to literacy that are currently occurring, such as the increased global economic competition that places a high value on effective information and

communication use, the rapid emergence of the internet in both professional and personal lives and public policy initiatives by countries that integrate literacy for development about additional trends shortly and beyond. The dual-level idea of new literacies is an effective strategy for creating a society where literacy is always evolving. It starts by emphasising a key idea: emerging technologies have always affected the purpose and aesthetics of literacy practices, as well as being shaped by them in turn. To understand how new information and communication technologies affect the new literacies, the theory addresses the social backdrop of the contemporary era. The theory is crucial in the wide-ranging framework of new literacies in the modern world since it addresses numerous emerging new literacies perspectives (Cain and Parrila, 2021).

Methodology

The Quan+qual mixed method design was adopted. The six LbR centres (Ijebu Itele, Kuto, Ilisan, Ayetoro, Ilaro and Ifo) in Ogun State were enumerated. 142 out of the 300 adult learners who participated in the programme were enumerated. The instruments used were LbR Learner (with two subscales: Learning Process- $\alpha=0.87$, User friendliness and Access to Basic Literacy- $\alpha=0.78$) questionnaires. In-depth Interviews were held with the project consultant and one facilitator, while focus group discussions were held with adult learners. The quantitative data were analysed using percentages, mean, standard deviation, t-test, and ANOVA at 0.05 significance level, while the qualitative data were thematically analysed.

Table 3.1: Sample Size

SN	LbR CENTRE	Sampled
1	St Johns Community Primary School, LbR Centre, Ijebu Itele, Ijebu East LGA	18
2	St John's Anglican Primary School 1 LbR Centre, Kuto Abe-Okuta, Abeoukuta South LGA	22
3	AUD School LbR Centre, Ilisan, Ikene LGA	24
4	Ansarudeen LbR Centre, Ayetoro, Yewa North	32
5	United District Nursery and Primary School LbR Centre, Ilaro, Ewekoro LGA	23
6	St Pauls Anglican School LbR Centre, Ifo, Yewa South LGA	21

TOTAL	142
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Results and Discussion

Analysis of Data on the Research Questions

Table 4.6 Frequency for User Friendliness and Accessibility of the Literacy-By-Radio Programme Initiative

Statements	VLE	LE	SE	NE	Mean	St.D
As a learner, I can listen to the programme with my radio from anywhere I am, which increased my access to the literacy programme	120 84.5%	8 5.6%	10 7.0%	4 2.8%	3.71	0.72
The LbR provides learners with flexible ways to acquire reading/writing skills with their given radio without having to go to class everyday which increased access to the literacy programme	115 81.9%	16 11.3%	10 7.0%	1 0.7%	3.72	0.62
Participation in literacy programme is easier with LbR as learners can participate simultaneously with their regular daily activities leading to increased literacy access to the working class learners	107 75.4%	25 17.6%	8 5.6%	2 1.4%	3.66	0.65
The LbR programme is attractive to busy adult learners leading to increased literacy access among the working class learners	106 74.6%	26 18.3%	8 5.6%	2 1.4%	3.65	0.65

Weighted Mean =3.69, S.D. =0.66

Table 4.6 delineated that the LbR initiative in Ogun State has notably enhanced literacy access among adult learners. The majority 131 (92.2%) of adult learners concurred that the LbR offers versatile avenues for acquiring reading and writing competencies. A significant proportion 132 (92.9%) expressed the view that the LbR facilitates easy and comfortable learning. A majority 132 (92.9%) think that the LbR aids in unleashing their potential. The high mean score (3.71)

and most participants indicate that the LbR substantially boosts access to basic literacy opportunities.

The moderate variance in responses suggests that while most learners benefited, a minority may not be experiencing equivalent levels of access. Identifying and supporting these learners can optimise the impact of the initiative. The favourable feedback (mean score of 3.72) regarding the flexibility offered by the LbR indicates its adaptability to diverse learners' schedules and requirements, a critical aspect of adult education. The consistent responses indicate that the programme's flexible approach is well-received throughout the state. With a mean score of 3.66, the majority of respondents perceive the LbR programme as easy to access and comfortable to use, thus, emphasising its user-friendly nature and accessibility. Hence, ensuring the programme's intuitiveness and inclusivity will continue to benefit adult learners, particularly those with negative experiences in traditional educational settings.

The feedback highlighting that the LbR assists in unlocking participants' potential (mean score of 3.65) underscores its role in empowering learners. The uniform positive responses indicate that the programme effectively fosters confidence and self-efficacy in participants, crucial for lifelong learning and personal growth. Providing flexible, comfortable and empowering learning opportunities, despite the highly positive overall feedback, addressing the needs of the minority who benefit less can further enhance the programme's efficacy. Continuous adaptation and support are vital to maintaining the LbR initiative as a valuable tool for adult literacy and empowerment in the state. Furthermore, several participants mentioned using the radio sets they were given at their homes or workplaces, enhancing their basic literacy participation.

On whether the literacy-by-radio initiative led to increased access to basic literacy among adult learners in Ogun State, IDI with one of the UNESCO's Individual Specialist on LbR said;

The content of lessons resonates with familiar concepts such as agricultural produce and other resources specific to their local environments. Indeed, participants derived value from LbR in learning to identify and count numerals in their native language during the pilot phase. Likewise, the advantages learners gained from mastering alphabet through LbR mirror the benefits (IDI with UNESCO Individual Specialist on LbR, June 12, 2024).

Furthermore, on the literacy-by-radio initiative leading to increased access to basic literacy among the adult learners in Ogun State, a respondent shared this opinion;

For me I am busy, but, with literacy by radio I was able to participate in a Literacy programme in the comfort of my workplace, I don't have to go to class every day, but, occasionally to interact and ask questions on things that I don't really understand (FGD, 6th June 2024, Ansarudeen LbR Centre, Ayetoro, Yewa North).

The above finding is in line with Sanusi's (2021) findings, emphasising the vital role of LbR in extending educational opportunities to those with limited access, equipping them with crucial skills and knowledge through the LbR broadcasts. The above findings also corroborate that of Okemakinde (2022) which posits that the radio serves as an effective auditory tool for communication, offering affordable access to information to a broad audience, particularly in remote areas. The finding also agrees with that of Abdul (2017) which found out that Radio-based literacy is yielding notable advancements in educational opportunities for varied demographics.

This finding also agrees with that of Sanusi, Talabi, Adelabu and Alade (2021) that LbR facilitate educational accessibility for individuals with visual impairments, particularly the elderly. Radio transmissions can also be customised to cater to the requirements of specific linguistic or cultural cohorts, fostering inclusivity and ensuring educational opportunities to varied populations. Radio-based literacy initiative also offers adaptability concerning timing and availability. Learners can tune in to programmes at their convenience, fostering learning opportunities that can be seamlessly integrated into their daily schedules. This adaptability accommodates individuals juggling work or familial obligations, thereby enhancing accessibility and convenience in education for them.

The finding also corroborates that of Ojomo, Tejuoso, Awofadeju and Oluwashola (2015) which submitted that the LbR initiatives in Nigeria could be deemed justifiable by the National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC) if they capitalize on effectively on the extensive coverage that radio offers, particularly in the rural and remote regions of the country where access to conventional educational resources might be restricted. Leveraging radio as a platform for literacy programmes enables NMEC to effectively target a

large demographic, encompassing individuals unable to partake in formal schooling or lacking access to other educational aids. Furthermore, the adoption of literacy schemes through radio presents a cost-efficient alternative in comparison to the establishment of physical infrastructures such as schools or training facilities. Radio transmissions necessitate relatively minimal resources and have the capacity to engage a significant number of listeners concurrently, rendering it a financially viable means of disseminating educational content to a large coverage of learners.

Table 4.7 The process of learning to read, write and compute in the LbR programme

The Process of Learning to Read, Write and Compute in the LbR Programme						
LbR learning process	VLE	LE	SE	NE	Mean	St.D
LbR's learning process include listening to radio broadcasting session on learning to read, write and to compute simple arithmetic	119 83.8%	15 10.6%	4 2.8%	4 2.8%	3.75	0.64
LbR's learning process include hands on where learners are instructed through the radio lessons to talk along, to write or to do simple arithmetic based on the day's lesson	120 84.5%	16 11.3%	4 2.8%	2 1.4%	3.07	0.42
LbR's learning process include integration of inspiring rich heritages of the various states in Nigeria, nationalism, basic hygiene, and so on	117 82.4%	15 10.6%	7 4.9%	3 2.1%	3.73	0.65
LbR's learning process include matching alphabets to numbers	111 78.2%	21 14.8%	7 4.9%	3 2.1%	3.69	0.66
LbR's learning process include interactive session with the LbR facilitator	102 71.8%	30 21.1%	9 6.3%	1 0.7%	3.64	0.63
Weighted Mean =3.58, S.D. =0.60						

Table 4.7 shows that the LbR's learning process include listening to radio broadcasting session on learning to read, write and to compute simple arithmetics; Hands on where learners are instructed through the radio lessons to talk along, to write and to do simple arithmetic based on the day's lesson. An extensive proportion of participants 120 (84.5%) acknowledged the

advantages derived from engaging in hands-on activities through the radio lessons, such as verbal communication, writing and basic arithmetic operations. The LbR approach captivated the learners as its established connections between educational content and culturally pertinent subjects. 111 (78.2%) of participants alluded to the effectiveness of the alphabet-to-number matching process. This methodology emerges as a robust constituent of the educational approach adopted by LbR. The interactive engagements with the LbR facilitator were deemed highly effective by 102 (71.8%) of the participants. The high mean score underscores the pivotal role of direct interactions with facilitators in the learning process. The weighted mean score of 3.58 and a standard deviation of 0.60 suggest the efficacy of the learning processes within the LbR initiative through diverse modalities. The sustained high mean scores across varied learning process signify a holistic and thorough educational scheme that adeptly caters to the requirements of individuals with limited or no literacy skills. The incorporation of diverse andragogical approaches by LbR, encompassing radio broadcasts, practical activities, cultural assimilation and interactive sessions, ensures a comprehensive learning encounter for the participants.

Although the general responses are positive, a small proportion of learners expressed limited benefit. Initiatives aimed at comprehending and tackling the specific requirements of these learners can contribute to further enhancing the efficacy of the programme. The LbR programme in Ogun State seems to be notably effective in imparting reading, writing and computing skills to individuals with low literacy levels. The interactive and methodical structure of the programme, combined with the integration of life skills, plays a significant role in its success. Sustained monitoring and targeting of the needs of the minority who did not experience as much progress will guarantee the programme's inclusivity and effectiveness for all participants.

On the LbR's learners' process of learning to read, write and compute with non-literates or semi-literates in Ogun State. IDI with UNESCO Individual Specialist on LbR, unveiled that:

The format of LbR entailed a 30-minute broadcast aired thrice weekly, with timing agreed upon by learners and the Radio Station, ensuring active participation of adult learners utilising scientific tools in their respective communities. Facilitators underwent comprehensive training to conduct learner registration and facilitate in-person meetings at mutually convenient times and

locations. Adults differ from traditional pupils or students due to existing commitments. The purpose of the face-to-face sessions is to monitor learners' progress and provide necessary assistance. Facilitators received allowances and were tasked with updating the State Agency for Adult Education on LbR progress, subsequently relaying information to NMEC (IDI with UNESCO Individual Specialist on LbR, June 12, 2024).

The finding agrees with that of Sanusi, Talabi, Adelabu and Alade (2024) who reported that the content of Literacy-by-Radio is presented progressively, enabling learners to grasp fundamental concepts before advancing to more intricate topics. Furthermore, life skills and practical knowledge are seamlessly integrated into the curriculum, enabling learners to apply their newfound knowledge to real-world scenarios. The finding also agrees with that of Bernhardt (2014) that effective communication and outreach strategies are essential for the success of the implementation process in ensuring that the target audience is informed about the literacy programmes, their advantages and how to access them. Employing diverse communication channels like community gatherings, local media, social media and partnerships with local organisations can reach a broad audience and encourage them to participate in the programmes. The implementation process should include robust monitoring and evaluation mechanisms. Regular evaluations and feedback from listeners and stakeholders aid in identifying the programme's strengths, weaknesses and areas that need enhancement. This cyclic process permits timely adjustments of content, delivery methods and strategies to optimise the impact of literacy programmes.

The finding also agrees with that of Hanemann (2019) that the process of implementation should take into account the sustainability over a significant period. This encompasses the formulation of approaches for financial durability, the exploration of collaborations with local entities or enterprises and the integration of literacy schemes into pre-existing educational systems or ventures. Planning for sustainability guarantees that the influence of the scheme is enduring and that beneficiaries can uphold access to high-quality literacy materials and assistance in the long term. Consequently, the evaluation of the suitability of implementing literacy through radio in Nigeria necessitates a thorough comprehension of the local setting, the target demographic and the specific objectives of the project. Regular assessments and input from involved parties can aid in pinpointing areas for enhancement and ensuring that the implementation process remains

pertinent, efficient and influential. Furthermore, the finding agrees with that of Sanusi (2021) that aligning the content with cultural norms, values and educational requirements of the target audience is crucial. The implementation process also considers the characteristics and necessities of the target audience, including age range, literacy levels, socioeconomic backgrounds and learning preferences of the beneficiaries. Adapting the content and delivery approaches to suit the target audience guarantees the suitability and efficacy of the programme in promoting literacy.

Meanwhile, the finding is slightly at variance with that of Sanusi (2021) that the appropriateness of the literacy implementation process through radio in Nigeria is contingent upon numerous factors. It is imperative to ensure that the process of implementation remains pertinent to the Nigerian context, taking into account linguistic diversity and creating content in local languages to enhance comprehension and engagement as the finding unveiled that the LbR broadcasting sessions was presented only in English language in Ogun State. Moreover, the finding is slightly at variance to that of the U.S. Department of Education (2022) which asserted that LbR implementation process should prioritise inclusivity and accessibility, ensuring that individuals with disabilities, including those with visual or hearing impairments, can access and benefit from literacy programmes. Thus, offering alternative formats like braille materials or sign language interpretation to enhance inclusivity and accessibility of the programme as findings show that materials were not available in alternative formats like braille and no sign language interpreter engaged in the implementation process.

Conclusion

The initiative of Literacy-by-Radio (LbR) has proven to be highly efficient in introducing participants to literacy, numeracy and computing skills. The programme's success in delivering educational content is underscored by the high mean scores and a significant number of participants reporting substantial benefits. Based on the findings that the LbR programme is user friendly and accessible among the adult learners haven significantly improved access to basic literacy, offering flexible and effective learning methods, the organisers should broaden learners access to literacy programmes, ensure that facilitators receive ongoing training and re-trainings to stay updated on effective teaching methods, enhance the curriculum with updated topics, and

ensure broader reach through additional radio frequencies and community partnerships, interactive elements such as call-ins, SMS feedback, social media integration and supplementary learning resources like printed manuals, online content, and mobile apps should be provided.

Based on the findings that the LbR learning process included: hands-on activities that align with daily lessons, learners practice reading, writing and basic math skills while listening to radio broadcasts that teach these subjects and letter-to-number exercises are all incorporated into the LbR programme in order to encourage active participation. Facilitators should make sure that their lessons are inclusive and engaging. It is crucial to provide ongoing reinforcement through useful exercises. Coordinators should also increase the number of matching exercises to improve cognitive abilities and implement online interactive sessions to improve learner feedback and engagement.