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# Simple Artificial Intelligence Tools for School Libraries in Nigeria

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***Abstract***

*Globally, the application of Artificial Intelligence in libraries, also known as Library 5.0, is shifting traditional operations toward more automated, user-centered models. However, in Nigeria, the adoption of such systems remains limited, probably due to infrastructural challenges, cost constraints, low levels of digital literacy and awareness. In this context, the concept of "simple AI tools" becomes particularly relevant as the first steps school librarians can take. These tools include easy-to-use and cost-effective AI-powered applications that can be deployed with minimal technical expertise. This research is targeted at identifying the simple but basic and effective AI tools which school librarians can start with.in Nigeria. It is based on comprehensive literature review. Ten tools were specified alongside their functions and features for easy and practical application. It is concluded that aggressive adoption of AI tools in school libraries should be the priority of all stakeholders.*

**Keywords:** Artificial Intelligence, school libraries, Nigerian libraries, AI tools, Primary school libraries, secondary school Libraries.

## Introduction

The information world is constantly pushed forward by rapid technological changes and advances. The Fourth Industrial Revolution, characterised by the combination of technologies that narrow the gaps between the physical, digital, and biological factors, has ushered in a new era of possibilities in education. Artificial Intelligence (AI) is at the forefront of this revolution, offering transformative capabilities in data processing, automation, personalization, and decision-making. According to Copeland (2025), Artificial Intelligence means the ability of a digital computer or computer-controlled robot to perform tasks normally associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of human beings, such as the ability to reason, discover meaning, generalise, or learn from past experiences. Since their development in the 1940s, digital computers have been programmed to carry out very complex tasks with great proficiency. Some of the programmes have attained the performance levels of human experts and professionals in executing many specific tasks.

Among the critical components of the educational infrastructure that stand to benefit significantly from AI integration are school libraries. In both primary and secondary education, libraries play a vital role in supporting the curriculum, fostering reading habits, nurturing critical thinking skills, and serving as information centers for both students and staff. However, in Nigeria, many school libraries, where they exist, remain underutilised and poorly equipped, often having outdated materials, inadequate infrastructure, and a lack of qualified library personnel. These challenges have hindered the ability of school libraries to meet the growing informational and educational needs of 21st-century children.

In the face of these handicaps, the emergence of simple AI tools presents a unique opportunity to revitalise school libraries and enhance their relevance in the digital age. Unlike complex AI systems that require significant technical expertise, infrastructure, and financial investment, simple AI tools are relatively accessible, easy to implement, and requires minimal training for its operations. These tools can streamline library operations, improve user engagement, and provide timely and relevant access to information resources. For instance, AI-powered recommendation systems can help students discover age-

appropriate books and resources aligned with their interests and academic levels. Virtual library assistants can provide immediate support to students seeking information, especially in schools where there are not enough teachers and trained librarians. AI-driven reading support tools can also cater to students with special educational needs, by helping to create more inclusive learning environments.

In the context of Nigerian primary and secondary schools, the integration of such tools is very promising. With the country's large youth population and increasing emphasis on digital literacy and STEM education, school libraries need to evolve to meet the dynamic demands of 21st-century education. Simple AI tools offer a pathway toward achieving this transformation. For example, an AI chatbot integrated into a school's digital library platform could provide 24/7 access to frequently asked questions, book recommendations, and research support—functions that are especially useful in environments with few or no trained librarians. Similarly, smart cataloguing systems can help manage book inventories more efficiently, ensuring that both students and teachers can locate needed materials with ease.

The adoption of Artificial Intelligence into library services transforms the way librarians manage and deliver information (Akhimien and Osawele, 2024). Nigeria is in dire need of technological inclusion starting from early educational levels. More so, the deployment of AI tools in school libraries aligns with broader national and international education goals, including the United Nations Sustainable Development Goal 4, which calls for inclusive and equitable quality education and the promotion of lifelong learning opportunities for all. By making library services more accessible, efficient, and engaging, simple AI tools can contribute to reducing disparities in education, particularly in rural and underserved communities where educational resources are lacking.

Furthermore, Nigeria's current educational policy frameworks, such as the National Digital Economy Policy and Strategy (NDEPS) and the Education for Change: A Ministerial Strategic Plan (2018–2022), emphasise the importance of technology in transforming education. These policies provide an enabling environment for the adoption of digital tools, including AI, within school systems. However, implementation has been inconsistent and

often limited to urban areas and elite institutions, leaving public primary and secondary schools at a disadvantage.

By focusing on elementary AI solutions that are cost-effective and user-friendly, this study advocates for a practical approach to technological integration in our school libraries. Simple AI tools is a good way to start. For all stakeholders, the development of a strategic framework for the adoption and integration of AI tools in school libraries is imperative and urgent. The ultimate goal is to prepare school libraries as dynamic, responsive, and student-centered spaces that support the development of lifelong learners in an increasingly digital world. This research paper seeks to expose simple AI tools, their potentials, and implementation strategies for Nigerian primary and secondary school libraries. In doing so, the paper aims to contribute to the literature on educational innovation in Nigeria and highlight the role that AI in school libraries can play in the technological advancement of both the librarians and the learners and in enhancing inclusive learning environments.

**Literature review**

Literature on artificial intelligence in the Nigerian library landscape is gradually gaining momentum. In April 2024, Oyetola, Oladokun & Dogara, published a journal article titled: *LIS Educators' Perception Towards the Adoption of AI Tools in Nigerian Library Schools*. The research delved into the knowledge and views of Library and Information Science (LIS) educators regarding the use of AI in library schools in Rivers State. A survey approach was employed, combining qualitative and quantitative methods. They recommended that Nigerian library schools should fully implement AI technologies like chatbots, barcodes, RFIDs, and robotics to enhance teaching activities and also that higher education institutions develop specialized training programs and workshops on AI for library schools, covering both basic and advanced concepts. Also writing on library and information science schools Adetayo, Oladipo, Adeleke, Odunwu, (2023), stressed the importance of technology-enhanced approaches, like gamification, to improve cataloguing and classification education in library schools.

Research has also been done on AI in the academic library sphere in Nigeria. Isiaka, Olarongbe, Sulyman, Aremu & Saba-Jibril (2024) in their study highlighted AI tools which can enhance operations in academic libraries in Nigeria. The study investigated the

perceived awareness and usefulness of artificial intelligence technology for library operations in Kwara State academic libraries using descriptive survey design. It revealed respondents awareness of the existence and importance of AI to library operations today and equally the challenges they face. It then recommended that AI technologies such as robots, chatbots, and expert systems should be integrated to libraries to provide top-notch services to their users. Also writing on AI and academic libraries in Nigeria, Igbo, Imo, Jidere & Ugwu (2024) published a paper titled: Adopting Artificial Intelligence in Academic Library Services in Nigeria: Requirements and Challenges. From the findings, it recommended that library administrations in Nigeria should engage in adequate training and manpower development initiatives to prepare librarians to adopt AI technology in library operations and services. Again issues in academic libraries and AI in Nigeria was researched by Odigie (2024). The paper was titled-Exploring the awareness, use and challenges facing the integration of artificial intelligence in library services by librarians in university libraries in North-Central, Nigeria. The study used qualitative approach, with .a case study design. Results indicated that while reference librarians demonstrate a substantial awareness of AI tools such as ChatGPT and Gemini, their utilisation remains primarily for personal use rather than professional service delivery within libraries. Challenges were enumerated, and it was recommended that targeted training programmes and infrastructure investments to facilitate the effective adoption of AI in Nigerian university libraries should be put in place.

From the perspective of library services and AI in general Adewojo, Amzat & Abiola (2024) suggest simple AI tools to enhance accessibility and user engagement, and equally address challenges like limited resources and outdated systems. Another related article is titled - Exploring the Integration of Artificial Intelligence in Nigeria Library Services (Ibrahim & Okpala, 2024).This study explores the integration of Artificial Intelligence (AI) in Nigeria's library services, highlighting its potential for enhanced information retrieval, automation, and personalised user experiences, while addressing challenges related to data quality and digital literacy. It was based on chronological review of some literatures and current initiatives. The paper highlights AI tools such as recommendation systems, automated cataloguing, and natural language processing that can enhance information

retrieval and user engagement in libraries in Nigeria by improving efficiency and accessibility for students and staff.

*Artificial intelligence in the library: Gauging the potential application and implications for contemporary library services in Nigeria* is the title of a paper authored by Oladokun, (2023). The study examined the potential application and implications of artificial intelligence for contemporary library services in Nigeria, using the expository research approach. It addressed how academic libraries can utilize artificial intelligence to support innovative library services. It recommended that academic libraries should fully embrace artificial intelligence like chatbots, barcodes, RFIDs, and robots for delivering quality services and libraries should also leverage on the opportunities presented by artificial intelligence to reconnect their remote users.

Ewa, (2024) conducted a descriptive survey to investigate whether an investment in artificial intelligence literacy predicts the enhancement of educators' skills for them to be effective in an AI powered environment in state primary schools in Nigeria. It was titled*: Artificial Intelligence (AI) Literacy, An Investment for Enhancing Educators' Skills in AI Powered Primary Schools in Nigeria. International Journal of Research and Innovation in Social Science*. The results suggested that knowledge of AI, use of AI devices and understanding the ethical issues about AI technologies significantly predict the enhancement of educators' skills in AI powered primary schools in Nigeria. Far reaching recommendations were made including that government should organise training workshops on AI literacy for educators in schools; the policy on education needs review to produce a framework for the introduction of AI in education (AIIE) to benefit the teachers; the curriculum of teacher education has to be revised to feature AIIE; AI literacy should be a requirement for recruiting new teachers; schools have to produce guidelines for the application of AI devices; government can create a demonstration school to trial the AI initiative; government can commit one percent of value added tax to fund AIIE; awareness campaigns should be organised regularly through various media to educate relevant stakeholders about the benefits of AIIE and that schools have to produce guidelines for the application of AI devices.

Given the growing interest in leveraging technology to improve learning outcomes and bridging educational inequalities, there is a need for targeted research on the practical application and viability of AI tools in school libraries. Most existing literature on AI in education tends to focus on academic libraries, library and information science schools, and library services in general, with limited attention given to the school libraries in basic education level. This gap in the literature necessitates this closer examination of how simple AI tools can be strategically adopted to improve library services and support teaching and learning in Nigerian school libraries now. The findings are presented under these thematic areas: the importance of simple AI tools to Nigerian school libraries; list of simple AI tools for school libraries; coping strategies for effective implementation; recommendations and conclusion.

## Importance of Simple AI Tools to Nigerian School Libraries.

In an era when information is increasingly digital and students are expected to be tech-savvy and information literate from childhood, the traditional school library model in Nigeria is increasingly getting outdated. There are lots of profits in enforcing AI operations in early education institutions to mold the generations in digital literacy from infancy. This becomes more attractive now that lots of cheap opportunities are there to enlarge our AI profile in school libraries without looking at our budget and allocations that constantly dwindle. Some of these benefits are:

1. Faster Access to Information

Speedy access to a wide range of information is a cardinal characteristic of AI. The quantum of information AI generates at the speed of light has turned the trajectory of access to information for good.

AI-powered search engines or chatbots for instance, can help students find books, articles, and resources quickly and more efficiently. Also Tools like optical character recognition (OCR) allow digitisation of local content and textbooks, thereby improving access Wagwu, Okpala, Maxwell & Oladokun (2024).

2. Enhanced Learning Support

AI in school libraries greatly transforms the general learning atmosphere and makes students' progress with ease.AI tutors and language tools such as grammar checkers or translators assist students with assignments, reading comprehension, and writing. Also personalised recommendations help match students with appropriate reading levels and topics.

3. Streamlined Library Management

School librarians are also relieved of the stressful and tedious management routine which are simplified by AI. Automated cataloging, circulation, and inventory management save time for library staff. AI-based tracking systems can monitor overdue books and suggest restocking priorities, thereby easing the administrative burden of the school librarians (Akpukpu, & Osawele, 2025).

4. Promotes Digital Literacy

Familiarity with the use of AI tools in school libraries fosters digital skills among students and teachers. This ultimately prepares them for a technology-driven future (Oyetola, Oladokun, & Dogara, 2024).

5. Cost-Effectiveness

Many simple AI tools are free or cheap and can be run on smartphones or basic computers already in some schools. A lot is gained from spending little or nothing.

6. Bridging Educational Gaps

AI can help address teacher shortages by offering support tools for students in underserved or rural areas. It equally supports inclusive education by aiding students with learning disabilities. A good example of this is the text-to-speech tools for the visually impaired.

7. Encouraging Independent Learning

AI tools empower students to explore topics outside the classroom, which ideally supports lifelong learning habits (Ijaiya, 2024).

8. Data-Driven Decision Making

AI can help school librarians track usage patterns and make data-informed decisions about which materials to acquire or promote (Akpukpu, & Osawele, 2025).It makes book acquisition simple and accurate.

9. Aligning with Global Trends

Integrating AI prepares schools to align with global educational standards and innovations (Ijaiya, 2024). It offers Nigerian school librarians' cheap opportunity to operate at per with their international colleagues.

10. Boosting Library Relevance

In all, with AI integration, school libraries can transform from passive book repositories into active, interactive learning environments (Adewojo, Amzat, & Abiola, 2025).

**List of Simple AI tools for School libraries.**

It is becoming more and more imperative for school library section to open the artificial intelligence corridors to their library operations and services. Here presented as filtered are a list of selected very simple, beginner-friendly AI tools suitable for school libraries in Nigeria, considering common constraints such as low bandwidth, limited infrastructure, and non-expert users. For ease of comprehension, the list is organised under- tool name, functions, use in libraries and the simple features:

a. Google Lens
**Function**: Image recognition (like, scanning books, translating text).

**Use in Libraries**: Helps students, staff and librarians identify books, translate passages, or scan text from printed material.

**Simple features**: Works on smartphones and is intuitive to use.

**b**. Grammarly (free versio**n)**

**Function**: It works as AI-powered writing assistant.

**Use in Libraries**: Assists students in improving grammar and clarity in writing assignments or reading comprehension tasks.

**Simple features**: Browser-based; easy to install and use.

c. YouChat (built into You.com)

**Function:** Chatbot similar to ChatGPT.

**Use in Libraries:** Can help answer questions, explain terms, and generate learning materials.

**Simple features**: Accessible via browser, no account required.

d. Talk to Books (by Google)

**Function:** AI tool that finds relevant book passages based on user questions.

**Use in Libraries:** Great for quick information retrieval and book suggestions.

**Simple features**: No login needed, very beginner-friendly interface.

e. Otter.ai free tier)

**Function:** Speech-to-text AI.

**Use in Libraries**: Converts lectures or readings into text—helpful for note-taking or accessibility.

**Simple features**: Mobile and web-based, with a basic free plan.

f. Microsoft Immersive Reader

**Function:** Assists with reading comprehension using AI to break down and read text aloud.

**Use in Libraries:** Helps struggling readers or ESL learners in understanding texts.

**Simple features:** Built into Microsoft Word, OneNote, and Edge browser.

g. ChatGPT

**Function:** this is onversational AI for research, homework help, and resource recommendations.

**Use in Libraries**: Assists with summarizing books, explaining difficult concepts, generating reading questions.

**Simple features:** Web-based, text-driven, and doesn't require coding knowledge. It is free with OpenAI account.

h. TTS Reader

**Function: t**his is text-to speech tool, that Reads text aloud using AI voices.

**Use in Libraries**: Aids visually impaired students or helps learners with low literacy levels.

**Simple features**: Browser-based, no installation needed.

i. **Canva Magic Write**

**Function:** AI content generation.

**Use in Libraries**: Helps design flyers, posters, or newsletters for library events or reading programs.

**Simple features**: Drag-and-drop interface; no technical skill required and it is free with canva account.

j. Bing AI or Copilot

**Function**: Web search combined with AI summarization and chat.

**Use in Libraries**: Finding credible information quickly, summarizing articles, or generating reports.

**Simple features**: it is built into Edge; no separate setup needed. It is free with Microsoft Edge.

These listed tools are to be adapted, domesticated and introduced by the school librarians to the pupils, students and staff. Although some of these tools may require internet access, but most work well on low bandwidth. No coding or technical expertise is needed. Tools like Immersive Reader and grammarly can run on existing school computers or phones. AI tools are especially helpful for accessibility and inclusive education.

Once started, the school librarian should look beyond this list. There are also a lot of other applications that can be installed and work with. There are some that can be used for the organisation and management of resources and services for a start. Google workspace is a good example. It is a suite of web-based productivity and collaboration tools developed by Google. It includes applications such as Spreadsheets which Nigerian school librarians can use for accessioning and patrons' data management. It is available at no cost. Another platform of great interest and a-must-use for every school library is the Epic Children's library. It is a free online reading platform programme with over forty- thousand quality books that can be downloaded and even used offline. It is also known as Epic schools and has schedules for lots of kids free reading hours.

**Coping strategies for Success**

Despite the potential benefits, the implementation of AI in Nigerian school libraries will not be free from challenges. Among these are infrastructural defects, such as unreliable power supply, poor internet connectivity, and the high cost of digital devices. There is also the issue of digital literacy, as many school staff and students may lack the necessary skills to effectively utilise AI-based applications. Additionally, issues around data privacy, the quality of AI-generated content, and the need for culturally and linguistically relevant AI tools are also of growing concern. These and other age-long challenges need not be over emphasized here, rather futuristic coping strategies are suggested to overcome them. The school librarian needs to be:

1. Resilient- measurable successes cannot be achieved in domesticating AI tools in Nigerian school libraries without perseverance. Once the will and vision are there, the word is 'resilience'. Projects should be planned, graded and goal-driven.

2. Explorative- school librarians should expose themselves to the ever-expanding world of new information technologies including artificial intelligence. Though almost unendingly changing, librarians should always track and experiment with them, before transforming needed ones to real time library practices, which is the key.

3. Innovative- school librarians should be flexible in the designing and redesigning of AI tools to suit their library needs. Most applications allow such creativity.

4. Ready to sacrifice- a lot of time, perseverance and resources go into these transformative projects and the librarian should be always ready to get to every goal.

5. Open to collaboration and consultation with colleagues: some librarians are already on the move by adopting some of these tools in their libraries. Advice and guidance should constantly be sought. Networking and working with colleagues will speed up the processes and build confidence.

6. Training-conscious- Interest in self- development and training should take upper hand here. More than ever before, school librarians need to catch-up with training and retraining needed to be abreast with AI facilities. AI offers a lot of opportunities free for information managers like libraries to take advantage of. Only frequent training can expose one to the knowledge and effective use of these AI resources. Free training are also available online and otherwise. The Nigerian Library Association and its sections do often offer free or very cheap workshop and webinars which every school librarian should exploit!

7. Adventurous- constant exploration and wandering in the AI space is recommended. The courage and confidence to experiment with new tools should be developed and sustained.

8. Ready to cooperate with school authorities- successful AI tools should be introduced into school libraries in agreement with the authorities who are to also make use of some of them. Such collaboration will make financial and other demands easy to get.

**Conclusions.**

The list of free AI tools continues to grow by the day, only ten were identified by this study for easy domestication in Nigeria. By exploring the opportunities, benefits, and implementation strategies associated with using simple AI tools, this research seeks to contribute to the literature on national educational innovation and inform practical interventions that can enhance library services at the foundational level of education in Nigeria. School librarians should brace up to the global demands for better and trending services.

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