# INTEGRATION OF DIGITAL TOOLS IN FACILITATING TEACHING AND L EARNING OF INDIGENOUS LANGUAGES

BY
**Hamisu Sale**
Department of Hausa, School of Languages, FCT, College of Education, Zuba, Abuja
E-MAIL: salehamisu@gmail.com
&
**Aisha Dauda**
Department of Primary Studies, School of Languages, FCT, College of Education, Zuba, Abuja

**Abstract**
*Integration of digital tools into the teaching and learning of indigenous languages allows for in creased accessibility, engagement, and preservation of these languages by utilizing platforms l ike online dictionaries, audio recordings, interactive apps, and virtual classrooms, enabling le arners to practice and access language materials anytime, anywhere, while also fostering cultu ral connection and community involvement through digital platforms. Integration of digital too ls in language teaching and learning can also be referred to as using various technological plat forms and applications within a language learning environment to enhance students' engagem ent, provide interactive activities, and facilitate access to diverse learning materials, ultimately improving language acquisition by making the process more dynamic and personalized. Digita l tools offer powerful opportunities to preserve, revitalize, and promote indigenous languages, especially in the digital age, but require careful consideration of cultural contexts and commun ity needs.*

## Introduction

Integration of digital tools into digital learning platforms offers a transformative approach to preserving cultural identities in an era where technology drives global communication and k nowledge sharing. These language can transcend geographical boundaries by leveraging digital tools, fostering wider accessibility and deeper engagement among native speakers an d learners alike. This digital evolution preserves linguistics diversity and revitalizes indigen ous languages, ensuring they remain vital to education and cultural expression in the moder n world. Nigeria with its hundreds of in digenous languages, faces the unprecedented threat of language extinction. However, creati ve digital learning tools and resources provide an opportunity to strengthen and preserve the se language ensuring their survival in today's rapidly changing world.

Digital tools offer significant potentials to revitalize and preserve indigenous languages providing accessible platforms and records for learning and teaching through online courses, mobile apps, and interactive software.

I . Accessibility and reach Online platforms and apps: Digital learning platforms can make language learning accessible to both n ative speakers and those interested in learning the language,

- Mobile Applications: Mobile apps can be customized to incorporative indige nous languages making them easily accessible on smartphones and tablets.
- Customizable Content: Digital resources can be tailored to specific indigeno us languages and cultural context, ensuring relevance and engagement.

- Global Reach: Digital tools can connect indigenous languages learners and s peakers across geographical boundaries, fostering a sense of community and shared identity.

2. Interactive and engagement learning Multimedia Resources: Digital tools allow for the integration of multimedia element like audio, v ideo and interactive exercises, making language learning more engaging and effectiv e.

- Self— Paced Learning: Online platforms and apps can offer self _paced lear ning modules allowing learners to progress at their own speed and focus on a reas where they need more support.
- Gamification: Interactive game and quizzes can be incorporated into languag e learning apps to make the process more fun and motivating.

3. Preservation and Revitalization: Digit al Archives: Creating digital archives of indigenous languages including recording, d ictionaries and cultural materials helps preserve linguistic and cultural heritage.

- Language Documentation: Digital tools can facilitate the documentation and analysis of indigenous languages, contributing to a better understanding of th eir structure and evolution.
- Community Engagement: Digital platforms can serve as spaces for indigeno us communities to connect, share their languages, and promote language revi talization efforts.

4. UNESCO's Digital Initiative for Indigenous Language Toolkit: This toolkit provides guidance and resources for using digital tools to preserve and promote Indigenous Language.
   - Mobile Apps and Online courses Numerous apps and online courses are bein g developed to teach indigenous languages after incorporating interactive exe rcises and cultural content.
   - Al-powerful Language Learning Tools: Al can be used to create personalized learning experiences and language learning apps tailored to specific indigeno us languages.
   - Challenges and Considerations Digital Divide: Ensuring equitable access to t echnology and internet connectivity is crucial for teaching all indigenous com munities.
   - Language Documentation and Standardization: Developing accurate and stan dardized digital resources for indigenous language resources collaboration be tween linguistic educators and community members.
   - Cultural Sensitivity: Digital initiatives must be culturally sensitive and respectful of traditions.
   - Sustainability: Ensuring the long-term sustainability of digital initiatives req uires ongoing funding, training, and community engagement.

**BENEFITS OF DIGITAL TOOLS FOR INDIGENOUS LANGUAGE**

- Preservation and revitalization: Digital tools can help preserve endangered languages by making them accessible online and facilitating language learning for both native speakers and non-native speakers.
- Education and Literacy: Digital learning platforms can be used to create educational resources in indigenous languages, promote language literacy, and make language learning more accessible.
- Community Building: Online platforms can foster a sense of community among speakers of a language, helping to maintain cultural identity and social connections.
- Accessibility: Digital tools can make indigenous languages accessible to a wider audience regardless of location or resources.
- Data Sovereignty: Indigenous communities need to exercise ownership over their language and cultural data to ensure that digital resources are used respectfully and ethically.

## CHALLENGES AND CONSIDERATIONS

- Digital Literacy: Ensuring that indigenous communities have the necessary digital skills and access to technology is crucial for successful implementation.
- Language Polarization: While the internet can be a powerful tool, its polarization has led to a reduction in the availability of language online, which needs to be addressed.
- Context Matters: The success of digital initiatives of the community depends on their language, culture, and technology access.

  Data Sovereignty: Respecting indigenous data sovereignty is essential to ensuring that digital resources are used ethically and respectfully.

## INDIGENOUS LANGUAGE IN DIGITAL LEARNING

Integrating indigenous languages into digital learning platforms offers a transformative approach to preserving cultural identities in an era where technology drives global communication and knowledge sharing. These languages can transcend geographical boundaries by leveraging digital tools, fostering wider accessibility and deeper engagement among native speakers and learners alike. This digital evolution preserves linguistic diversity and revitalizes indigenous languages, ensuring they remain vital to education and cultural expression in the modern world.

**THE USE OF DIGITAL TOOLS IN TEACHING AND LEARNING Digital learning tools provide the opportunity for immediate feedback and assessment. Learners can check their answer and solutions immediately and receive immediate feedback on their performance. This allows for quicker identification of strengths and weaknesses and help learners work on targeted improvements.**

## THE DIGITAL DEVICES USED FOR TEACHING

Interactive white boards are used by teachers to support teaching in front of a class. These interactive white boards are multifunctional devices. They only output on the screen but also take input as a teacher can use it as a touch screen to write notes and input commands.

## TYPES OF DIGITAL LEARNING RESOURCES

- Digital Textbooks: Digital textbooks can be a cost effective way to update the curricu lum when necessary.
  Online grade books and classrooms. Programs like Google classroom, Blackboard s chooling and the like are excellent organized tools for teachers and students. Teacher s can keep grade books, teaching materials, attendance, the information and different iation strategies organized all in one place.
- Interactive Models: When physical models are difficult or impossible to obtain, man y interactive models can be sourced online. For example, in an anatomy and physiol ogy classroom, a cadaver lab would be impossible in the K — R context.

## BENEFITS OF DIGITAL TOOLS INTO INDIGENOUS LANGUAGE LEARNING

Integrating Digital tools offer numerous benefits for enhancing learning by providing perso nalized, interactive and accessible educational experiences. ● Personalized learning experie nces. Al—powerful platforms have revolutionized education by offering tailored, dynamic and accessible learning experiences. Platforms such as Dream-box and Knewton utilize rea l-time data to adjust the difficulty, type, and sequence of learning materials (Esen, 2020)

- Teaching digital tools significantly enhance teaching and administration by improvi ng efficiency, organization and overall effectiveness.
- Effective Communication: Digital tools significantly enhance lecturers ability to co mmunicate effectively with students and colleagues, streamlining interactions and fo stering a more connected and responsive educational environment. These tools save t ime, while ensuring communication remains clear, accessible and well organized„ (Dobre 2015).
- Flexible learning: Digital tools allow for self paced learning enabling individuals to l earn at their own speed and convenience.
- Cross — Cultural Exchange: Digital tools facilitate connections between indigen ous communities and broader audience, promoting cultural exchange and understand ing.
- Innovation in language learning: Digital tools drive innovation in language learning methodologies, reacting new and effective ways to learn and teach indigenous langu age.
- Sharing cultural knowledge: Digital tools can be used to share cultural stories, traditi on and knowledge in indigenous language to younger generations.
- Interactive learning: Digital tools often incorporate elements like quizzes, games, an d multimedia content, making learning more engaging and fun.
- Wider Audience: Digital platforms and resources can reach a broader guideline, incl uding those in remote areas or diaspora communities, who may not have access to tra ditional learning methods.
- Diverse formats: Multimedia resources like audio recordings, videos, and interactive exercises can cater to different learning styles and enhance engagement.
- Documentation and Archiving: Digital tools facilitate the creation of digital archives and documentation projects, preserving linguistic and cultural knowledge for the digital generation.

- Language Learning Apps and Platforms: Platforms like Duolingo and Memrise incorporate indigenous language, gamifying the learning process and making it more engaging.

## CONCLUSION

To effectively incorporate indigenous language into digital learning, it is essential to consider several vital strategies and factors, like community engagement and collaboration and resources, technological adaptations, curriculum development, teacher training, and capacity building.

- **References**


Dobre, I. (2015). Learning Management Systems for Higher Collaboration. P. 313-320.

Digital initiatives for indigenous language, UNESCO. 2024.

Empowering indigenous language in the digital community. UNESCO, 2024.

Esen, A. K., and Zor, U. (2022). Academic Entrepreneurship: The Case of Dowser. In Academic and in Entrepreneurship: Foundations in Theory and Lessons. Pp. 175-189.

Innocent, N. (2025), Indigenous Languages in Digital Learning. Phillips counseling.

Mein, SU, Lin ma. Dongba, Z., Akilu, Y.R., Clara, C. (2025). Exploring Benefits and Concerns of Incorporating Digital Tools in Engineering Education. European Journal of education pedagogy. Vol. 6. No. I

Meighan, P.J. (2021). The role of technology in indigenous language: SAGEpub *Journal.*

National Consultation on Indigenous Language. UNESCO, 2025.

Yusuf, A. M, Bolaji, D., Shuaibu, A. O., Margrate, N. A., Nafisa, R., and Musediq, T. B. (2024). Revitalizing Indigenous Knowledge System via Digital Media Technologies for Sustainability.