iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 12 **Issue:** IX **Month of publication:** September 2024

DOI: https://doi.org/10.22214/ijraset.2024.64252

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue IX Sep 2024- Available at www.ijraset.com

Use of AI in India and International Education in Developmental Countries

Mrs. Rajani Byakodi
Senior Grade Lecturer Department of Computer Science & Engineering Government Polytechnic Mulabagal, Karnataka, India

Abstract: ***The use of AI in education, particularly in developing countries like India, is transforming how learning is accessed and delivered. By overcoming traditional barriers such as lack of infrastructure, qualified teachers, and resources, AI-driven solutions are offering innovative methods to enhance education. Below is a more detailed exploration of AI's role in India and other developing countries, along with references to highlight these trends.***
Keywords: AI, EdTech, Leverage Edu, Toppr, Diksha, NEP

I. AI IN INDIAN EDUCATION

India, with its vast population and diverse geography, faces significant challenges in providing quality education. However, AI is playing a pivotal role in addressing these challenges:

A. Improving Access to Education

1) EdTech platforms: Companies like BYJU's and Vedantu have integrated AI into their educational platforms to provide personalized learning experiences for millions of students across India. These platforms offer AI-driven assessments, tutoring, and adaptive learning modules tailored to each student's pace and needs.

2) Bridging the language gap: AI-powered language translation tools have been helping students in non-English speaking regions by offering educational content in local languages. For instance, Google's AI-based translation services make English educational material accessible to students in various Indian languages.

B. Teacher Empowerment and Support

1) AI tools are being used to assist teachers in grading and providing feedback. Platforms like Leverage Edu and Toppr use AI to automate routine tasks, allowing teachers to focus on engaging with students.

2) AI-based teacher training programs: AI is also being used to upskill teachers through platforms like Diksha, where educators can access training modules tailored to their needs and capabilities.

C. Educational Initiatives

The National Education Policy (NEP) 2020 in India recognizes the importance of AI and emphasizes integrating AI-based tools into the education system. The policy promotes AI research and innovation, with a focus on expanding digital and online education platforms.

II. AI IN INTERNATIONAL EDUCATION IN DEVELOPING COUNTRIES

Similar trends are emerging in other developing nations, where AI is transforming access to education and providing personalized learning solutions.

A. Personalized Learning and AI-powered Platforms

1) Africa: AI-driven platforms like Ubongo and Eneza Education are expanding access to quality education in remote areas across Africa. These platforms provide AI-powered tutoring through SMS, radio, and mobile platforms, reaching students who have limited access to the internet.

2) Latin America: In countries like Brazil and Colombia, AI-powered tools are helping bridge the gap in access to education. For instance, platforms like Arukay use AI to teach coding and digital skills, empowering students to compete in the global economy.

©IJRASET: All Rights are Reserved

B. *Overcoming Educational Infrastructure Gaps*

1) In areas with low connectivity, AI solutions designed for mobile phones and low-bandwidth environments are crucial. For instance, the Onebillion initiative in Africa uses AI to create offline content that supports literacy and numeracy development.
2) AI-driven assessments: In regions with few teachers or overcrowded classrooms, AI-based assessments and feedback systems ensure that students receive personalized attention and support. Tools like **CENTURY Tech** in Kenya and South Africa use AI to create real-time feedback loops that help educators adjust their teaching strategies accordingly.

C. *Teacher Training and Development*

AI-powered platforms are also helping train teachers in developing countries. The Teach the Teachers initiative in Sub-Saharan Africa uses AI to provide teachers with resources and training programs, ensuring they stay updated with the latest pedagogical approaches.

III. CHALLENGES IN IMPLEMENTING AI IN EDUCATION IN DEVELOPING COUNTRIES

Despite the potential benefits, implementing AI in education in developing countries faces several challenges:

1) Digital Divide: The lack of infrastructure such as stable internet connections and electricity limits the reach of AI-driven educational solutions in rural and underserved areas.
2) Cost and Accessibility: While AI offers scalable solutions, the initial costs of AI technologies can be prohibitive for some educational institutions, particularly in low-income areas.
3) Data Privacy and Ethical Concerns: The collection and use of student data by AI systems raise privacy concerns. Developing countries may not have robust data protection laws, which could expose students to risks.

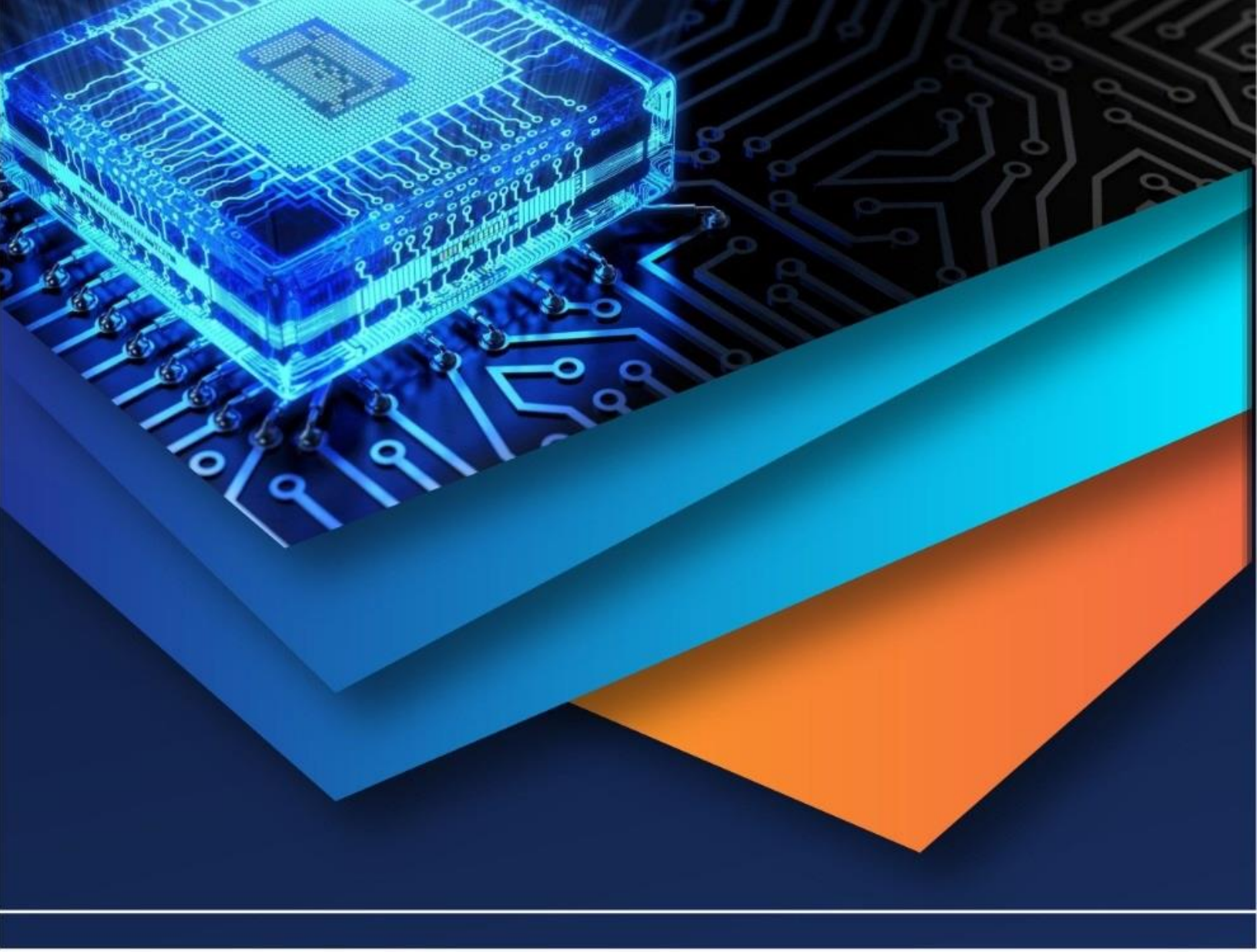
IV. CONCLUSION

AI in education is an emerging force in developing countries, particularly in India. It enhances access, supports teachers, and personalizes learning experiences. While challenges remain, the growth of AI-based educational technologies holds the promise of bridging gaps in educational quality and accessibility. However, for AI to achieve its full potential, ongoing investments in infrastructure, teacher training, and data security are essential.

REFERENCES

[1] BYJU's AI integration in personalized learning
[2] Google's AI translation tools in Indian education
[3] Vedantu and AI-driven assessments
[4] India's National Education Policy (NEP) and AI initiatives
[5] Ubongo and Eneza Education using AI in Africa
[6] CENTURY Tech’s AI education tools in Kenya

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)