International Journal of Teaching, Learning and Education (IJTLE)
ISSN: 2583-4371
Vol-3, Issue-6, Nov-Dec 2024
Journal Home Page: https://ijtle.com/
Journal DOI: 10.22161/ijtle

Digital Technology in English Language Learning: Opportunities, Challenges, and Innovations in India's Education Landscape

Filza Zaki Khan[1], S Anas Ahmad[2]

[1]Research Scholar, Department of English, Aligarh Muslim University, India
Email: filzazakikhan@gmail.com
[2]Assistant Professor, Department of English, Aligarh Muslim University, India
Email: anas.in994@gmail.com

Received: 04 Oct 2024, Received in revised form: 01 Nov 2024, Accepted: 07 Nov 2024, Available online: 14 Nov 2024

Abstract

Against the background of India's multicultural society, this paper elucidates the progressive use of digital advancement in learning the English language. This research paper focuses on the opportunities for digital technologies in English learning in India and its progress and further growth. It reveals several technological possibilities encompassing the use of additional multimedia tools in learning, the generation/development of mobile applications for learners in urban and rural areas, their ability to choose according to their needs, and the provision of easy access to learning. The paper also highlights specific concerns in the Indian context of studying, namely the urgent need to address the digital access divide, lack of physical facilities, and socio-economic factors that limit people's ability to apply technology for learning. This paper further outlines the emergence of transformative trends that are reshaping the landscape of English language education in India. These trends include the integration of Augmented Reality/Virtual Reality in language learning and teaching. The study provides a comprehensive understanding of the digital technologies that are revolutionising the acquisition of English in India, drawing on a systematic analysis of existing literature. The research findings underscore the critical challenges and issues that must be addressed to fully leverage the potential of digital transformation in enhancing English learning nationwide.

Keywords— Digital age, English Language, India, Learning, Technology.

I. INTRODUCTION

The integration of digital technologies has dramatically impacted education, especially in the learning of the English language. Since teaching of English encounters challenges that arise from the linguistic diversity in a multicultural country such as India, the integration of digital tools offers a plethora of new options that can be adopted to enhance the teaching and learning of the language. As learners from various socio-economic backgrounds seek access to quality education, technology has emerged as a powerful tool to bridge gaps, making learning more accessible and engaging. Cheng et al. (2015) opined that ELT has witnessed several changes with the emergence of technological advancements that altered traditional teaching methodologies. These changes are especially significant in cases where there is a growing use of multimedia tools, mobile applications, and online learning platforms to identify learning needs and preferences. Likewise, Jamalova (2023) supports this by asserting that incorporating technology in teaching and learning environments not only increases the students' interest level but also improves students' competencies in the

four skills, namely reading, writing, listening, and speaking.

"In recent years, the Indian education system has witnessed a push towards digitisation, driven by initiatives such as Digital India (NEP, 2020, p. 5)". These initiatives aim to expand access to digital resources and improve the quality of education, particularly in rural and underserved areas. As highlighted by Motteram (2013), digital innovations such as Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) have become integral to English language instruction, offering flexibility and personalised learning experiences that cater to individual learner needs.

However, despite these advancements, challenges remain. The digital divide—stemming from unequal access to technology and the internet—continues hindering equitable educational opportunity distribution. Moreover, socio-economic factors and infrastructural limitations further exacerbate this divide, limiting the potential benefits of digital tools for learners in less privileged areas. Addressing these challenges is crucial for ensuring that digital transformation in English language education is inclusive and impactful.

This study explores the opportunities, challenges, and innovations in using digital technologies for English language learning in India. By thoroughly examining the existing body of literature, this research aims to shed light on the opportunities available and provide insights into the effectiveness of these technologies while also identifying key barriers to their widespread adoption. This study seeks to contribute to the ongoing discourse on how technology can be harnessed to improve English language education in India, particularly in a post-pandemic world where online learning has gained unprecedented prominence. This research also explores novel trends for creating immersive and interactive language education in India by assessing the potential innovative tools such as AR/VR.

II. ELL IN INDIA: A HISTORICAL PERSPECTIVE

2.1 Tracing the Rise of ELL in the Post-Independence Era

Despite being a multilingual powerhouse, colonial India did not welcome English as a language for the masses without resistance. English was considered 'the much-hated language' due to how it unravelled in the Indian subcontinent. Hence, the perceived notions towards English language learning in India suffered a series of dilemmas in the postcolonial period. While there were movements to reduce the influence of English in favour of native languages, English was still widely used and recognised for its practical advantages. It facilitated communication across regions and provided access to global knowledge. Moreover, it remained essential in higher education, business, and governance, with proficiency in English improving employment prospects (Vijayalakshmi & Babu, 1995).

The position of English Language Learning in this context-rich setting has shown positive responses since the post-independence era. According to Ramanujam (2011), "*In a way, an associate official language, English, knowingly or unknowingly has played an instrumental role in maintaining the diversity of India's language scene because the existence of English has meant that it has not been necessary to select any one Indian languages as a national language. In fact, the states which used to rally to slogans such as angriji hatao (remove English) are now eagerly introducing English in the first year of schooling.*" (qtd in Coleman, 2011, p. 28)

Hence, once considered an instrument of oppression, the English language gradually transitioned to a reluctantly adopted lingua franca, catering to the utilitarian purposes of the tech-driven, fast-paced, transformative world.

2.2 The Evolution of Digital Technologies in Education

The evolution of digital technologies in education in India has progressed in three main periods: Pre-pandemic, during-the-pandemic, and post-pandemic eras. The pre-pandemic era saw the dominance of traditional education methods, such as physical classrooms, blackboard teaching, and authoritative-teacher-centered classrooms (Raviya & Upadhyay, 2021). However, the conditions of the classrooms in the pre-pandemic era had several shortcomings, such as low engagement and motivation, monotonous classrooms, etc., that needed to be addressed and acted upon. Furthermore, even though introduced, the digital initiatives lagged when it came to participation. Hota (2022) acknowledged significant challenges in the pre-pandemic era, "including inadequate digital infrastructure and limited access to computers and internet facilities in schools. Only 16.26% of schools had computers, and 7.42% had internet access" (Hota, 2022).

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.6.3

However, during the pandemic, India saw an exponential rise in integration and active participation in digital technologies, especially in the pandemic and post-pandemic era. Dependence on software applications like learning management systems (LMS), video conferencing, social media platforms, word processors, etc., became inevitable (Alturki & Aldraiweesh, 2021). However, challenges emerged, including disparities in access to devices and internet connectivity (Roy & Brown, 2022). While some institutions successfully implemented integrated LMS approaches, others struggled with fragmented solutions, using separate platforms for video conferencing, student interaction, and content sharing (Roy & Brown, 2022). Despite these challenges, the pandemic accelerated the adoption of digital learning technologies in higher education (Camilleri & Camilleri, 2021; Alturki & Aldraiweesh, 2021). Nonetheless, it is essential to note that India had been planning on going digital before the rise of the Pandemic. The National Knowledge Commission, headed by Sam Pitroda in 2005, crafted a report that extensively focused on digital literacy and the involvement of technology in education systems. The report entitled 'Report to the Nation' published in 2006, suggested key developments in the field of education such as "building an excellent knowledge system to meet the demands of the 21st century, as well as promoting the creation of a knowledge base for technological enhancement" (*Knowledge Commission Report | Government of India, All India Council for Technical Education*, n.d.). The report, however, further reflected on the later initiatives of the government of India. Launching the Digital India Programme on 1 July 2015 became an aegis for digital developments in India. Therefore, the foundation for digital India was already underway when the pandemic occurred. Consequently, this effort gained momentum, resulting in a rapid adoption of distinct technology-driven approaches and frameworks.

The third wave of digital evolution, the post-pandemic era, will play an essential role in shaping India's digital future. The first policy of the 21st century became the cornerstone for its holistic perspective on education with an emphasis on pillars such as equity, accessibility, affordability, etc. NEP (2020) has provided a comprehensive perspective on the 'way forward' on digital education by proposing to establish platforms like the National Education Technology Forum (NETF) with a focus on identifying emerging technologies, capacity building, and sharing the best practices across the educational system to ensure the effective interaction of digital tools (further initiatives by the Nep, 2020 discussed below) (NEP, 2020). However, challenges like infrastructure limitations and lack of scalability persist. Despite these barriers, initiatives like the National Digital Health Mission and Atma Nirbhar Bharat Scheme present opportunities for leveraging technology in the post-pandemic era. The lessons learned from COVID-19 and the accelerated increase in the use of technology are expected to shape India's digital future, implementing innovative and trending technologies, particularly Immersive Digital technologies such as augmented reality and virtual reality, making learning more creative and upgrading the level of education in India.

III. CURRENT TRENDS, SCENARIOS, AND OPPORTUNITIES

3.1 Digital Empowerment in India: Bridging Gaps through Technological Initiatives

Indian education has seen significant transformations in recent years, transitioning from a teacher-focused traditional information delivery system to a student-focused modern digital learning approach. According to Sun (2023), the number of smartphone users in India is estimated to reach 1.55 billion by 2040. To accelerate this process, many state governments have also started distributing smartphones/gadgets to students under programs like UP's 'Swami Vivekananda Youth Empowerment Scheme' to provide smartphones and tablets to schoolchildren, therefore equipping them with the necessary digital competencies and recognising their significance to align with the goal of achieving digital empowerment. The Indian government has also started implementing several digital initiatives to improve accessibility and ensure quality in disseminating education in higher education, especially in response to the COVID-19 Pandemic (Kumar, 2020; Singh et al., 2021). Hota (2022) and Ahmad (2020) listed initiatives such as SWAYAM, DIKSHA, National Digital Library of India (NDL), and PM eVidya, which offer a wide range of online courses across academic disciplines (Hota, 2022; Ahmad, 2020). These platforms assist the learners in retrieving quality education, compensating for the conventional barriers to learning. The government has further started emphasising the use of virtual labs, virtual reality-enabled classrooms, and curated online content for both students and teachers (Arbind Kumar, 2020).

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.6.3

Collaboration with the private sector, the introduction of language learning digital platforms like 'PlanetSpark' (Based on one of the author's experiences) and the adoption of blended teaching techniques are suggested to enhance digital infrastructure and improve the overall effectiveness of these initiatives (Hota, 2022) and digital platforms like PlanetSpark, etc. In addition, governments are consistently implementing schemes and scholarships such as Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) and National Scholarship Portal (NSP) to uplift the conditions of marginalised communities and make them digitally literate and bridge the persisting gap between existing classes. However, Hota (2022) insists on the persistent challenges, such as inadequate digital infrastructure, poor internet connectivity in rural areas, and insufficient training on digital methodologies. Therefore, it is crucial to attain a successful equilibrium between technology and conventional ways, which are still a viable strategy but not an impractical alternative to technology. (Uskov et al., 2018)

3.2 Leveraging technology in ELT classrooms

Having ruled out the importance and evolution of English and the emerging use of technology in the field of education in India, it becomes necessary to discern the current situation, trends and methodologies being used in ELT classrooms. Moreover, it is also essential to understand the ground-level implementation and whether or not it is reflected in the learners' performances. Various studies indicate a shift from traditional learning to blended, mobile-assisted, personalised learning (Vaishnav, 2024). Mobile applications in English language learning are highly beneficial for urban and rural learners in India since they cater to their environments. The app's utility is further bolstered by the widespread accessibility of mobile phones and mobile internet, enabling its use in various educational settings ranging from comprehensively equipped schools in major metropolitan regions to schools in rural areas with limited or no amenities. D. Roy and Putatunda (2021) illustrated how the transition to Web 2.0 led to the adoption of various changes to keep up with the changing times. However, they noticed that "the digital divide of the nation led to the asymmetrical distribution of technological and, therefore, educational opportunities to the rural and underprivileged sections of the nation" (Roy & Putatunda, 2021)

Language learning is a complex task and can become tedious at times as it involves not just the pragmatic aspects but a thorough understanding of the rules as well in order to speak correctly. SLA researchers have been actively investigating various methodologies to devise a method that could fulfil the exhaustive needs of the learners. Various methodologies, ranging from the Grammar-Translation Method (GTM) to Communicative Language Teaching (CLT), have been employed and evaluated, leading to the conclusion favouring an eclectic approach. The learning theories, such as Constructivist and task-based theories of language learning, emphasise the creation of knowledge through individuals' interactions with an external socio-cultural environment, positioning language instruction as central to the examination of socio-political discourse (D. Roy & Putatunda, 2021b). However, today's world (with globalisation at its peak) demands a strong emphasis on communicative and intercultural competencies, requiring innovative use of technologies and moving towards innovative methods to meet such requirements (Vaishnav, 2024a). The National Mission on Education through Information and Technology (NMEICT) launched by the Government of India has further reinforced the integration of technology in ELL classrooms with respect to modernising education (*Digital India Initiative of Government Has Revolutionized Education Access in Rural Areas*, n.d.).

Learners actively use Artificial Intelligence and Machine Learning to their full potential. Software like Chat-GPT, Claude, Perplexity, etc., have gained popularity among the young generation and are being used extensively. Furthermore, a school in Kerala - KTCT Higher Secondary School- has recently deployed India's inaugural artificial intelligence (AI) teaching robot, named 'Iris', which was created in partnership with Makerlabs Edutech. Driven by an Intel processor and furnished with an integrated voice assistant, the robot provides tailored educational experiences and engages with pupils through an Android application (Singh, 2024). Introduction of Language Labs, promotion of multi-modal learning, use of interactive software such as Duolingo, Tell Me More, etc., investments in speech recognition software, digital classrooms and learning management systems, making resources available on cloud-based technology, language testing tools, etc. and various others are being actively deployed to enhance the digital potential of India. Therefore, these technological advancements are implemented in an appropriate and just manner might prove to significantly enhance the learning of English.

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.6.3

IV. ADDRESSING THE CHALLENGES, DIGITAL GAPS AND AI RISKS

India's emphasis on becoming a thriving digital leader and remaining on par with global powers is much appreciated. However, it is also important to address the problems and challenges that remain an integral barrier in the way of its plans. The concerns in the Indian context are not just limited to multilingualism but also include the unequal distribution of assets, such as the case of rural-urban, which leads to a great digital divide. Singh (2010) described the conditions of rural areas as lacking access to ICTs, language labs, and audio-visual aids. Kumar (2024) explores rural India's myriad challenges in learning English. The successful execution of the English Language Teaching (ELT) curriculum at the elementary level encounters significant obstacles in rural environments. According to him, English Language Teaching (ELT) in rural regions stems from "formidable obstacles rooted in psychological, linguistic, institutional, and environmental factors" (Kumar, 2024,p.1). Another study illustrated how "English is often perceived as a subject rather than a language by rural students, hindering their engagement and proficiency" and how the focus is more on "rote memorisation rather than genuine language acquisition" (Ghuge, 2024, p.1). In addition to historical and economic inequalities, these problems are exacerbated by the restricted availability of educational resources and a shortage of skilled English instructors.

Moreover, the lack of favourable learning conditions and insufficient teacher training complicates the provision of effective English language education. A study indicated that the implementation of student-centred learning, adaptation to the new English curriculum, mitigating inadequate teaching resources, and managing overcrowded classrooms constitute substantial hurdles for English educators (Singh, 2010). Another variable underlying ELT classrooms here that poses a challenge is the motivation level of the learners. Due to the varied backgrounds of the learners, the socio-economic biases against the learners lead to rising demotivation.

Moreover, it is also impossible to ignore AI's threats when it comes to learning as a language. A study by Viktorivna et al. (2022) found that the consistent use of AI in Language Learning significantly reduced the learners' spontaneity and creativity levels. Another study listed concerns regarding the use of "AI in ELT could lead to a dehumanisation of language learning, by replacing human interaction and communication with machine and reduction in the quality of language instruction, as students become overly reliant on technology and fail to develop their interpersonal and communication skills" (Rukiati et al., 2023, p.7). Therefore, introducing Artificial Intelligence can be considered a 'blessing in disguise' due to its potential threats that come along with the significant benefits. Therefore, the deployment of AI must be carried out with careful consideration and in an ethical fashion. Hence, assessing the ground-level conditions of the ELT classrooms becomes a critical part of this study, giving us an overview of the challenges that must be tackled.

V. INNOVATIONS – A WAY FORWARD

5.1 Advancing English Language Learning through the emerging AR/VR technologies

As we have already discussed, India's mission is to integrate technology in education through the lens of several key initiatives mentioned above. We look forward to the 'The National Education Policy - 2020'. The NEP (2020) extensively talks about India's goal of digitising education and its future implications, making it a 'Digital epicentre' with a key emphasis on accessibility, equity, and affordability. Moreover, it also implies that the researchers should carry forward their investigations on further implications, ensuring the progress of India's goals. Thus, it becomes necessary to further the discussions on the next-generation digital paradigms, novel trends and innovative methodologies that include the use of Innovative Immersive Digital Teaching (IIDT) such as Virtual Reality (VR) and Augmented Reality (AR). Sinthiya (2023) and Godwin (2023), in their respective works, elicited how AR and VR technologies offer immersive and interactive experiences that can revolutionise English Language Learning (ELL) by providing authentic language exposure and opportunities for real-time communication. AR allows learners to interact with virtual English language content in their immediate surroundings, enhancing comprehension and retention. VR creates fully immersive virtual environments that transport learners to English-speaking settings (Godwin-Jones, 2023).

Furthermore, researchers have also suggested that integrating Collaborative and game-based virtual environments can improve problem-solving skills and enhance active participation. A study by Rowe et al. (2011) concluded "a strong positive relationship between learning outcomes, in-game problem solving

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.6.3

and increased engagement". Another study explained how collaborative learning approaches in 3D virtual worlds are more effective than teacher-directed instruction in facilitating intrinsic motivation, knowledge gains, and group performance (Cho & Lim, 2017). According to Munster (2015), Virtual reality may allow students to engage in various activities, such as undertaking simulated journeys through the universe or to Gettysburg, as well as interacting directly with a car engine. It also elaborated how "Virtual reality gives hands-on viewpoints which may help people better understand and retain a topic and learn to perform new tasks" (Munster et al., 2015, p.19). The validity of these studies can be reinforced by the dynamic character of technology and its capacity to propel discoveries to greater levels of scale than before. Tech giants have already started their preparations to meet the future of innovative, immersive digital technology. The much-deliberated VR headset Apple Vision Pro has been launched and is already creating a buzz among the inno-vigilantes. However, several alternatives are in the making, including Meta's Meta Quest 3 virtual reality headset, scheduled to debut at Meta Connect 2024. Xreal Air 2 Ultra augmented reality glasses provide features such as spatial computing and real-world object identification, while Asus AirVision M1 delivers USB-C connectivity. A cooperation between Samsung and Google is underway to produce an XR headset that will incorporate Qualcomm's XR2+ Gen 2 processor, enabling a resolution of 4.3K and integration of mixed reality passthrough. Headset, and its rivals like Meta's Quest 3S (Hector, 2024). These devices hold significant potential and might prove to revolutionise ELT classrooms by making them more interactive, reality-based, context-based and culturally relevant. Godwin-Jones (2023), in the work 'Presence and agency in real and virtual spaces: The promise of extended reality for language learning', explained how IID technologies can help develop various language skills:

- Listening: Through audio, video, and animated multimedia content
- Reading: Using interactive texts, electronic dictionaries, and digital reading materials
- Speaking: Via voice chat, speech synthesis, and virtual conversation partners
- Writing: Through blogging, social media interactions, and collaborative writing tools

5.2 Scope in Indian Scenarios

The world is striving towards achieving excellence in the field of education by backing it up with innovative and powerful methodologies that can revolutionise the future of classrooms and beyond. Countries like Finland, South Korea, and Japan have already started implementing IIDT in ELT classrooms. India is also maintaining pace with the digital literacy initiatives done with Zen, as mentioned earlier. The digital age has ushered in a new era of learning, where the Internet serves as a model for learning institutions, enabling worldwide communities to exchange ideas and learn from one another (Mallik & Mallik, 2017). As already discussed, with the rise of smartphone phone users reaching 1.55 billion by 2040 (Sun, 2023). It may be contended that this requirement is sufficiently stringent to start exploring the potential of virtual reality and augmented reality technology in several Indian classrooms. While these innovations show promise, challenges remain in implementation due to infrastructure and resource limitations (Uzdenova et al., 2020). The implementation of these technologies remains a challenge due to their exorbitantly high prices, considering the Indian context. However, a study by Munster et al. (2015) predicts a decrease in the costs linked to these technologies in the coming years, making them more cost-effective. However, this decrease is not anticipated to be significant since the technology will continue progressing, and virtual reality (VR) devices will be outfitted with more realistic features. Therefore, it is also important to look for more practical options that may equally improve language acquisition in a comprehensive and effective manner.

VI. CONCLUSION

After doing a deep analysis of various studies, this research concludes that English Language Learning in India is a complex task involving challenges with a multifaceted nature. Despite the various opportunities available and the integration of new technologies into ELT and education in general, it still lags when it comes to ground-level implementation. From bridging the gap between the rural-urban disparities to curating culturally relevant methodologies catering to the multilingual population, or even providing proper training to the instructors, it becomes difficult to target the specific issues and tackle them. Therefore, it is imperative for ELT practitioners to broaden their perspective and delve deep into research to -

1. Lay out reforms in the already existing

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.6.3

practices in accordance with India's socio-cultural situation.

2. Integrate the already existing digital tools in a proficient manner.
3. Address the complexes among learners resulting from the uneven allocation of resources across different economic classes.

Moreover, it is necessary to pay attention to the rising demand for English at a global level due to its extensive use across fields. In addition to its high demand, there is a growing need to accelerate the learning process as well. People in the modern era aspire to quickly achieve fluency in English, reducing their time investment. Practitioners also need to look for effective methods that consume less time and cater to the needs of learners who want to learn English within a limited timeframe.

Now that we have transitioned into the realm of the digital era, a medium that has become popular among the masses, it becomes viable for us to start investigating the potential of technology in enhancing the teaching practices of ELT classrooms, bringing a revolution in the field of language learning. Alongside this, it is also crucial that the evaluation techniques undergo a transformation and align with the prevailing pattern of formative assessments instead of summative evaluations. In this regard, adaptive learning systems should offer real-time feedback throughout the learning process. The active involvement of communities and parents is also critical in assisting learners, especially in regions where English language acquisition is restricted. Furthermore, continuous teacher-training programs for instructors will ensure they possess digital literacy skills and enhance their overall effectiveness, enabling them to be more innovative and efficiently use technology appropriately. Hence, leveraging technology in ELL in an Indian context can significantly boost the learning and acquisition process if implemented appropriately and thoughtfully.

REFERENCES

[1] Ahmad, S. (2020). Digital initiatives for access and quality in higher education: An overview. *Prabandhan Indian Journal of Management, 13*(1), 9. https://doi.org/10.17010/pijom/2020/v13i1/149944

[2] Alturki, U., & Aldraiweesh, A. (2021). Application of learning management system (LMS) during the COVID-19 pandemic: A sustainable acceptance model of the expansion technology approach. *Sustainability, 13*(19), 10991. https://doi.org/10.3390/su131910991

[3] Arbind, K. (2020b). Digital transformation initiatives in Indian higher education: A critical analysis from pedagogic perspectives. *Русская Политология – Russian Political Science, 2*(15). https://doi.org/10.51180/rps.2020.15.2.004

[4] Camilleri, M. A., & Camilleri, A. C. (2021). The acceptance of learning management systems and video conferencing technologies: Lessons learned from COVID-19. *Technology Knowledge and Learning, 27*(4), 1311–1333. https://doi.org/10.1007/s10758-021-09561-y

[5] Cheng, L. K., Puteh, F., Selamat, A., & Mohamed, F. bin. (2015). A review of recent methodologies in English language content delivery. In *2015 IEEE Conference on e-Learning, e-Management and e-Services (IC3e)* (pp. 169–174). IEEE. https://doi.org/10.1109/IC3e.2015.7403507

[6] Cho, Y. H., & Lim, K. Y. T. (2015). Effectiveness of collaborative learning with 3D virtual worlds. *British Journal of Educational Technology, 48*(1), 202–211. https://doi.org/10.1111/bjet.12356

[7] Coleman, H. (2011). *Dreams and Realities: Developing Countries and the English Language.*

[8] Digital India initiative of Government has revolutionized education access in rural areas. (n.d.). *Press Information Bureau*. https://pib.gov.in/Pressreleaseshare.aspx?PRID=1945057

[9] English in a postcolonial situation: The example of India on JSTOR. (n.d.). *JSTOR*. http://www.jstor.org/stable/25595559

[10] Ghuge, S. S. (2024). Breaking down walls: Challenges in teaching English to school level students. *International Journal of Scientific Research in Engineering and Management, 08*(05), 1–5. https://doi.org/10.55041/ijsrem33581

[11] Godwin-Jones, R. (2023). Presence and agency in real and virtual spaces: The promise of extended reality for language learning. *Language Learning & Technology, 27*(3), 6–26.

[12] Hector, H. (30 June 2024). The year so far in AR/VR: The five biggest announcements and what is coming next. *TechRadar*. https://www.techradar.com/computing/virtual-reality-augmented-reality/the-year-so-far-in-arvr-the-5-biggest-announcements-and-whats-coming-next

[13] Hota, S. P. (2022a). Digital education and literacy in India: An overview. *Splint International Journal of Professionals, 9*(4), 257–263. https://doi.org/10.5958/2583-3561.2022.00030.3

[14] Jamalova, M. (2024). Integrating Modern Technology in English Language Teaching: Innovations and Outcomes in School Education. Eurasian Science Review An International Peer-Reviewed Multidisciplinary Journal, 2(2), 138–142. https://doi.org/10.63034/esr-48

[15] Knowledge Commission Report | Government of India, All India Council for Technical Education. (n.d.). https://www.aicte-india.org/reports/overview/Knowledge-Commission-Report

[16] Kumar, T., Shet, J., Parwez, M. A., & Premkumar, J. (2022). Technology-integration experiences in ELT Classrooms as an Effective tool: A theoretical study. *Journal for Educators, Teachers and Trainers, Vol. 13 (1)*, 13(1). https://doi.org/10.47750/jett.2022.13.01.006

[17] Kumar, M. (2024). Challenges and solutions in English language teaching (ELT) in rural settings: A case study in India. *Research Review International Journal of Multidisciplinary, 9*(1), 75–82. https://doi.org/10.31305/rrijm.2024.v09.n01.010

[18] Mallik, A., & Mallik, L. (2017). A review of education technology in digital age: Classroom learning for future and beyond. *Semantic Scholar*. https://www.semanticscholar.org/paper/A-Review-of-Education-Technology-in-Digital-Age%3A-Mallik-Mallik/7452323037b1118b063190cd20886aea92bb859d

[19] Motteram, G. (2013). Innovations in learning technologies for English Language Teaching. (Innovations in English Language Teaching). *British Council*.

[20] Munster, G., Jakel, T., Clinton, D., & Murphy, E. (2015). Next mega tech theme is virtual reality. In Instant Magazine. Piper Jaffray Investment Research. Retrieved 13 September 2024, from https://cdn.instantmagazine.com/upload/4666/piperjaffray.f032beb9cb15.pdf

[21] National Education Policy 2020 (2020) Ministry of Education. Ministry of Human Resource Development, Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf (Accessed: August 10, 2024).

[22] Paul, V., Thapliyal, R., & Walia, R. (2021). Exploring the opportunities and challenges of digital learning in India. Webology. https://doi.org/10.29121/web/v18i2/9

[23] Raviya, H., & Upadhyay, T. (2021). Traditional classroom to digital learning: Pandemic played a major role in online education. *Towards Excellence, pp. 775–783*. https://doi.org/10.37867/te130471

[24] Richard Jegadeesan, P., & Akkara Sherine. (2024). Tech-driven transformation: Improving English language instruction with technology. *Educational Administration: Theory and Practice, 30*(4), 7436–7439.

[25] Rowe, J. P., Shores, L. R., Mott, B. W., & Lester, J. C. (2011). Integrating learning, problem solving, and engagement in narrative-centered learning environments. *Artificial Intelligence in Education, 21*(1), 115–133. https://doi.org/10.3233/jai-2011-019

[26] Roy, D., & Putatunda, T. (2021). Technology in language classrooms of India: Decoding digital learning and dynamics of context and curriculum. In *Apple Academic Press eBooks* (pp. 279–292). https://doi.org/10.1201/9781003187479-15

[27] Roy, S., & Brown, S. (2022). Higher education in India in the time of pandemic, sans a learning management system. *AERA Open, 8*, 233285842110695. https://doi.org/10.1177/23328584211069527

[28] Rukiati, E., Wicaksono, J. A., Taufan, G. T., & Suharsono, D. D. (2023). AI on learning English: Application, benefit, and threat. *Journal of Language Communication and Tourism, 1*(2), 32–40. https://doi.org/10.25047/jlct.v1i2.3967

[29] Singh, M., Adebayo, S. O., Saini, M., & Singh, J. (2021). Indian government e-learning initiatives in response to COVID-19 crisis: A case study on online learning in Indian higher education system. *Education and Information Technologies, 26*(6), 7569–7607. https://doi.org/10.1007/s10639-021-10585-1

[30] Singh, P. (7 March 2024). Dressed in saree, meet India's first-ever AI teacher robot named 'Iris.' *Business Today*. https://www.businesstoday.in/technology/news/story/dressed-in-saree-meet-indias-first-ever-ai-teacher-robot-named-iris-420551-2024-03-07

[31] Singh, S. (2010). Digital divide in India. *International Journal of Innovation in the Digital Economy, 1*(2), 1–24. https://doi.org/10.4018/jide.2010040101

[32] Sinthiya, B. (2023). English Language learning in the metaverse: Exploring the potential of AR and VR. *Shanlax International Journal of English,* 12(S1-Dec), 161–166. https://doi.org/10.34293/rtdh.v12is1-dec.52

[33] Vaishnav, P. B. (2024a). Current trends and future prospects in English language teaching (ELT). *Asian Journal of Education and Social Studies, 50*(7), 1–10. https://doi.org/10.9734/ajess/2024/v50i71438

[34] Viktorivna, K. L., Oleksandrovych, V. A., Oleksandrivna, K. I., & Oleksandrivna, K. N. (2022). Artificial intelligence in language learning: What are we afraid of *Arab World English Journal, 8*, 262–273. https://doi.org/10.24093/awej/call8.18

[35] Vijayalakshmi, M., & Babu, D.M. (2014). A Brief History of English Language Teaching in India.