RESILIENT PEDAGOGICAL ADVANCEMENTS: FOSTERING ICT TOOLS FOR POST-PANDEMIC ESL LEARNING THROUGH SUSTAINABLE DEVELOPMENT – A REVIEW

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ABSTRACT

Background: The COVID-19 pandemic spurred a revolutionary shift in education, notably in language acquisition. Rooted in the principles of sustainable development, this study probes the post-pandemic linguistic pedagogy, spotlighting the refinement of English as a second language’s (ESL) receptive and expressive competencies within this novel framework.

Method: With a targeted approach to Language Skills (LSRW) acquisition, employing 25 meticulously selected eLearning applications, it addresses the reconfiguration of English language instruction following the pandemic-induced disruption of conventional methods.

Results: These digital resources facilitated unprecedented levels of engagement, ensnaring students' focus through compelling visual aids. Furthermore, they bridged the scholastic divide between educators and learners. Consequently, students found these platforms indispensable for acquiring English as a second language in the online setting. This inquiry propels a call for further investigation into harnessing technology-driven learning to enhance ESL environments, all firmly grounded in the foundational principles of sustainable development. It emphasizes the imperative of fostering environmentally conscious and socially inclusive educational practices.

Conclusion: Ultimately, it stands as an invaluable compendium for English language educators worldwide, furnishing insights to surmount the pandemic-induced pedagogical hurdles and embrace the innovative learning prospects it has ushered in, while advancing the cause of sustainable development in education.

Keywords: New Learning, Pedagogy, SDG, ICT, LSRW, ESL Classrooms.

AVANÇOS PEDAGÓGICOS RESILIENTES: PROMOÇÃO DE FERRAMENTAS DE TIC PARA A APRENDIZAGEM DO ABANDONO ESCOLAR PRÉCOCE PÓS-PANDÊMICO ATRAVÉS DO DESENVOLVIMENTO SUSTENTÁVEL - UMA REVISÃO

RESUMO


Método: Com uma abordagem direcionada para a aquisição de Habilidades Linguísticas (LSRW), empregando 25 aplicativos de eLearning meticulosamente selecionados, ele aborda a reconfiguração do ensino do idioma inglês seguindo a interrupção induzida por pandemia dos métodos convencionais.

Resultados: Esses recursos digitais facilitaram níveis sem precedentes de engajamento, aproximando o foco dos alunos através de ajudasvisuais atraentes. Além disso, transpuseram a divisão escolar entre educadores e...
aprendizes. Consequentemente, os alunos acharam essas plataformas indispensáveis para adquirir o inglês como segunda língua no ambiente on-line. Este inquérito impulsiona um apelo para uma investigação mais aprofundada sobre o aproveitamento da aprendizagem baseada na tecnologia para melhorar os ambientes de abandono escolar precoce, todos firmemente fundamentados nos princípios fundamentais do desenvolvimento sustentável. Enfatiza o imperativo de promover práticas educacionais conscientes do meio ambiente e socialmente inclusivas.

**Conclusão:** Em última análise, é um inestimáível compêndio para educadores de língua inglesa em todo o mundo, fornecendo insights para superar os obstáculos pedagógicos induzidos pela pandemia e abraçar as perspectivas de aprendizagem inovadoras que introduziu, enquanto avança a causa do desenvolvimento sustentável na educação.

**Palavras-chave:** Nova Aprendizagem, Pedagogia, ODS, TIC, LSRW, Salas de Aula ESL.

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### 1 INTRODUCTION

In the context of sustainable development, the paradigm of education has undergone a notable transformation, placing a significant emphasis on technological integration, thereby affording learners greater flexibility in terms of time and location (Alonso et al., 2005). This evolution towards what is often referred to as "new learning" occurs concomitantly with major shifts in technological progress, societal dynamics, and the ramifications of human activities. Noteworthy parallels can be drawn between contemporary new learning and the Renaissance's bold foray into innovation. Yet, two distinct dimensions warrant consideration, particularly in light of their heightened divergence from prior epochs. The Digital Age has wielded profound influence over the processes of meaning-making and learning. Subsequent to this, the surge in global mobility, facilitated by the unprecedented ease with which individuals navigate their environments in pursuit of their diverse needs, has engendered burgeoning diversity within communities.

The advent of technology-enabled educational platforms, spurred by the exigencies of the pandemic, has charted a new trajectory for classroom learning, fundamentally reshaping established pedagogical norms. This prevailing digital epoch now enables seamless real-time connectivity between individuals separated by great distances, affording opportunities for live, collaborative interactions on the virtual landscape. This seismic shift necessitates a corresponding reconfiguration of the educational framework, particularly in the domain of English as a Second Language (Hashim, Yunus, & Embi, 2018; Hashim, Yunus, & Hashim, 2019). In Eastern societies, 21st-century education espouses the integration of learners with technology, designating them as "self-directed learners" in preparation for a lifelong learning odyssey (Yusop, 2014; Hashim & Yunus, 2010). There exists an imperative to seamlessly incorporate English language instruction, leveraging the potent catalyst of technology (Yunus et al., 2010; Yunus, Salehi, & Chenzi, 2012).

The domains of productive and receptive language skills are intricately intertwined. This review paper is dedicated to an in-depth exploration of the efficacy of diverse learning management tools available on the internet for augmenting language proficiency. The paper envisages the transformation of the ESL classroom into this new learning epoch, facilitated by the integration of Information and Communication Technology (ICT) tools from an array of
platforms. The imperative of devising a digitally-enabled curriculum became acutely apparent in the crucible of the pandemic.

The primary objective of this review is to investigate the role of English language education within the framework of Sustainable Development with respect to post-pandemic digital domination. Education, serving as its foundational pillar, functions as a cultural conduit for the dissemination of knowledge. Through the act of sharing knowledge, hypotheses are formulated and refined, driving innovation and the progressive evolution of information. In the contemporary context, the global community is actively seeking means to facilitate the seamless transmission of knowledge and information.

In contrast, this study endeavors to explore viable platforms for real-time knowledge and information exchange. Specifically within the domain of language instruction, educators must possess a comprehensive understanding of the subject matter to effectively impart it to their students (Harmer, 2008). This knowledge transfer encompasses the processes of teaching and providing feedback, which are contingent upon the students' performance in assessments. Learners who frequently encounter impediments in oral communication, including restricted domain-specific lexicon, articulation complexities, and self-assurance dilemmas, which can be mitigated through the strategic application of (ICT) tools (Tran & Mai, 2023). Through a systematic review, this research aims to equip educators and trainers with insights into appropriate platforms, ICT tools, and instructional methodologies conducive to fostering meaningful connections with students in the context of language acquisition.

Despite the challenges posed by the ongoing pandemic, the acquisition of knowledge remains a resilient pursuit, facilitated by digital curricula and an array of ICT resources. This review seeks to illuminate the pathways through which education, bolstered by technology, can continue to thrive and serve as a catalyst for sustainable development in an ever-evolving global landscape. This review paper is grounded in the overarching principle of Sustainable Development, emphasizing the imperative of addressing educational disparities exacerbated by the COVID-19 pandemic through judiciously selected tools and platforms in the post-pandemic landscape. The exigencies of the pandemic have engendered a heightened cognizance among scholars regarding the instrumental role of digital technologies in the acquisition and dissemination of knowledge across diverse modalities. The digitalization of education is a complex process that extends its influence across all domains of human initiatives (Jafarov et al., 2023).

This comprehensive review has undertaken a global survey of post-pandemic endeavors in the realm of language education, with the express purpose of discerning the instrumentalities deployed therein. Furthermore, this synthesis seeks to discern their efficacy and ascertain their relative success rates. The overarching aim is to gauge the effectiveness of ICT tools when applied within the broader spectrum of pedagogical practices, thereby elucidating their potential to mitigate the educational disruptions wrought by the pandemic.

In summation, this endeavor, underpinned by the tenets of Sustainable Development, endeavors to not only elucidate the pivotal role of digital tools in ameliorating the educational aftermath of the COVID-19 crisis but also to provide a nuanced understanding of their impact within the broader pedagogical context. Through this rigorous inquiry, the research aspires to contribute substantively to the discourse surrounding post-pandemic educational strategies and their alignment with the imperatives of sustainable educational development.

Amidst the COVID-19 pandemic, the education sector witnessed a proliferation of diverse, technology-driven teaching and learning methodologies. This transformative wave shattered the confines of the conventional classroom, ushering in an expansive vista of possibilities. While the pandemic wrought havoc on multiple fronts, it paradoxically catalyzed
a substantial enhancement in the educational landscape. It compelled all stakeholders to engage in the progression of classroom technology.

Given that the pandemic is redefining our trajectory, it becomes imperative for all to be cognizant of the path ahead. The surge in remote learning has notably economized individuals' invaluable time in various ways. Proficiency in utilizing the tools and platforms integral to technology-facilitated education is essential for both educators and learners. This mastery not only augments the allure of the learning process but also elevates it beyond its pre-pandemic state. Such proficiency is vital for global appreciation and acceptance of the new educational paradigm.

In the context of sustainable development, this shift towards technology-driven education carries considerable promise. It can potentially reduce the ecological footprint associated with traditional, brick-and-mortar educational institutions. By diminishing the need for physical infrastructure and the accompanying resources, technology-enhanced education aligns with the principle of environmental stewardship. Moreover, it has the potential to democratize access to quality education, transcending geographical barriers and socioeconomic constraints. This inclusivity is a cornerstone of sustainable development, as it empowers individuals from diverse backgrounds to actively participate in the knowledge economy, fostering social equity and economic resilience.

2 THEORETICAL FRAMEWORK

Integrating sustainable development into the groundwork of modern education is imperative. Mary Kalantzis and Bill Cope, in their book "New Learning: Elements of a Science of Education," advocate for a transformation in traditional educational paradigms. This shift emphasizes a learner-centric approach that embraces diversity and focuses on outcomes. The book underscores the need for educational reforms in line with new learning methodologies. Kalantzis and Cope emphasize that embracing these new approaches requires dedication to research, hypothesis formulation, observation, and meticulous documentation of acquired knowledge.

The unforeseen COVID-19 pandemic forced many countries to close physical classrooms as a precautionary measure (Rahman, 2020). Consequently, e-learning became the prevailing norm, despite initial resistance from some educators (Kamenetz, 2020). This compelled educational institutions to equip students with the skills to learn independently, without the familiar classroom environment, in preparation for the challenges posed by the pandemic. English, being the linchpin for most subjects, is crucial in ensuring that students master their second language with diligence and proficiency.

Language proficiency permeates various facets of communication. Students are instructed to listen, speak, read, and write in order to refine their language skills (Grabe & Stoller, 2002). Another pivotal aspect of language acquisition lies in the pedagogical approach adopted by language instructors (Ahmadi, 2017). In the current scenario, computers have assumed a prominent role in language education, aiming to offer a self-directed learning experience. As instructional tools, computers grant students ample access to learning resources. Modern language educators regard technology as a catalyst for delivering high-quality education (Becker, 2000).

Technology offers an array of resources and references for language learners. Research on the integration of technology as a learning tool varies based on instructor preferences. The infusion of technology into language education caters to both visual and auditory learning styles, resulting in an enriched educational experience. By augmenting their learning process, students gain access to a wealth of data and information that extends beyond the confines of
traditional classrooms. The advent of technology in education has opened up expansive avenues to revolutionize existing language teaching methodologies (Gilakjani, 2017).

Figure 1. The impact of digital educational resources on students, considering factors like regional context and mode of delivery
Source: (Atzatzev, 2021).

Within the context of sustainable development, where quality education stands as the cornerstone, a critical concern arises regarding the accessibility of digital tools for students hailing from rural and economically disadvantaged regions across the globe. Alarmingly, a staggering 463 million school children worldwide find themselves devoid of any exposure to digital educational resources within their classrooms. This glaring digital divide is further exacerbated by the fact that three out of every four students lacking access to digital curriculum resources originate from rural areas (Atzatzev, 2021). Consequently, this absence of exposure to digital technologies constitutes a significant impediment, impeding these students’ participation in and benefiting from the advancements in new pedagogical approaches. This, in turn, hampers their overall educational progress and the broader objective of sustainable development in education.

In the wake of the pandemic, educational institutions swiftly turned to e-learning platforms as a primary mode of instruction. Traditional classroom settings posed challenges for educators in effectively disseminating information, but technological solutions have ameliorated this issue. Notably, wireless technology has been leveraged in research endeavors aimed at enhancing vocabulary acquisition. One study employed the “Short Message Service” (SMS) as a platform for regular dissemination of technical English words. The outcomes evinced that students not only assimilated new vocabulary but also found the learning process enjoyable. This investigation concluded that the incorporation of mobile learning systems as educational tools facilitates seamless acquisition of knowledge (Cavus, 2009).

Contemporary educational landscapes feature a plethora of platforms serving as learning instruments. Emerging media tools such as social media, blogs, wikis, and YouTube conspicuously influence English as a Second Language (ESL) learners. This study specifically scrutinizes the impact of new media and tools on the motivation levels of second language (L2)
learners. The findings underscore that new media platforms substantially invigorate students' pursuit of English language proficiency, transforming passive and dependent learners into active and self-reliant ones. However, despite the commendable aspects of new media, instances of cultural incongruity and misinterpretation of linguistic content can demotivate learners. Consequently, judicious monitoring of the usage of new media platforms is imperative to forestall any adverse effects (Hasan, 2020).

Educators must conscientiously integrate technology into their pedagogical practices to ensure its substantive incorporation into the learning process. This endeavor should fortify the curriculum, empowering learners to harness technology for enriching their language skills (Costley, 2014). The structured classroom paradigm can be infused with vitality and rendered more engaging for learners through technological interventions. Cooperation, a pivotal facet of learning, is facilitated by technology, enabling students to collaboratively create, design, and learn from their peers' work (Keser, Huseyin, & Ozdamli, 2011). Technology serves as a conduit between local and global communities, fostering connections and broadening opportunities for the dissemination of knowledge, teaching, and learning (Bransford, Brown, and Cocking, 2000).

The integration of computer technology elevates teachers' proficiency in instruction and augments learners' capacity for erudition in the classroom. It empowers teachers to meet the educational needs of their students. Technologically-driven shifts in the curriculum have been introduced to supplant conventional chalk-and-talk methods, which are considered antiquated in the context of effective English language instruction (Susikaran, 2013). A well-structured classroom environment is directly correlated with effective learning outcomes. In the wake of technology-enhanced classrooms, lecture-based formats have become increasingly rare. Teachers are now compelled to allocate time and effort towards devising strategies for leveraging technology as a pedagogical tool (Raihan and Lock, 2010).

In various studies pertaining to technology-integrated learning, the incorporation of technology has become indispensable. It empowers language instructors to elevate the caliber of classroom instruction. Mobile applications present a diverse array of knowledge-inducing factors. This paper underscores the deployment of technology by educators to enhance learners' language proficiency. The findings underscore that judicious use of technology significantly heightens learners' language acquisition abilities and skills (Ameri, 2020). The subsequent paper delves into vocabulary acquisition through e-learning, with the researcher assessing students' proficiency in spelling English words. In this study, e-learning was employed as a strategy to achieve this objective (Yen, 2020).

3 METHODOLOGY

This new paradigm of learning poses a challenge for adherents of traditional modes of education. The surge in novel learning methodologies has compelled individuals to adapt to the use of technology. Initially, traditionalists may encounter difficulties in this transition, impacting their learning behaviors and norms. The present study was undertaken to gauge the level of engagement of individuals in e-learning. Through this investigation, it became evident that the novel mode of learning-teaching transactions became comfortable and accessible. The results indicated a heightened level of learning among English as a Foreign Language (EFL) students. Subsequently, the researcher was able to establish an online environment conducive to effective and accessible learning (Oraif, 2021).

Embedded within the framework of sustainable development in education, the integration of digital technology serves as a pivotal enabler for augmenting students' digital proficiency and empowering them in its adept application, thereby effectuating a substantive digital transformation (Abad-Segura et al., 2020). While extant scholarship substantiates the
efficacy of online platforms in the realm of language acquisition, this systematic review illuminates the manifold facets of diversity within online education, with particular emphasis on the instrumental role of associated tools.

3.1 Animoto

Animoto, accessible at https://animoto.com/, serves as a presentation platform akin to PowerPoint but offers heightened customization capabilities. Notably, it enables the creation of animated renditions from pre-set templates, which can then be synchronized with audio and video components. This process affords an unbounded scope for creativity and imaginative expression. Consequently, learners’ capacity to synthesize knowledge in their educational journey is notably facilitated (Irgin and Turgut, 2009). Conversely, educators have the capacity to formulate interactive English as a Foreign Language (EFL) tasks, thereby fostering the refinement of students’ oral and written proficiency. This medium grants students exposure to dynamic and professionally crafted presentations in a notably condensed timeframe (Coskun & Marlowe, 2015).

3.2 Audacity

Audacity, accessible at https://www.audacityteam.org/download/, provides a robust platform for honing listening comprehension skills. It is both cost-free and user-intuitive. Primarily employed in classroom settings, Audacity has proven instrumental in expanding vocabulary, refining reading comprehension, and assimilating grammatical nuances outlined in the curriculum. Within the realm of reading plans, learners can collaboratively devise exercises and assignments, as well as independently craft dialogues and texts, all without the need for supplementary software. Its application, as elucidated by Nedeva and Dimova (2010), stands as a formidable aid in the educational context.
3.3 Canvas

Canvas, a prominent Learning Management System (LMS), accessible at https://www.instructure.com/canvas, functions as a virtual environment for teaching and learning. It is web-based and all-encompassing in its integration capabilities (Azizah, 2020). Canvas fosters a consistent learning experience, irrespective of the physical classroom setting. It constitutes a formidable platform for innovation, engagement, and fostering a dynamic teacher-student rapport. The system empowers educators to seamlessly transition into the digital realm, enabling the evaluation of student performance and the creation of tailored activities for various proficiency levels, thereby promoting progressive learning (Al Khoeri et al., 2021).

3.4 Class Dojo

Class Dojo, accessible at https://www.classdojo.com/, cultivates self-regulation skills in students. In the era of burgeoning online classrooms, maintaining student behavior is paramount. This platform serves as a catalyst in shaping and monitoring student conduct. The ability to review both daily and aggregated weekly behavioral scores proves invaluable for both students and educators in tracking progress and effecting improvements. The cultivation of self-regulation, identified by Zimmerman (2002) as a pivotal life skill acquired through education, is facilitated by this platform, which in turn promotes a positive and constructive lifestyle (Maclean-Blevins, 2013).

3.5 Concept Maps

Concept Maps, accessible at https://www.lucidchart.com/pages/concept-map, represent a visual tool for organizing and elucidating ideas and concepts. They find wide applicability in planning curricula, designing learning strategies, and formulating instructional approaches, especially for evaluating students’ grasp of various concepts in their respective fields of study (Novak, 1990). In ESL classrooms, concept mapping serves a critical role in the assessment process. Open-ended concept mapping allows educators to discern the nuanced nature of students’ comprehension, offering insights into the structure of their knowledge. This tool proves instrumental in diagnosing and rectifying misconceptions, as noted by McClure et al. (1999). Various online platforms offer this potent tool for effective educational use.

3.6 Edmodo

Edmodo, accessible at https://new.edmodo.com/, serves as a specialized platform tailored for the cultivation of writing proficiency within an English as a Second Language (ESL) instructional context. Its design mirrors that of a social networking platform, affording a universal accessibility that greatly enhances the learning and teaching experience (Kongchan, 2012). The platform facilitates the delivery of writing skill exercises through a variety of interactive tasks, thereby rendering the process engaging and dynamic for educators. Notably, this approach incorporates scaffolding techniques, which transcend temporal and geographical constraints, ensuring students' access to support and guidance regardless of their locations (Purnawarman et al., 2016). This amalgamation of technological and pedagogical features underscores Edmodo's efficacy as a versatile tool for fostering ESL writing proficiency.
3.7 Edpuzzle

Edpuzzle, available at https://edpuzzle.com/, represents a versatile platform capable of transforming video content into interactive instructional materials. It allows for the customization of videos sourced from platforms such as YouTube and Khan Academy to suit specific lesson plans. Notably, Edpuzzle offers a range of editing tools, including cropping and voiceovers, empowering instructors to tailor content to their preferences. This tool proves particularly valuable in developing the speaking and listening proficiencies of ESL learners. Furthermore, edited videos can be seamlessly integrated into assessment platforms like Quizzes, Moodle, or Blackboard, allowing for robust evaluation (Alvarado et al., 2016). Instructors benefit from the capability to monitor individual and collective student progress with ease.

3.8 Flipgrid

As a video-mediated communication (VMC) tool, Flipgrid, accessible at https://info.flipgrid.com/, stands as a preeminent platform for instructing and honing oral communication skills. Its standout feature lies in the peer feedback mechanism, wherein students record their oral communication exercises for analysis and receive immediate input from peers (Miskam, 2019). Flipgrid's user-friendly interface sets it apart in the realm of VMC tools, offering an intuitive experience for both instructors and learners (Balakrishnan & Puteh, 2014).

3.9 Glogster

Glogster, accessible at https://edu.glogster.com/, constitutes a cloud-based educational platform designed to foster creative and interactive learning environments. Within an ESL classroom, Glogster serves as a potent tool for vocabulary instruction. Instructors harness its capabilities to craft and disseminate collective knowledge through multimedia elements like text, images, art, and music, thus alleviating classroom tension (Picardo, 2012). Its impact on ESL learners primarily centers on progress and achievement (Abood, 2020).

3.10 Google Sites

Google Sites, accessible at https://sites.google.com, kindles students' enthusiasm for writing by providing a collaborative platform. Through Google Sites, students are empowered to create personalized web pages with content of their choosing. The iterative process of editing and refining content fosters the development of writing skills. Since these sites are publicly accessible, feedback from a wider audience enables self-correction and further refinement. Google Sites thus embodies a collaborative hub for the exchange of information, publication, and peer learning, extending the learning experience beyond the confines of the classroom (Tavares et al., 2012).

3.11 Kahoot

Kahoot, accessible at https://kahoot.it/, stands as a game-based assessment tool that injects an element of engagement and curiosity into the evaluation process. Teachers employ quizzes on Kahoot to assess students in an interactive and enjoyable manner. Participants enter the quiz using a unique code and respond to questions posed by the quiz creator. Scores are
visible on a general scoreboard, adding a competitive yet constructive dimension to the learning experience (Alvarado et al., 2016).

3.12 Khan Academy

Khan Academy, accessible at https://www.khanacademy.org/, serves as a comprehensive educational platform offering a wealth of online courses, lessons, and practice resources, all provided free of charge. It complements conventional instruction by offering students additional support and resources. Teachers are equipped with a dashboard to track student progress and receive notifications regarding any difficulties students may encounter during their learning journey (Thompson, 2011). This personalized feedback loop enhances the overall educational experience.

3.13 Mind Mapping

Mind Mapping, accessible at https://www.mindmapping.com/, serves as a potent tool for visual representation and organization of information. This process mirrors the innate cognitive structure of information within the human mind (Buzan, 1993). Through the utilization of Mind Mapping, students are empowered to effectively retain, plan, and structure their writing tasks, particularly in the context of examinations (Al Naqbi, 2011). Its integration in the classroom setting extends to problem-solving, vocabulary acquisition, note-taking, presentation creation, and the visualization of creative concepts (Buran, 2015).

3.14 MindMeister

MindMeister, a cloud-based mind-mapping application accessible at https://www.mindmeister.com/, offers a dynamic platform for structured ideation and concept organization. Research highlights the pivotal role of MindMeister in the development of vocabulary skills, underscoring its impact on enhancing lexical richness (Putra, 2022). By leveraging the capabilities of MindMeister, users are able to construct a tangible framework for abstract ideas, facilitating a deeper comprehension and elaboration of complex concepts.

3.15 Pixton

Pixton's educational comic platform, available at https://www.pixton.com/, empowers students to unleash their artistic inclinations. Its innovative approach is particularly valuable in ESL classrooms, where Pixton serves as an effective tool for teaching grammar and vocabulary. The platform's intuitive interface fosters creativity and innovation, while additional features such as corrective feedback, comic downloads, and content sharing amplify its utility (Lee, 2013). Pixton's user-friendly design empowers students to breathe life into their imaginative pursuits, thereby infusing the curriculum with a dynamic and engaging dimension (Cabrera et al., 2018).

3.16 Quizlet

Quizlet, accessible at https://quizlet.com/, stands as a versatile platform for crafting study tools and assessments. Notably, its flashcard feature stands out as a prominent tool for vocabulary instruction within the classroom setting. These exercises can be seamlessly accessed through both the web-based application and mobile platforms (Dizon, 2016). This accessibility ensures that students can engage with learning materials regardless of their location. The
practicality of instant access to educational content streamlines the process for educators to maintain a continuous and connected learning environment for their students.

3.17 Screen Casting

Screen Casting has transcended traditional constraints of time and space, redefining the concept of the classroom into an ideological framework. It asserts that physical classrooms are not the sole venue for learning; the virtual realm holds equal significance. In the comfort of their own environments, students have exhibited heightened learning outcomes and positive impacts through screen-casted lectures (Evans, 2011). The COVID-19 pandemic underscored the efficacy of Screen Casting in fostering learning and serving as a means to complement classroom instructions (Thompson, 2012).

3.18 Socrative

Socrative, accessible at https://www.socrative.com/, represents a digital platform tailored for seamless classroom engagement. Its primary utility lies in assessments, offering a cost-effective solution that sustains student interest and self-motivation. Instructors can deploy active learning strategies to gauge student participation and monitor their progress through this platform (El Shaban, 2017).

3.19 Storybird

Storybird, accessible at https://storybird.com/, significantly contributes to ESL classrooms by enhancing students' narrative writing skills. This platform is accessible across various smart electronic devices and accommodates individuals with varying levels of creativity and imagination. As a free platform, Storybird places emphasis on narrative writing rather than mere image manipulation, thereby fostering a more comprehensive writing experience (Anita, 2016). It centers on five core skills: design, collaboration, creative writing, communication, and reflection, as outlined by Gakhar and Thompson (2007).

3.20 Study Stack

Study Stack, available at https://www.studystack.com/, shares similarities with Quizlet in terms of features. It finds application in ESL classrooms for vocabulary acquisition. Activities such as Matching, Hangman, Crossword, Unscramble, Chopped, Fill in the Blanks, and Quiz are available on Study Stack. Through these interactive tasks, students can acquire English vocabulary in an engaging and enjoyable manner (Chien, 2015).

3.21 Sutori

Sutori, accessible at https://www.sutori.com/en/, fosters collaborative learning experiences for students. It empowers both instructors and learners to construct interactive stories through an intuitive interface. The platform enables seamless integration of various media content, including images, videos, audio, and quizzes, enhancing the overall visual appeal of presentations. Through Sutori, students can express their ideas in a visually captivating manner, thereby refining their writing skills (Indriana, 2018).
3.22 Ted-Ed

TED-ED, accessible at https://ed.ted.com/, champions the idea of disseminating knowledge globally, harnessing the collective expertise of teachers and students worldwide. In ESL classrooms, it serves as a formidable resource for developing listening, reading, and speaking skills. Its strength lies in the wealth of information available in video format, which can be customized to create a tailored curriculum. Instructors can craft tasks using these videos at their convenience, leveraging the platform’s versatile features (Rashtchi et al., 2021).

3.23 Thinglink

Thinglink, available at https://www.thinglink.com/, serves as an instrumental tool for elucidating complex concepts by seamlessly integrating the physical environment with digital information, thus creating a unique experiential learning opportunity. In ESL classrooms, Thinglink proves invaluable for promoting reading and speaking skills through collaborative image annotation. Its user-friendly interface allows students to engage with their learning content through multimedia elements, facilitating a more immersive learning experience (Roslan, 2020). Thinglink functions as an adjunct for ESL educators, leveraging images and videos to enhance language acquisition (Boyle, 2015).

3.24 Vocaroo

Vocaroo, accessible at https://vocaroo.com/, enriches ESL classrooms by enabling learners to refine their oral proficiency through practice and feedback. Its user-friendly nature enables independent use by students without instructor guidance. Through Vocaroo, students can record, practice, and review their oral expressions. This platform also lends itself to the development of reading skills, as students can identify areas for self-improvement through the playback of their recordings (Kim, 2014).

3.25 Wakelet

Wakelet, accessible at https://wakelet.com/, shares similarities with Google Sites, allowing users to create posters, collages, and web pages. Students can organize their content in a webpage format using Wakelet. In an ESL classroom, Wakelet serves as a visual content platform to enhance writing skills. Students can incorporate text, audio, tweets, Facebook posts, videos, and Google Drive files into their projects, thereby fostering creativity and innovation (Colodeeva, 2019).

4 RESULTS & DISCUSSION

In an era characterized by persistent change, the inescapable influence of novel learning paradigms permeates diverse spheres, notwithstanding the absence of volition among the stakeholders involved. The prevailing COVID-19 milieu necessitates universal adaptation to this altered educational landscape, compelling educationalists to optimize its potential. Empirical investigations underscore the pronounced efficacy of e-learning within the realm of English as a Foreign Language (EFL) instruction, surpassing the conventional classroom modality in terms of pedagogical efficiency. Notably, notwithstanding physical separation, technology serves as an integrative force, consolidating disparate entities into a cohesive
learning community. The imperative of embracing this new normality is irrefutable, impelling researchers to diligently refine digital pedagogy towards a state of optimal efficacy.

The questions about Artificial Intelligence in the classrooms are under consideration. Many AI tools are emerging into academia but they are still under review as they can affect the way of learning to any extremes. The integration of AI in ICT tools can improve the potential of language education into hundred folds. Their emergence into the education society would enhance language acquisition, practice and assessment. While examining these exciting opportunities, concerns about its reliability in nurturing young minds arise without hesitation and the role it could play in replacing human facilitators is put at stake.

4.1 Enhanced Language Learning

With Artificial Intelligence, classrooms can easily venture into developing a personalized and adaptive learning experience. Strengths, weaknesses and the learning pattern of any student can be easily analysed using Machine Learning (ML) and Natural Language Processing (NLP) algorithms. This will help the facilitators to provide tailored content to their learners ensuring the precise level of challenge and support in optimizing their language learning journey.

4.2 Immersive Learning Practice

AI enhance ICT tools can provide instant feedback on vocabulary, grammar and pronunciation usage, this will enable the students to identify and rectify the error before they could register the acquired content in their long-term memory. This contributes to more effective self-correction and improvements.

4.3 Gamification

AI-enabled Gamification in ICT tools may enable students' motivation and engagement through elements like competition, challenges and rewards. This makes the learning process enjoyable and sustainable. Application of this method can influence changes with high difference when compared with conventional methods.

4.4 Accessibility And Inclusivity

AI in ICT tools can attend to diverse learning needs, that includes learners with disabilities and learners with different native languages. Individual learning paces and preferences can be served through adaptive content delivery and a personalized approach.

4.5 Concerns And Considerations

The potential benefits of the integration of AI in ICT tools and classroom environments are significant. Yet, the concerns are at large when considering the reality. AI lacks the emotional intelligence, empathy and nuanced understanding that a human educator provides. AI would struggle to replicate a human educator in nurturing and providing supportive guidance for learners.

4.6 Role Of A Facilitator
Rather than replacing the human facilitators with AI, it could serve as a valuable component in the ICT-enabled classroom dynamics. Facilitators can ponder more upon developing strong interpersonal connections with the learners by mentoring and addressing their socio-economic needs while AI could enable the ICT tools by giving routine tasks, language practice sessions and assessments based on the learners’ capacity and interest.

4.7 Ethical Consideration And Future Outlook

Given the close interaction between the learners and AI, it is imperative to prioritise ethical considerations. Implementation of AI must ensure key aspects such as data privacy, responsible AI use, and the promotion of positive educational outcomes. The future implementation of AI in ICT tools for language classrooms hinges upon achieving an optimal equilibrium between technological advancement and human interaction. One potentially effective strategy entails fostering a symbiotic relationship between AI and educators, wherein both parties synergistically leverage their distinct capabilities to cultivate optimal educational environments.

5 CONCLUSION

EFL acquisition, traditionally structured around the pillars of listening, speaking, reading, and writing, finds a compelling conduit in e-learning platforms. Diverse applications emerge as potent educational tools, fostering student engagement and proficiency attainment in their secondary linguistic endeavor. A caveat lies in the potential challenge faced by the preceding generation in navigating this nascent learning paradigm. However, it behooves them to acquire proficiency in this domain, given the exigencies of the evolving educational landscape. Considerations pertaining to diminished human interaction and emotional involvement necessitate concerted inquiry and exploration, as these dimensions are integral to a holistic educational experience. Rigorous research endeavors hold the potential to surmount these constraints, paving the way for a more comprehensive and nuanced understanding of the interplay between technology-mediated learning and the human dimension.

The maxim, "Technology is the new normal," resonates ubiquitously in contemporary discourse, emblematic of the rapid and pervasive adoption of technological solutions in education. Educators across diverse disciplines have, over the past decade, incrementally cultivated innovative online pedagogies. However, the exigencies of the COVID-19 pandemic precipitated an expeditious implementation of these paradigms. While students engaged in specialized programs may undergo an adjustment period in light of the systemic educational reforms, the integration of this novel instructional modality has already demonstrated remarkable efficacy in ESL classrooms. Further scholarly inquiry in this domain holds the promise of effectuating a more substantial integration of technology in pedagogy, auguring well for the enrichment of the educational milieu.

REFERENCES

Reference to journal articles


Roslan, N. N. A., & Sahrir, M. S. (2020). The effectiveness of ThingLink in teaching new vocabulary to non-native beginners of the Arabic language. *IIUM Journal of Educational Studies, 8*(1), 32–52. [https://doi.org/10.31436/ijes.v8i1.274](https://doi.org/10.31436/ijes.v8i1.274)


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