# **REVOLUTIONISING EFL CURRICULUM: A THEORETICAL ANALYSIS OF GENERATIVE AI FOR ACTIVE LEARNING**

#### FX. Risang Baskara

English Letters Department Universitas Sanata Dharma Yogyakarta, Indonesia risangbaskara@usd.ac.id

#### Abstract

Focal to this research lies a field marked by pedagogical transformation - English as a Foreign Language (EFL) education, wherein conventional curriculum design and the advent of generative AI converge. As questions arise around the potential of AI to reshape EFL curricula and augment active learning, this study illuminates pathways for such transformation. Prior research into EFL curriculum design indicates a need for a more individualised, dynamic approach, which present AI technologies are ideally equipped to fulfil. By drawing upon the capabilities of AI to generate novel content, personalise instruction, and adapt learning experiences, this paper offers a theoretical exploration of EFL curriculum redesign. Significantly, this novel investigation attempts to address a gap in current research, with few studies having analysed how generative AI could be practically incorporated into curriculum design to amplify active learning outcomes in EFL. Utilising theoretical analysis methods, this research expounds upon the roles of AI in the EFL curriculum and its implications for teacher and learner dynamics, instructional delivery, and assessment methodologies. Findings unveil a potential shift in EFL curriculum design towards greater dynamism and personalisation, with generative AI as the catalyst. These implications underscore the need for continuous discourse on the intersection of technology and language education, with this research signalling a transformative step forward for EFL pedagogy and active learning.

Keywords: Active Learning, EFL Curriculum, Generative AI, Language Pedagogy, Personalised Instruction

#### Introduction

In this era of ongoing technological advancement. domains once deemed discrete, notably generative AI and EFL curriculum design, now find themselves on paths (Alhalangy converging AbdAlgane, 2023; Klímová & Ibna Seraj, 2023; Koraishi, 2023). As partakers in an increasingly digital landscape, our educational fabric witnesses а groundbreaking potential for metamorphosis, illuminated by the confluence of artificial intelligence with instructional schematics (Zhang & Aslan, 2021). EFL curriculum design, an linguistic elemental component of pedagogy, emerges within this transformative nexus.

Generative AI, equipped with its dynamic capacity for content creation and

adaptation, harbours the prospect of reformulating traditional curricular frameworks and transmission mechanisms (Eager & Brunto, 2023; Zhang & Aslan, 2021). This intricate intersection of pedagogy and technology thus proffers a profitable opportunity for investigation (Zhang & Aslan, 2021). To comprehend this harmonisation in its entirety, one is called upon to journey into the profound reaches of generative AI's capacities, contemplating its prospective role in the reinvention of EFL curriculum design (Williams et al., 2019). This beckons a research narrative that not only perceives AI as a technological novelty but also as a game-changer with far-reaching implications for pedagogical practices in EFL contexts (Zhang & Aslan, 2021).

Active learning, an essential component of effective linguistic pedagogy, propels learners into deep engagement, forging a robust and lasting comprehension of language principles (Azizi et al., 2022; Sajidin & Ashadi, 2021). Such an approach nurtures an environment conducive to interaction, where learners actively sculpt their understanding, thereby bolstering the impact of EFL instruction (Azizi et al., 2022; Sajidin & Ashadi, 2021). Traditionally, educational tactics have favoured passive absorption over active involvement, fostering potential lacunas in language proficiency (Azizi et al., 2022; Sajidin & Ashadi, 2021). Active learning starkly contrasts this conventional methodology, equipping learners to steer their educational voyage, inciting profound linguistic participation, and kindling an intrinsic curiosity indispensable to language assimilation (Azizi et al., 2022; Sajidin & Ashadi, 2021).

Therefore, the integration of active learning into EFL instruction does not merely augment the efficacy of language pedagogy; it also imparts a sense of personal engagement and proprietorship to learners, elements crucial to successful language acquisition (Azizi et al., 2022; Sajidin & Ashadi, 2021). This shift towards active involvement reshapes learners from mere consumers of knowledge into creators, engendering an enriching learning environment that encourages exploratory thought and selfinitiated discovery (Azizi et al., 2022; Sajidin & Ashadi, 2021). As such, active learning can transform EFL instruction, fostering a paradigm shift in language acquisition that focuses on learner autonomy, engagement, and long-term linguistic proficiency (Azizi et al., 2022; Sajidin & Ashadi, 2021).

This inquiry stands at the intersection of transformative technology and pedagogy (Pedro et al., 2019), endeavouring to shed light on how generative AI can catalyse a

revolution in EFL curriculum design. Leveraging AI's remarkable capability to curate dynamic and personalised content (Ribeiro, 2020), we must explore how such competencies might redefine the fabric of EFL pedagogical structures. Central to this exploration is investigating how the infusion of generative AI into EFL curricula can amplify active learning (Mohamed, 2023). Would personalising instruction and creating malleable learning experiences through AI technology potentiate learner engagement and foster efficacious language acquisition? This is the query at the heart of our theoretical exploration.

This investigation aims to instigate discourse on AI's transformative potential in language education (Williams, Park, Oh, & Breazeal, 2019). In the face of evolving technological landscapes, there emerges an imperative to shift pedagogical paradigms to ensure adaptability and relevancy (Su & Zhong, 2022). As such. this study endeavours to make a meaningful contribution to the academic dialogue on designing EFL curricula that are equipped for future advancements and challenges (Jiang, 2022). As we navigate the digital turn in education, examining the potential synergies between AI and EFL curriculum design aims to illuminate pathways for more efficient and engaging language instruction (Su & Zhong, 2022).

## Methodology

In order to constructively engage with this complex discourse, our research methodology comprises an argumentative review that delves into extant and emergent literature situated at the confluence of generative AI and EFL education (Han et al., 2023; Jiang, 2022). Through meticulous investigation of antecedent studies, we aspire to unearth prevailing trends, unresolved contentions, and potential lacunae in the current body understanding, offering a broad of panorama of the discipline (Jiang, 2022).

Complementing this review, our modus operandi includes a theoretical analysis of the capabilities of AI. This analytical prism affords more nuanced us a comprehension of the potential of generative its AI and potential applicability within the ambit of the EFL curriculum (Han et al., 2023).

Our investigation finds itself at a complex yet transformative confluence — the interplay between generative AI and the design of the EFL curriculum. At this nexus, an extensive survey of both the domain of AI and the extant literature on EFL curriculum design becomes crucial (Zhang & Aslan, 2021). The embraced methodology facilitates this meticulous examination, paving the wav to comprehension that is extensive in its reach and acute in its focus. Engaging with literature argumentative review an provides an invaluable chronological and conceptual backdrop. It helps unveil trends and fissures in prior research, paving the way for enriched discourse. Generative AI is a branch of AI that can create new content, such as text, images, and music (Cao et al., 2023). It has been applied to various educational contexts, such as early childhood education (Su & Zhong, 2022; Williams et al., 2019), language learning (Kohnke et al., 2023), and cloud-based mobile computing services (Xu et al., 2023).

Our investigation finds itself at a complex vet transformative confluence — the interplay between generative AI and the design of the EFL curriculum. At this nexus, an extensive survey of both the domain of AI and the extant literature on EFL curriculum design becomes crucial. The embraced methodology facilitates this meticulous examination, paving the way to comprehension that is extensive in its reach and acute in its focus. Engaging with an argumentative literature review provides an invaluable chronological and conceptual backdrop. It helps unveil trends and fissures in prior research, paving the way for enriched discourse. Generative AI, which refers to AI systems that can create novel content such as text, images, or music, has been increasingly applied in education to enhance teaching and learning outcomes (Baidoo-Anu & Owusu Ansah, 2023; Gimpel et al., 2023; Su & Zhong, 2022). On the other hand, EFL curriculum design is a complex and dynamic process involving multiple factors and stakeholders, such as learners' needs, teachers' beliefs, institutional constraints, and sociocultural contexts (Richards. 2017; Tomlinson, 2013). The interplay between generative AI and EFL curriculum design can offer new opportunities and challenges for EFL researchers, educators and such as providing personalised feedback, scaffolding language skills, fostering learner autonomy, and addressing ethical issues (Kuo et al., 2015; Williams et al., 2019).

On the other hand, theoretical exploration of AI casts light on the tools within our current grasp while also anticipating their potential future contributions to the field of EFL pedagogy. Thus, our chosen methodology serves a dual purpose — it is an exploratory instrument and a catalyst for dialogue. It allows for a critical interplay between well-grounded theories and blossoming technologies, thereby shedding light on potential avenues for progress in EFL curriculum design (Wang et al., 2023). Such a methodological stance enriches the discourse on active learning within language education, simultaneously probing its existing framework and pushing its boundaries. This approach aims to uncover new horizons to foster pedagogical transformative practices within the ever-evolving landscape of EFL instruction (Ribeiro, 2020).

### Results

An argumentative review enacted as part of this investigation provides an illuminating portrait of the EFL curriculum design, demonstrating a terrain full of promise intermingled with significant potential. It exposes dynamic а transformation arena where conventional pedagogical strategies are witnessing the onslaught of innovative practices. A consensus reverberates through much of the scrutinised literature, lauding active learning as an instrumental force in language pedagogy (e.g., Freeman et al., 2014; Prince et al., 2004; Turpen & Finkelstein, 2009). The design of EFL curricula has traditionally followed an instructor-centric model. emphasising direct pedagogical delivery and passive knowledge reception on the learner's part.

While proffering a structured language input, this established model often falls short of fully engaging learners or tailoring to their individual needs and preferred learning styles. Such a shortfall has implications for effective language acquisition. The lack of interactivity and personalisation within traditional curriculum result structures can in superficial language learning, where students may learn to mechanically use constructs without language fully understanding their application or nuances 2017). (Richards, This gap in comprehension and application represents a significant challenge in EFL education, where the ultimate aim is not just the acquisition of language knowledge but the ability to use this knowledge effectively in real-world communication (Lee et al., 2023). Consequently, it becomes imperative to scrutinise these limitations and explore new models of curriculum design that can enhance the depth and breadth of language learning experiences.

In addressing these perceptible gaps, many studies advocate a shift towards active learning paradigms (e.g., Pillai et al., 2020; Richards, 2017). Such a paradigmatic transformation pivots educational attention from instructors towards learners, inciting the latter to immerse themselves actively in the language acquisition process (Pillai et al., 2020). This approach cultivates a sense of learner autonomy, fostering more profound and more significant interaction with language learning content (Yeh & Mitric, 2019). Pedagogical strategies are intrinsic to active learning, encompassing collaborative problem-solving tasks, project undertakings, and reflective exercises, which have been evidenced to facilitate effective language learning and encourage the development of critical thinking capabilities and communicative competencies among learners (Richards, 2017).

beneficial outcomes Such constitute invaluable assets in the realm of language education, thereby underscoring the imperativeness of incorporating principles of active learning within the architecture of EFL curriculum design (Oprandi, Ogamba, & Middleton, 2022; Shawer, Gilmore, & 2009). Active learning Banks-Joseph, initiatives offer learners a sense of ownership and engagement, enabling them learning take charge of their to experiences. As they interact with language constructs, solve problems. collaborate with peers, and reflect on their learning, they are more likely to internalise and apply language constructs effectively (Cohen & Ball, 1999). The transformative of such an approach potential is significant, redefining the traditional landscape of EFL curriculum design and paving the way for a more engaged, effective, and learner-centric pedagogy (Ahmed & Dakhiel, 2019). Integrating active learning principles remains a nonnegotiable endeavour in the quest for future-ready language education.

As the focus shifts to the theoretical exploration of generative AI, a palpable congruence exists between AI's capabilities and the requirements discerned in the domain of EFL curriculum design (Abalkheel, 2022). By creating novel and tailored content, generative AI can infuse traditional curricula with renewed vitality Aslan, 2021). Such (Zhang & an invigoration paves the way for a transition towards learning models that are more dynamic in nature and centred around the learner (Su & Zhong, 2022). The ability of generative AI to adapt the content following learner data opens new vistas for personalisation, unseen and unprecedented in their scope and depth (Zawacki-Richter et al., 2019).

Such a capability allows for an EFL curriculum that evolves and transforms harmoniously with learners' diverse needs, distinct preferences, and remarkable progress, thereby ensuring a more relevant and engaging learning experience (Ribeiro, 2020). By delivering instruction tuned to individual learners, generative AI embodies the potential to make language learning more meaningful and effective (Kim et al., 2019). As it analyses learner data to shape content and guide instruction, generative AI can create a learning environment that responds and adapts to learners in real-time, keeping them engaged and motivated (Firat, 2023). Such а capacity for dynamic personalisation and adaptation aligns with active learning principles. It accentuates their potential, creating an ecosystem where learners are not just consumers of knowledge but also active contributors to their learning process (Flogie & Aberšek, 2023).

Moreover, AI's inherent capacity to facilitate the creation of adaptive learning pathways unfolds new opportunities for amplified learner autonomy, a pivotal tenet of active learning (Alam, 2022; Kabudi et al., 2021; Seo et al., 2021). Learners find themselves empowered to steer their personal language acquisition voyage, maneuvering through AI-generated content aligned seamlessly with their learning pace and style (Seo et al., 2021; Kabudi et al., 2021). Such a possibility deepens their involvement with the language, enriching the learning process. From an educational vantage point, incorporating generative AI can liberate educators from the constraints of repetitive administrative tasks, thus allowing them to concentrate on bolstering learner engagement and addressing particular needs (Seo et al., 2021).

In a secondary yet equally critical role, generative AI emerges as a pedagogical assistant. supplementing its primary function as an instructional tool (Ribeiro, 2020). The synergy of these roles amplifies the potential of AI to transform the way EFL curriculum is designed and delivered, providing a shift towards a more personalised and adaptive approach (Chen et al., 2021). Generative AI, in its capacity as a pedagogical assistant, can provide invaluable insights into learner performance and progress, enabling educators to make data-informed decisions and interventions (Owan et al., 2023). The potential of AI to act as both an enabler of individualised learning and a facilitator of pedagogy underscores effective the transformative potential of AI in the realm of EFL instruction (Koraishi, 2023). This dual-faceted role of generative AI in curriculum design and delivery reflects a promising future for integrating AI in language education, which is more engaging, personalised, and effective.

Building upon the insights gleaned from a thorough exploration of existing literature and theoretical analysis of generative AI, a novel framework for an AI-powered EFL curriculum is proposed. This innovative structure fuses the principles of active learning with the potent capabilities of generative AI, giving birth to a vibrant and responsive curriculum design while simultaneously catering to the unique needs of individual learners (Zhu & Bento, 2017). Central to this novel curriculum model is a content generator driven by AI, capable of crafting personalised and levelappropriate language learning materials (Ribeiro, 2020).

The capacity for real-time adaptation enables the curriculum evolve to synchronously with the learners' progress, ensuring relevancy and continuous alignment with learners' needs. This dynamic curriculum, fueled by AI, promotes an immersive learning environment that incites engagement, and deepens understanding, boosts efficacy (Chiu et al., 2023). In essence, this conceptual model symbolises a paradigm shift in EFL curriculum design, pivoting from a static, one-size-fits-all approach to a fluid, learner-centric model, echoing the principles of active learning and individualisation at its core.

Within the framework of this AI-infused curriculum, it becomes apparent that the support for adaptive learning pathways catalyses empowering learners (Ribeiro, empowerment 2020). This anchors learners in the driving seat of their language acquisition journey (Pedro et al., 2019). This curriculum structure allows learners to delve into language constructs quickly, immerse in interactive tasks, and receive immediate, personalised feedback (Kerr, 2016). This setup cultivates a thriving environment for active learning, a cornerstone of the proposed curriculum model.

Emphasised within the proposed structure is also the role of educators. reconceptualised as facilitators rather than mere distributors of knowledge (Queiroz et al., 2022). The design enables educators to transition from traditional pedagogical roles towards a more interactive, supportbased role (Qadir, 2023). With the advanced capabilities of generative AI, administrative tasks traditionally placed upon teachers can be seamlessly handled, enabling them to dedicate more time and energy to cultivating an engaging learning atmosphere, nurturing learner autonomy,

and addressing individualised needs (Lameras & Arnab, 2021). This shift in roles underscores the transformative potential of the AI-driven model, where technology and human intervention harmoniously coexist to propel language education forward.

### Discussion

In intertwining the threads of generative AI with those of EFL curriculum design, we unveil a tapestry teeming with implications and opportunities (Lim et al., 2023; Su & Zhong, 2022). Such a fusion beckons the dawn of a transformative learning paradigm; dynamic, personalised, and with learners steering the helm (Lim et al., 2023). Where once lay the static traditional EFL foundations of the curriculum, we now witness the emergence of a flexible, adaptive learning entity crafted to reflect the unique learning journeys of its students (Su & Zhong, 2022; Yang, 2022).

The superior capability of generative AI to curate personalised content on demand proposes a decisive shift in curriculum design; from a monolithic 'one-size-fits-all' to a bespoke 'tailored-fit' approach curriculum (Weisz et al., 2023). Such a construct embraces the unique needs, learning styles, and pace of progression intrinsic to each learner (Chang & Kidman, 2023). As such, this tailored approach pledges an immersive and efficient language learning experience, an experience tailored to resonate with each learner's unique intellectual and linguistic footprint (Mondal et al., 2023).

Furthermore, this fusion of AI and curriculum design reorients the role of educators, liberating them from repetitive administrative tasks and allowing them a greater focus on their students' holistic development (Kim et al., 2022; Woithe & Filipec, 2023). As AI technology ensures the provision of personalised learning materials, teachers find themselves with the expanded bandwidth, enabling them to invest in fostering critical thinking, cultivating cultural sensitivity, and communicative competence advancing (Williams et al., 2019). They contribute richly to an enriched EFL learning experience, affirming the transformative potential of marrying generative AI with EFL curriculum design (Jiang, 2022; Su & Zhong, 2022).

Integrating generative AI into the design of EFL curricula portends a sea change in dynamics. pedagogical instructional methodologies, and evaluative techniques (Ribeiro, 2020). The fulcrum of this impending transformation lies firmly in the grasp of AI. It is a change that transcends conventional classroom boundaries. signalling the metamorphosis of the teacher-centric archetype into a vibrant learning ecosystem (Dishari et al., 2023). In this new paradigm, teachers, AI, and learners engage in an interactive dance, each influencing the rhythm and direction of the other, each integral to creating a harmonious learning symphony (Guilherme, 2019).

The role of teachers undergoes а transformative shift in this novel learning schema. No longer solely the dispensers of knowledge, their role expands to encompass facets of facilitation and mentorship (Rodriguez et al., 2021). Teachers, in this dynamic trifecta, guide learners through the labyrinth of their AI-enhanced individualised, learning journey. They provide the human touch, imparting wisdom and perspective, nurturing critical thinking and problemsolving skills, and fostering a culture of inquiry and reflection (Chaudhry & Kazim, 2021). All while the AI serves as a powerful, adaptive tool, personalising content and pacing to suit each learner's unique needs and abilities (Bozkurt & Sharma, 2023; Kaouni et al., 2023; Marchenko & Gudkova, 2023).

This transformative shift is not confined to pedagogical roles and dynamics alone; it reverberates through the fabric of instructional methodologies and evaluative techniques. Instruction becomes less a oneway delivery of pre-determined content and more a responsive, interactive process, with AI-generated content dynamically adjusting to learner feedback and progress (Latif et al., 2023). Assessments evolve from summative tools to formative ones. facilitating ongoing feedback and improvement continuous (Jurāne-Brēmane, 2023). With generative AI woven into the EFL curriculum, we see the potential for enhancing language learning outcomes and the promise of a genuinely learner-centric, engaging, and enriching learning experience (Ribeiro, 2020).

Methodologies of instruction, long constrained by the limitations of traditional modes of teaching, undergo а revolutionary transformation through the incorporation of AI-driven active learning strategies. These strategies, which include problem-solving tasks, collaborative projects, and reflective exercises, are not merely adopted but are reinvented, acquiring new dimensions of interaction and engagement with the inclusion of AIgenerated. learner-tailored content (Ribeiro, 2020; Ciravegna et al., 2022). This change revolutionises the learning landscape, casting a ripple effect across the domain of instruction and amplifying the depth and breadth of learner interaction with language (Yannier et al., 2021).

Assessment, an indispensable cog in the machinery of language learning, likewise benefits immensely from integrating generative AI. The AI's capacity to generate personalised assessment tasks using individual learner data is a powerful tool for educators (Zhai, 2023). It enables a shift from generic evaluations to individualised feedback, more accurately

reflecting the learner's progress (Cambridge University Press & Assessment, 2023). This provides timely responses to the learner's efforts and results in a more nuanced understanding of learner advancement, highlighting areas of strength and zones requiring further support.

The role of generative AI extends beyond mere assessment creation, permeating the subsequent instructional decisions. By illuminating the gaps in understanding, AIdriven assessments provide a roadmap for educators to tailor their subsequent instruction (Cambridge University Press & Assessment, 2023; Ribeiro, 2020). In this context, AI does not merely evaluate learning but actively informs the pedagogical process (Jiang, 2022; Pedro et al., 2019). This dual role of assessment and instructional informer sets the stage for a genuinely dynamic, responsive, and effective EFL curriculum primed to cater to every learner's unique needs and pace (Rosé & Ferschke, 2016).

Central to this discourse rests a crucial contention: the indispensability of a dynamic, personalised curriculum in fostering active learning and enhancing outcomes in language acquisition. This perspective emphasises the profound impact a curriculum, tailored to individual learner needs and preferences, can have on the learning process (Trousass et al., 2022; Shemshack & Spector, 2020). When learners actively engage with materials designed to cater to their skill levels and interests, it cultivates a depth of linguistic comprehension that extends beyond mere rote learning into authentic language usage (Miliband, 2006). Moreover, personalised learning can be supported by adaptive learning technologies that adjust the content and feedback according to the learner's performance and progress (Jing et al., 2023).

Generative AI, armed with its capacity for crafting personalised, level-appropriate, and engaging content, is ideally positioned to stimulate a learner's curiosity and motivation (Chang & Kidman, 2023). It can potentially invigorate the landscape of language learning by providing a wide array of learning experiences. From reading comprehension exercises and vocabulary drills to conversation simulations, each activity is designed to mirror real-world language use (Cui et al., 2023). The contextualisation of these learning activities allows learners to draw connections between their language lessons and everyday interactions, bridging the gap between the classroom and the outside world (Dwivedi et al., 2021).

It is widely recognised that active, contextual learning fosters more robust language acquisition (Azizi et al., 2022; Collentine & Freed, 2004). When learners engage with language in varied and meaningful contexts, they acquire not just the mechanics of the language but also the cultural and communicative nuances that contribute to fluent. natural usage (Chaudron, 2001; Loewen, 2020). Integrating generative AI into the curriculum thus opens a gateway to a environment learning that is simultaneously challenging, supportive, immersive and personalised (Chang & Kidman, 2023; Tan, 2023). It sets the stage for learners to explore, experiment, and engage with the language in their way.

In its conception and design, such a dynamic curriculum accommodates a broad spectrum of learner variables. These range from learning styles and pace through the cultural context within which learning is situated and extend to the learner's current language proficiency level (Graves, 2008). The inherent flexibility of this curriculum framework empowers learners to steer their language-learning journey, instilling in them a sense of autonomy and self-assuredness (Breen, 1987; Olshtain, 1989). These elements are not merely peripheral benefits but central components of a successful language learning experience, as they contribute significantly to bolstering language acquisition (Dörnyei & Ushioda, 2011; Ellis, 2008).

The transformative potential of generative AI in driving curriculum design heralds the promise of a future where a profound shift marks the landscape of EFL instruction. Envisioned is a landscape where active learning ceases to be an ancillary instructional strategy but emerges as the foundation upon which EFL instruction is built (Jiang, 2022; Woo et al., 2022). It is a vision of a pedagogical environment where students are not passive receivers of knowledge but active participants in the construction and understanding of their learning content (Jeon & Lee, 2023; Rasul et al., 2023).

By embedding generative AI into the fabric of the EFL curriculum, the active learning principle becomes woven into the very essence of language instruction (Hsiao & Chang, 2023; Woo et al., 2022). This shift reimagines and redefines the boundaries traditional of language instruction, bringing forth an unprecedented fusion of technology and 2020). pedagogy (Ribeiro, In this confluence lies the promise of a learning environment that is at once personalised, dynamic, and learner-centric, marking a transformative step forward in the field of EFL instruction (Jiang, 2022; Nasrullah et al., 2023).

## Conclusions

As this discourse culminates, one becomes increasingly cognizant of generative AI's transformative potential within **EFL** education. The intricacies we have explored denote a paradigm shift in curriculum design that morphs static, prescriptive structures into dynamic, personalised learning journeys (Woo et al., 2022). Generative AI, serving as the linchpin of this transformation, facilitates a vibrant synergy between technology and pedagogy, remoulding the contours of EFL instruction (Jiang, 2022; Ribeiro, 2020). The potency of generative AI lies in its capacity to converge the various dimensions of language learning into a unified, tailored curriculum. From text generation to conversation simulation, AI's capabilities allow an unfurling of learning experiences that resonate with learners' unique attributes and requirements (Adiguzel et al., 2023; Alam, 2021). This integration of AI and EFL instruction signifies an unprecedented stride towards learner-centred education powered by technological innovation.

Notwithstanding the promise of AI, we must caution against an uncritical acceptance of its merits. The application of AI in education, while promising, brings with it questions of ethics, accessibility, and effect on teacher roles (Akgun & Greenhow, 2022; Holmes et al., 2021). These facets warrant critical examination and balanced discourse in our march towards an AI-integrated EFL landscape.

Our journey does not terminate at the discovery of AI's potential; instead, it initiates a sustained dialogue on the role of technology in language pedagogy. As academicians, educators, and researchers, we are duty-bound to keep this conversation alive, fostering a culture of inquiry, critique, and innovation in our field. Emphasising research as a critical engine of this process is paramount. Rigorous research into AI's implications for **EFL** instruction can inform pedagogical decisions, and curriculum redesigns, and policy formulations (Ji et al., 2022; Kasneci et al., 2023). Thus, research emerges as an indispensable tool for shaping effective, future-ready EFL curricula, echoing our learners' evolving needs. This discourse must also shine a light on the voices at the grassroots - the teachers and learners. Their experiences, insights, and concerns will lend crucial perspectives to our understanding of AI's role in EFL education (Ribeiro, 2020). Therefore, creating platforms for their participation in this conversation becomes an essential responsibility for us as stakeholders in higher education.

As we broach the cusp of a new era in EFL education, it is pertinent to identify avenues for further research. As AI technology swiftly evolves, so must our inquiry into its educational implications. We delve deeper into must AI's pedagogical applications, its effects on learner outcomes, its influence on teacher roles. and its ethical considerations (Holmes et al., 2021; Jiang, 2022). Research must also explore the feasibility and effectiveness of various AI implementations across diverse educational settings. Varied geographical, socioeconomic, and cultural contexts will interact differently with an AI-driven curriculum, necessitating comprehensive and context-sensitive studies (Akgun & Greenhow, 2022; Zhai, 2023). In tandem with these explorations, we need to examine how our education systems can adapt to accommodate AI's potential. This includes changes in policy, teacher training, and resource allocation (Pedro et al., 2019; Ribeiro, 2020). Only through this continual inquiry and adaptation can we genuinely harness AI's transformative potential in EFL education. As we peer into this exciting future, let us remember that our ultimate goal remains to foster enriching, inclusive, and effective learning experiences for all our students.

### References

Abalkheel, A. (2022). Amalgamating Bloom's taxonomy and artificial intelligence to face the challenges of online EFL learning amid post-COVID-19 in Saudi Arabia. International Journal of *English Language and Literature Studies*, *11*(1), 16-30.

- Adiguzel, T., Kaya, M. H., & Cansu, F. K. (2023). Revolutionising education with AI: Exploring the transformative potential of ChatGPT. *Contemporary Educational Technology*, *15*(3), ep429.
- Ahmed, S. A., & Dakhiel, M. A. (2019). Effectiveness of Learner-Centered Teaching in Modifying Attitude towards EFL and Developing Academic Self-Motivation among the 12th Grade Students. *English Language Teaching*, 12(4), 139-148.
- Akgun, S., & Greenhow, C. (2021).
  Artificial intelligence in education: Addressing ethical challenges in K-12 settings. *AI and Ethics*, 1-10.
- Alam, A. (2021, December). Should robots replace teachers? Mobilisation of AI and learning analytics in education. In 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3) (pp. 1-12). IEEE.
- Alam, A. (2022). Employing Adaptive Learning and Intelligent Tutoring Robots for Virtual Classrooms and Campuses: Reforming Smart Education in the Age of Artificial Intelligence. In Advanced Computing and Intelligent *Technologies:* Proceedings of ICACIT 2022 (pp. 395-406). Singapore: Springer Nature Singapore.
- Alhalangy, A. G., & AbdAlgane, M. (2023). Exploring the Impact of AI on The EFL Context: A Case Study of Saudi Universities. *Journal of Intercultural Communication*, 23(2), 41-49.
- Azizi, Z., Namaziandost, E., & Ashkani, P. (2022). Active learning as an approach to fostering EFL learners' speaking skills and willingness to communicate: A mixed-methods inquiry. *Issues in Language Teaching*, 11(2), 93-128.

- Baidoo-Anu, D., & Owusu Ansah, L. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Available at SSRN* 4337484.
- Bozkurt, A., & Sharma, R. C. (2023). Challenging the status quo and exploring the new boundaries in the age of algorithms: Reimagining the role of generative AI in distance education and online learning. *Asian Journal of Distance Education*, 18(1).
- Breen, M.P. (1987). Contemporary Paradigms in Syllabus Design Part II. Language Teaching, 20, 157 -174.
- Cambridge University Press & Assessment. (2023). The Cambridge approach to generative AI and assessment. https://www.cambridge.org/newsand-insights/news/The-Cambridgeapproach-to-generative-AI-andassessment
- Cao, Y., Li, S., Liu, Y., Yan, Z., Dai, Y., Yu, P. S., & Sun, L. (2023). A comprehensive survey of aigenerated content (aigc): A history of generative ai from gan to chatgpt. *arXiv* preprint *arXiv:2303.04226*.
- Chang, C. H., & Kidman, G. (2023). The rise of generative artificial intelligence (AI) language modelschallenges and opportunities for geographical and environmental education. *International Research in Geographical and Environmental Education*, 32(2), 85-89.
- Chaudhry, M. A., & Kazim, E. (2022). Artificial Intelligence in Education (AIEd): A high-level academic and industry note 2021. *AI and Ethics*, 1-9.
- Chaudron, C. (2001). Progress in Language Classroom Research: Evidence from The Modern

Language Journal, 1916-2000. *The Modern Language Journal*, 85(1), 57-76.

- Chiu, T. K., Moorhouse, B. L., Chai, C. S., & Ismailov, M. (2023). Teacher support and student motivation to learn with Artificial Intelligence (AI) based chatbot. *Interactive Learning Environments*, 1-17.
- Ciravegna, G., Precioso, F., & Gori, M. (2021). Knowledge-driven Active Learning. *arXiv* preprint *arXiv:2110.08265*.
- Cohen, D. K., & Ball, D. L. (1999). Instruction, capacity, and improvement.
- Collentine, J., & Freed, B. (2004). Introduction: Learning context and its effects on second language acquisition. *Studies in second language acquisition*, 26(2), 153-171.
- Cui, L., Zhu, C., Hare, R., & Tang, Y. (2023). MetaEdu: a new framework for future education. *Discover Artificial Intelligence*, 3(1), 10.
- Dishari, S., AlAfnan, M. A., & Lee, L. (2023). Reframing Constructivism For Better Authentic Teaching And Learning. Journal of Namibian Studies: History Politics Culture, 34, 3141-3155.
- Dörnyei, Z., & Ushioda, E. (2011). Teaching and researching: Motivation (Vol. 2). *Harlow: Pearson Education*.
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Williams, M. D. (2021). ... Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International* Journal ofInformation Management, 57, 101994.
- Eager, B., & Brunton, R. (2023). Prompting higher education towards AI-augmented teaching and learning practice. *Journal of University*

*Teaching & Learning Practice*, 20(5), 02.

- Ellis, R. (1997). Second language acquisition. *The United States: Oxford*, 98.
- Firat, M. (2023). How chat GPT can transform autodidactic experiences and open education. *Department of Distance Education, Open Education Faculty, Anadolu Unive.*
- Flogie, A., & Aberšek, B. (2022). Artificial intelligence in education. LutsenkoO. LutsenkoG.(Eds.), Active Learning: Theory and Practice, 97-118.
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the national* academy of sciences, 111(23), 8410-8415.
- Gimpel, H., Hall, K., Decker, S., Eymann, T., Lämmermann, L., Mädche, A., ... & Vandrik, S. (2023). Unlocking the power of generative AI models and systems such as GPT-4 and ChatGPT for higher education: A guide for students and lecturers (No. 02-2023). Hohenheim Discussion Papers in Business, Economics and Social Sciences.
- Graves, K. (2008). The language curriculum: A social contextual perspective. *Language Teaching*, 41(2), 147-181. doi:10.1017/S0261444807004867
- Guilherme, A. (2019). AI and education: the importance of teacher and student relations. *AI & society*, *34*, 47-54.
- Han, J., Yoo, H., Kim, Y., Myung, J., Kim, M., Lim, H., ... & Oh, A. (2023). RECIPE: How to Integrate ChatGPT into EFL Writing Education. arXiv preprint arXiv:2305.11583.
- Hinojo-Lucena, F.-J., Aznar-Díaz, I., Cáceres-Reche, M.-P., & Romero-Rodríguez, J.-M. (2019). Artificial

Intelligence in Higher Education: A Bibliometric Study on its Impact in the Scientific Literature. *Educ. Sci.*, 9, 51. <u>https://doi.org/10.3390/educsci90100</u> 51

- Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., ... & Koedinger, K.
  R. (2021). Ethics of AI in education: Towards a community-wide framework. *International Journal of Artificial Intelligence in Education*, 1-23.
- Hwang, G. J., & Chien, S. Y. (2022). Definition, roles, and potential research issues of the metaverse in education: An artificial intelligence perspective. *Computers* and *Education: Artificial Intelligence*, 3, 100082.
- Jeon, D. J. (2022a). Exploring AI chatbot affordances in the EFL classroom: Young learners' experiences and perspectives. arXiv preprint arXiv:357716381.
- Jeon, D. J. (2022b). Prompt engineering for human-AI story writing: An Activity Theory perspective. arXiv preprint arXiv:2306.01798.
- Jeon, J. (2022). Exploring AI chatbot affordances in the EFL classroom: young learners' experiences and perspectives. Computer Assisted Language Learning. Advance online publication.
- Jeon, J., & Lee, S. (2023). Large language models in education: A focus on the complementary relationship between human teachers and ChatGPT. *Education and Information Technologies*, 1-20.
- Ji, H., Han, I., & Ko, Y. (2022). A systematic review of conversational AI in language education: focusing on the collaboration with human teachers. *Journal of Research on Technology in Education*, 1-16.
- Jiang, R. (2022b). Jiang, R. (2022). How does artificial intelligence empower

EFL teaching and learning nowadays? A review on artificial intelligence in the EFL context. *Frontiers in Psychology*, 13, 1049401.

- Jing, Y., Zhao, L., Zhu, K., Wang, H., Wang, C., & Xia, Q. (2023). Research landscape of adaptive learning in education: A bibliometric study on research publications from 2000 to 2022. *Sustainability*, *15*(4), 3115.
- Jurāne-Brēmane, A. (2023). Digital Assessment in Technology-Enriched Education: Thematic Review. *Education Sciences*, 13(5), 522.
- Kabudi, T., Pappas, I., & Olsen, D. H. (2021). AI-enabled adaptive learning systems: A systematic mapping of the literature. *Computers and Education: Artificial Intelligence*, 2, 100017.
- Kaouni, M., Lakrami, F., & Labouidya, O. (2023). The Design of An Adaptive E-learning Model Based on Artificial Intelligence for Enhancing Online Teaching. *International Journal of Emerging Technologies in Learning (Online)*, 18(6), 202.
- Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... & Kasneci, G. (2023).
  ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274.
- Kerr, P. (2016). Adaptive learning. *Elt Journal*, 70(1), 88-93.
- Kim, D. (2020). Learning language, learning culture: Teaching language to the whole student. *ECNU Review of Education*, 3(3), 519-541.
- Kim, J., Lee, H., & Cho, Y. H. (2022). Learning design to support student-AI collaboration: Perspectives of leading teachers for AI in education. *Education* and *Information Technologies*, 27(5), 6069-6104.

- Kim, N. Y., Cha, Y., & Kim, H. S. (2019). Future english learning: Chatbots and artificial intelligence. *Multimedia-Assisted Language Learning*, 22(3).
- Klímová, B., & Ibna Seraj, P. M. (2023). The use of chatbots in university EFL settings: Research trends and pedagogical implications. *Frontiers in Psychology*, *14*, 1146.
- Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). ChatGPT for language teaching and learning. *RELC Journal*, 00336882231162868.
- Koraishi, O. (2023). Teaching English in the age of AI: Embracing ChatGPT to optimise EFL materials and assessment. *Language Education* and Technology, 3(1).
- Kuo, Y. C., Chu, H. C., & Huang, C. H. (2015). A learning style-based grouping collaborative learning approach to improve EFL students' performance in English courses. *Journal of Educational Technology & Society*, *18*(2), 284-298.
- Lameras, P., & Arnab, S. (2021). Power to the teachers: an exploratory review on artificial intelligence in education. *Information*, 13(1), 14.
- Latif, E., Mai, G., Nyaaba, M., Wu, X., Liu, N., Lu, G., ... & Zhai, X. (2023). Artificial general intelligence (AGI) for education. *arXiv* preprint *arXiv:2304.12479*.
- Lee, T. Y., Ho, Y. C., & Chen, C. H. (2023). Integrating intercultural communicative competence into an online EFL classroom: an empirical study of a secondary school in Thailand. *Asian-Pacific Journal of Second and Foreign Language Education*, 8(1), 1-25.
- Lim, W. M., Gunasekara, A., Pallant, J. L., Pallant, J. I., & Pechenkina, E. (2023). Generative AI and the future of education: Ragnarök or reformation? A paradoxical perspective from management

educators. *The International Journal* of Management Education, 21(2), 100790.

- Loewen, S. (2020). Introduction to instructed second language acquisition. Routledge.
- Marchenko, I., & Gudkova, N. (2023). The synergy paradigm: the potential of information technology in university language education. In V International Scientific and Practical Conference" Science in motion: classic and modern tools and methods in scientific investigations". NGO European Scientific Platform (Vinnytsia, Ukraine); LLC International Centre Corporative Management (Vienna, Austria).
- Miliband, D. (2006). Choice and voice in personalised learning. *Schooling for tomorrow: Personalising education*, 21-30.
- Mohamed, A. M. (2023). Exploring the potential of an AI-based Chatbot (ChatGPT) in enhancing English as a Foreign Language (EFL) teaching: perceptions of EFL Faculty Members. *Education* and *Information Technologies*, 1-23.
- Mondal, S., Das, S., & Vrana, V. G. (2023). How to bell the cat? A theoretical review of generative artificial intelligence towards digital disruption in all walks of life. *Technologies*, 11(2), 44.
- Nasrullah, N., Rosalina, E., Faradila, A. S., Tanziliana, R. N., & Naufal, M. H. (2023). Blended Learning Approach For EFL In-Service Teachers In Constructing Smart Learning Environment: Innovation In Education Personalized For Self-Independent Learning. International Journal of Educational Research and Social Sciences (IJERSC), 4(1), 141-153.
- Olshtain, E. (1989). Changing directions in language curriculum design. Annual

*Review of Applied Linguistics*, 10, 135-144.

- Oprandi, P., Ogamba, I., & Middleton, A. (2022). Introduction to Theory and Curriculum Design. *100 Ideas for Active Learning*.
- Owan, V. J., Abang, K. B., Idika, D. O., Etta, E. O., & Bassey, B. A. (2023). Exploring the potential of artificial intelligence tools in educational measurement and assessment. *Eurasia Journal of Mathematics, Science and Technology Education, 19*(8), em2307.
- Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development.
- Pillai, N., Raff, E., Ferraro, F., & Matuszek, C. (2020, December).
  Sampling approach matters: Active learning for robotic language acquisition. In 2020 IEEE International Conference on Big Data (Big Data) (pp. 5191-5200). IEEE.
- Prince, M., Borrego, M., Henderson, C., Cutler, S., & Froyd, J. (2013). Use of research-based instructional strategies in core chemical engineering courses. *Chemical Engineering Education*, 47(1), 27-37.
- Qadir, J. (2023, May). Engineering education in the era of ChatGPT: Promise and pitfalls of generative AI for education. In 2023 IEEE Global Engineering Education Conference (EDUCON) (pp. 1-9). IEEE.
- Queiroz, V., Simonette, M., & Spina, E. (2022). Artificial intelligence and education: myth and facts. In *EDULEARN22 Proceedings* (pp. 996-1001). IATED.
- Rasul, T., Nair, S., Kalendra, D., Robin,M., de Oliveira Santini, F., Ladeira,W. J., ... & Heathcote, L. (2023).The role of ChatGPT in higher

education: Benefits, challenges, and future research directions. *Journal of Applied Learning and Teaching*, 6(1).

- Ribeiro, R. (2020). AI In English Language Learning. Cambridge English Blog. Retrieved from https://www.cambridge.org/elt/blog/ 2020/03/09/artificial-intelligenceenglish-language-learning/
- Richards, J. C. (2017). Curriculum development in language teaching. Cambridge: Cambridge University Press.
- Rodríguez-Triana, M. J., Prieto, L. P., Martínez-Monés, A., Asensio-Pérez, J. I., & Dimitriadis, Y. (2018, March). The teacher in the loop: Customising multimodal learning analytics for blended learning. In Proceedings ofthe 8th international conference on learning analytics and knowledge (pp. 417-426).
- Rosé, C. P., & Ferschke, O. (2016). Technology support for discussion based learning: From computer supported collaborative learning to the future of massive open online courses. *International Journal of Artificial Intelligence in Education*, 26, 660-678.
- Sajidin, S., & Ashadi, A. (2021). How Do Their" Group Work" Works As An Active Learning Strategy Of Efl Learning. Jurnal Cakrawala Pendidikan, 40(2), 480-494.
- Seo, K., Tang, J., Roll, I., Fels, S., & Yoon, D. (2021). The impact of artificial intelligence on learner– instructor interaction in online learning. *International journal of educational technology in higher education, 18*, 1-23.
- Shawer, S., Gilmore, D., & Banks-Joseph, S. (2009). Learner-Driven EFL Curriculum Development at the Classroom Level. International journal of teaching and learning in higher education, 20(2), 125-143.

- Shemshack, A., & Spector, J. M. (2020). A systematic literature review of personalised learning terms. *Smart Learning Environments*, 7(1), 1-20.
- Su, J., & Zhong, Y. (2022). Artificial Intelligence (AI) in early childhood education: Curriculum design and future directions. *Computers and Education: Artificial Intelligence, 3*, 100072.
- Tan, S. (2023). Harnessing Artificial Intelligence for innovation in education. In Learning intelligence: Innovative and digital transformative learning strategies: Cultural and social engineering perspectives (pp. 335-363). Singapore: Springer Nature Singapore.
- Tomlinson, B. (Ed.). (2023). *Developing materials for language teaching*. Bloomsbury Publishing.
- Troussas, C., Krouska, A., & Virvou, M. (2020). Using a multi module model for learning analytics to predict learners' cognitive states and provide tailored learning pathways and assessment. *Machine* learning paradigms: Advances in learning analytics, 9-22.
- Turpen, C., & Finkelstein, N. D. (2009). Not all interactive engagement is the same: Variations in physics professors' implementation of Peer Instruction. *Physical Review Special Topics-Physics Education Research*, 5(2), 020101.
- Wang, X., Liu, Q., Pang, H., Tan, S. C., Lei, J., Wallace, M. P., & Li, L. (2023). What matters in AIsupported learning: A study of human-AI interactions in language learning using cluster analysis and epistemic network analysis. *Computers & & Education*, 194, 104703.
- Weisz, J. D., Muller, M., He, J., & Houde, S. (2023). Toward General Design Principles for Generative AI

Applications. *arXiv arXiv*:2301.05578.

Williams, R., Park, H. W., Oh, L., & Breazeal, C. (2019, July). Popbots: Designing an artificial intelligence curriculum for early childhood education. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 33, No. 01, pp. 9729-9736).

preprint

- Williams, R., Park, H. W., Oh, L., & Breazeal, C. (2019, July). Popbots: Designing an artificial intelligence curriculum for early childhood education. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 33, No. 01, pp. 9729-9736).
- Woithe, J., & Filipec, O. (2023). Understanding the Adoption, Perception, and Learning Impact of ChatGPT in Higher Education: A qualitative exploratory case study analysing students' perspectives and experiences with the AI-based large language model.
- Woo, D. J., Guo, K., & Susanto, H. (2023). Exploring EFL students' prompt engineering in human-AI story writing: an Activity Theory perspective. arXiv preprint arXiv:2306.01798.
- Xu, M., Du, H., Niyato, D., Kang, J., Xiong, Z., Mao, S., ... & Poor, H. V. (2023). Unleashing the power of edge-cloud generative ai in mobile networks: A survey of aigc services. *arXiv* preprint *arXiv:2303.16129*.
- Yang, W. (2022). Artificial Intelligence education for young children: Why, what, and how in curriculum design and implementation. *Computers and Education: Artificial Intelligence*, *3*, 100061.
- Yannier, N., Hudson, S. E., Koedinger, K. R., Hirsh-Pasek, K., Golinkoff, R. M., Munakata, Y., ... & Brownell, S.

E. (2021). Active learning: "Handson" meets "mindson". *Science*, *374*(6563), 26-30.

- Yeh, E., & Mitric, S. (2019). Voices to Be Heard: Using Social Media for Digital Storytelling to Foster Language Learners' Engagement. *Tesl-Ej*, 23(2).
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019).
  Systematic review of research on artificial intelligence applications in higher education–where are the educators?. *International Journal of Educational Technology in Higher Education, 16*(1), 1-27.
- Zhai, C. (2023). A systematic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university. *Computers and Education: Artificial Intelligence*, 100134.
- Zhai, X. (2023). Chatgpt and ai: The game changer for education. *Available at SSRN*.
- Zhang, C., Zhang, C., Zheng, S., Qiao, Y., Li, C., Zhang, M., ... & Hong, C. S. (2023). A complete survey on generative ai (aigc): Is chatgpt from gpt-4 to gpt-5 all you need?. arXiv preprint arXiv:2303.11717.
- Zhang, K., & Aslan, A. B. (2021). AI technologies for education: Recent research & future directions. *Computers* and *Education: Artificial Intelligence*, 2, 100025.
- Zhu, J. J., & Bento, J. (2017). Generative adversarial active learning. *arXiv* preprint arXiv:1702.07956.