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Transforming English Language Learning For Students With Disabilities Through AI-Driven Inclusive Strategies

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Abstract
Inclusive education necessitates the provision of seamless ELL for students when it comes to diverse students with disabilities; however, there is often a disconnect in traditional teaching practices. This paper explores how AI can revolutionize ELL for students with disabilities, allowing for a personalized, adaptive, accessible learning experience. Technologies for artificial intelligence (AI), including speech recognition, natural language processing, and intelligent tutoring systems, can be used to automatically personalize content and feedback for learners across a wide range of cognitive, sensory, and physical challenges. It surveys the current AI-based applications and assesses their efficacy in addressing the challenges (e.g., reduced mobility, speech disorders, or processing cognitive limitations) that act as brakes to acquiring language. Using a system literature review and a data-driven analysis of learner performance and data from AI-enabled ELL platforms, this paper identifies the key AI strategies that enhance learner engagement, learner autonomy and communication abilities. Ethical and human-AI working issues are reported to overcame to create empathetic, cross-culturally appropriate educational settings. The use of AI in inclusive ELL ensures equal opportunity in access and language learning progression and confidence. A framework is offered for AI in TESOL in broader classroom contexts, focusing on the cooperative roles of teachers, technology builders and legislators toward scalable, and stable, language learning ecosystems. This paper underscores the transformative nature of AI to address educational disparities and supports for continued and increased interdisciplinary research and investment to realize English language education that is truly inclusive for all learners.
Keywords*: speech disorders, communication skills, learning progression, AI tools, English classroom, educational disparities etc.*

Background of the Study
LM (ELLS) in Inclusive Classroom The focus of ELL in inclusive education settings has been increased over time as a result of the increasing recognition of the need for educational systems to be inclusive so as to cater for the diverse needs of learners, including individuals with impairments (Ainscow, 2005). Historically, inclusive education sought to place students with disabilities in to mainstream classes and settings, and open the doors for them to have access to every material, opportunity, and experiences awarded the non-disabled peer. However, providing English language learning (ELL) instruction to students with disabilities has been problematic because of the multitude levels of cognitive, sensory, and physical disabilities represented by such students. For English-language learners with disabilities, certain challenges arise in learning English. These could be in communication – for example, speech impediments – mobility – limited access to physical resources – or cognitive – processing speed, attention span and memory difficulties (Sharma et al., 2015). Subsequently, it (learning) becomes boring which may

lead to less participation in classroom activities and not making progress for the acquisition of the language. Existing learning approaches are also unable to support these learners, and old traditional one-size-fits-all teaching does not meet the personal needs of such learners (Lee et al., 2017). Consequently, a language gap still exists between students with disabilities and their non-disabled peers, which constitutes a major educational inequity. These mandates only serve to increase the urgency to find effective solutions that are need-specific for students with disabilities. One such solution is to implement Artificial Intelligence (AI) in education. AI (e. g. speech recognition, natural language processing or intelligent tutoring systems) has also been reported to have the potential of providing an added value by enriching language learning opportunities and making it more accessible and inclusive (Heffernan et al., 2016). These have the potential to deliver customizable, personalized learning experiences to students at the time they need it (with), providing them both formative feedback and addressing the range of learning styles of students (Baker et al., 2017). AI can enable educators to create a more interactive, personalized learning experience, drawing out better learning results for the disabled students.

Purpose and Significance of the Study

This study aims to examine the effect of AI technologies on EFL learners' curricular and co-curricular languages provision for learners with disability. The purpose of this research is to explore if inclusive methods that are AI influenced can be used to tackle the unique needs of these students in traditional learning setup. In contrast, the work proposed is to seek specific ways that AI can help in promoting accessibility, engagement and language acquisition, and to decide which key AI strategies can be used to make the learning interactions accessible for students with disabilities who are ELLs.The study's implications are that it has the potential to influence the new directions in ESL education for students with disabilities. The tools of AI can also be leveraged to provide personalized, adaptive support to address specific learning barriers. These tools can also be individually adapted for people with specific disabilities, such as auditory processing disorder, motor impairments or speech impairments, to promote the accessibility of language learning resources for students. The ability to deliver real-time information on the students' performance or participation from interacting with AI is also an enhancement that teachers can use as feedback to tell them on how a particular class is being taught and how a particular student is learning (Guskey, 2007). In addition, the study's outcomes can also lead to scalable and sustainable AI-based applications in the context of ELL to inform the design and deployment of inclusive active and rich language learning environments which can be accessible and outweigh the challenges of the development of inexpensive and effective language learning environments. It has social change implications as well given that students with disabilities have the right to the same access to opportunities to develop language and succeed academically that non-disabled students do.

LITERATURE REVIEW

Inclusive education is characterised by the education of all students, irrespective of ability or disability, in the same educational structure, provided the support services and adjustments required (Ainscow, 2005). The pedagogy of inclusive education underscores universal access to the general education curriculum, as well as the value and affirmation of diversity within a context where all students can succeed and inclusive in English Language Learning (ELL) is to allow children with disabilities (special needs) to have an access to ELL activities that can meet all, such as cognitive, sensory and physical differences (Sharma et al., 2015). However, there are several challenges students with disabilities encounter in traditional ELL environments. The students with physical disabilities may have problems entering classes and taking part in group works. For individuals with sensory limitations (e.g., hearing or visual impairments), processed audio or graphical representations in the classroom are difficult to engage with completely (Lee et al., 2017). Language instruction may be difficult for a student to keep up with through attention, memory, and the rate of processing cognitive limitations. Furthermore, students who have speech difficulties or limited movement might have difficulty participating in small groups or in speaking and listening activities (Sharma et al., 2015).

The defaults of instruction do not meet these wide-ranging needs, and traditional instruction methods do not work either because they are a "one size fits all approach" that is not successful with students with disabilities. Students with disabilities are not being included in regular classes teaching the main language, or they are being taught in a language class that is not based on their individual needs. This leaves children without knowing words and under performing in language development (Klingner & Vaughn, 2000). Flexible, individualized ELL approaches that match all students' skills and needs are, therefore, urgently required.

AI in Education

AI in education encompasses different technologies that are used to improve and make teaching better. AI technologies include speech recognition, natural language processing (NLP), and intelligent tutoring systems (ITS) that can be tailored to the specific needs of particular learners, offer personalized feedback, and support real time language processing. Speech recognition supports students in practicing pronunciation and receiving immediate feedback and generation of natural language for reading and writing through natural language processing (NLP) (Heffernan et al., 2016).

The development of AI in education was defined in the 1960s with the first intelligent tutoring systems. Early AI programs, such as the Logic Theorist and the General Problem Solver, were designed to simulate the capability of humans to solve problems and be used as educational aides in mathematics and logic. Machine learning, big data analysis, and neural networks advances have enabled the creation of complex educational technologies such as automated essay evaluators and artificial intelligence adaptive learning applications (Baker et al., 2017). AI has been on a steady march in education, from consolidating administrative tasks to more dynamic and personalized systems that interact with students. AI-assisted systems, e.g. personalized learning system and automatic tutoring tools, are more and more frequently applied for delivering educational experiences that are customized in real time, based on students' strengths and weaknesses, for engaging students with learning materials and improving their learning performance (VanLehn, 2011).

AI for Students with Disabilities

AI provides numerous exciting opportunities for assisting students with disabilities in inclusive classroom. For students with motor disabilities, AI technologies such as voice commands or adaptive user interfaces can assist in interacting with educational content, enabling them to take part in activities that may otherwise be inaccessible (Seitz et al., 2018). For students with speech and language problems such as storm syndrome, AI-driven technologies, such as speech-to-text and automated voice synthesis, can offer other means of communication that would allow them to participate in the class work and in their homework even more (Matusov et al., 2015).Cognitive obstacles to learning such as attention, memory, or information processing issues can be circumvented by AI tutoring systems that tailor their pacing to the student, offering scaffolded support. Support, such as ITS (Baker et al., 2017), which gives instant and contextualized feedback, can assist learners to progress at their own pace and to receive support in real-time. Furthermore, AI can also being used for personalized learning tasks via data analytics, allowing to focus on specific language learning exercises which the students may need extra-practice (i.e., vocabulary or sentence) (VanLehn, 2011).Many researches show how successful AI-oriented applications support inclusive education. A study by Alharthi et al. (2020) showed that AI speech recognition system promoted pronunciation and fluency in language learning for students with hearing impairment. Research by Heffernan et al. (2016) shows that intelligent tutoring systems are successful working with students with learning disabilities, because it provides adaptive feedback, supports language acquisition. Despite many successful cases, there is a number of difficulties in the application of AI technology in inclusive education. One limitation is the cost and availability of such AI-based tools, which may not be suitable for use in all educational institutions, particularly those in low-resource settings (Baker et al., 2017). Moreover, we need to explore the ethical dimension of AI use in education, including but not limited to the issue of data privacy and security as well as the teacher's role to advocate monitoring of education driven by AI (Binns, 2021). The lack of universal design for some AI tools may limit their utility for students with specific disabilities and, in turn, limit their impact (Seitz et al., 2018).

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Research Design

This research has a mixed-methods nature of system literature review, and analysis-based evidence to investigate the impact of the AI-driven strategies in ELL for the disabled students. Our focus of study population relative to students with disabilities is those students enrolled in English Language Learning (ELL) programs which are designed to support those students who wrestle with language acquisition. The students are from diverse educational backgrounds (middle and high school) and co-located in inclusive classrooms, with the presence of targeted tools, methods, and AI-based platforms that aim to foster the learning process. The focus of their study refers to language learning, especially the enhancement of vocabulary and grammar, pronunciation as well as communicative skills with the aid of customization and adaptive learning solutions.

Student ID	Time Spent (Minutes/Day)	Frequency of Use (Days/Week)	Completion Rate (%)	Interactions with Feedback (Number of Responses)	Initial Vocabulary Score	Final Vocabulary Score	Initial Grammar Score	Final Grammar Score	Pronunciation Improvement (Rating 1-5)	Set Learning Goals (Yes/No)	Used Personalized Learning Paths (Yes/No)	Sought Help/ Feedback (Yes/No)
1	45	5	85%	20	50	75	40	70	4	Yes	Yes	Yes
2	30	4	78%	15	60	80	50	65	3	Yes	No	Yes
3	60	6	90%	25	45	70	60	80	5	No	Yes	No
4	40	5	82%	18	55	72	50	68	4	Yes	Yes	Yes
5	50	6	88%	22	52	74	45	71	4	Yes	Yes	Yes
6	35	4	75%	14	40	60	35	62	3	No	No	Yes
7	55	5	80%	20	48	73	42	69	4	Yes	Yes	Yes
8	30	4	70%	12	62	78	58	66	3	Yes	No	No
9	50	5	87%	19	55	79	50	74	4	Yes	Yes	Yes
10	40	5	83%	16	58	77	54	70	4	Yes	Yes	Yes

Data Analysis

The results of the research indicate that in the case of 10 students who used AI-powered ELL platforms, it is possible to see a comprehensive picture about their participation in foreign language learning process, and about how autonomous they became and how they improved their performance. Levels of engagement indicate that students engaged with the platform 30-60 min/day and approximately 4 to 6 days/week. The finalization rate of training modules was high and varied between 70% and 90%. This means the students were actively taking part in the course and interacting with the platform regularly. The number of interactions with feedback systems also ranged but with an average of 15-20 times, students actively engaged in the feedback from the AI tools.Performance-wise, the majority of the students demonstrated significant improvement in vocabulary and grammar achievements. Average vocabulary scores improved 10-30 points and grammar scores increased 10-25 points. These results indicate that the AI-based platforms were successful in supporting students' language comprehension and production. Most students rated pronunciation improvements between 3 and 4 in a 1-5 scale (moderate to high). Some learners made significant gains in pronunciation, highlighting the potential of AI tools to support language learning for these learners. Meanwhile in terms of autonomy, the student engagement

with self-regulated learning aspects of the AI tools was high. Approximately 70% of students established personal learning objectives and 80% of them accessed the personalized learning paths offered by the platforms. This suggests students active for your learning process, which is indispensable for language learning. Additionally, around 60\% of students actively requested feedback or assistance from the platform, recommending that a substantial number of students used the available resources to enhance their comprehension and performance.The dataset contributes to a better understanding of how students with disabilities interact on AI-based EL platforms. Strong learner engagement, evidence of performance gains, and high degree of learner independence suggest that these platforms work well to enhance language acquisition. In particular, AI technologies can be applied to promote a learning environment in which students can study individually at their own pace, take individual support, and actively monitor their progress and improvement-AI is expected to be applied to the field of inclusive education.In the classroom, instructors had students perform a number of activities in each language designed to increase their language use. These activities were interactive reading exercises, vocabulary exercises, grammar practice, pronunciation practice, and speaking exercise. Groups engaged in group lectures, debates and role-play activities to sharpen their listening and speaking abilities. Writing assignments (drafting essays, narratives, or paragraph/short-response writing) were used to teach grammar, sentence formation, and vocabulary. Each student receiving extra help in such subjects as reading comprehension or pronunciation receives this instruction outside normal classroom hours while others may receive similar individualized help during school hours in small groups or as one-on-one tutoring. And adding to the learning experience, teachers leveraged multimedia, like video and audio recording, to introduce new vocabulary or grammar patterns in real-world scenarios. Quizzes, oral presentations, and peer evaluations were employed as formative assessment tools to keep track and change teaching strategies.

Sample Population

There were 10 differently-abled student participants in the sample who were all attending ELL classes. It contained students with disabilities including motor dysfunctions and speaking problems and learning disorders (e.g., dyslexia). These disabilities had posed access barriers in language learning, such as difficult in pronouncing, spelling or writing, which in turn hindered their social participation in the conventional learning modes. The sample students were using assistive technologies and personalized learning paths according to their abilities and needs. The research centred on the ways in which AI-based tools supported these students to resolve various difficulties, and have an inclusive and successful learning experience.No small part of assisting those students with disabilities came through inclusive tools. Speech-to-text technologies such as Google's Speech-to-Text and Dragon NaturallySpeaking were used by motor impaired and hand-restricted students to engage in writing activities by dictating written text. Students with speech-language disorders benefited from a text-to-speech program such as Microsoft's Speech SDK and Kurzweil 3000, which reads text and material and allowed these students to listen to text in order to understand and become more familiar with written material as well as help them develop their reading skills. These were especially helpful for students with reading challenges, including dyslexia. Similarly, intelligent tutoring systems (ITS), such as those from Carnegie Learning and Knewton offered customized paths for learning. Real-time feedback Tightened and tailored support through these platforms was offered based on where individuals were in their nurturing quests. Through the personalized instruction according to learners' pace and proficiency level, such constitutive tools supported all, including students with disabilities, to participate the good quality language learning contents.

Personalization and Adaptation

AI technology has the potential to revolutionize English Language Learning (ELL) by varying the degree of content and feedback to students of different competence. At the heart of personalized learning is the power of AI to diagnose and address individual learning needs, creating a unique learning experience on a personal level, taking into consideration the learner's speed, areas of interest and level of proficiency. For students with special needs, this means that AI can personalize the study materials to accommodate

cognitive, sensory and physical difficulties, and to ensure that there is the right level of support and challenge for every student to achieve success in the language learning process. An example is Knewton the AI-driven platform monitoring the way students are interacting learning content and dynamically making the content harder or easier. Every student is served content that is just at the right difficulty level – not too easy, and not too hard – to heighten engagement and mitigate frustration (VanLehn, 2011). Meanwhile, applications and programs such as Duolingo, which incorporates AI to adjust the frequency of vocabulary and grammar lessons depending on performance, also adjusts the frequency of specific language-based tasks, taking into account a learner's history, in order to allow them to learn key points and then move on (Vesselninov & Grego, 2012). These personalised (adaptive) learning systems have been proven to increase student scores significantly as it tailors to the learners pace / understanding.Also, speech recognition software functionality presents in ELL applications such as google speech to text facilitates students with speech and auditory processing problems to practice pronunciation and obtain timely feedback on their accuracy. The system is assessing the learner's speaker proficiency and adapting exercises to provide support when support is needed. Such individualized feedback to learners (with the help of AI) supports the student to work in the areas that need greater attention, while also supporting students to better themselves in continuous second language learning.

Enhancing Learner Engagement and Autonomy

AI-powered applications also contribute to increasing learner engagement and autonomy. As we move forward, these tools will help to foster a greater sense of student responsibility for learning and more self-directed practice, something that may be particularly valuable for students with learning disabilities who need a more flexible approach to the learning process. It can provide dynamic, interactive learning experiences that have students not just driven to be there, but can also allow students to track their own progress and make decisions about learning next steps. Gamification, for example, is a widely known technique that has been implemented in AI-driven language learning platforms to increase interactivity. Apps such as Duolingo, where users accumulate points, level up, and finish challenges in a game-like environment, are also making the process more interactive and more fun. Such gamified applications motivate the students to log into the platform frequently, and this increases retention rates and ensures that students are motivated (Anderson & Rainie, 2017). AI has a significant role to play as well to generate personalized and tailored challenges, in order to make tasks adapted to the current learner's competency, therefore reducing discouragement and frustration. Additionally, AI powered language learning platforms like Rosetta Stone, and Lingvist enable users to select learning paths and set goals on their own and hence catering to self-regulated learning practices. Also, by providing immediate feedback on their progress, these systems provide students with the means to self-monitor, which strengthens their sense of control and responsibility for learning. It is this kind of self-directed learning that can sustain lifelong language learning, and can build students' confidence and competence in their use of a language.

Communication Assistance

Artificial intelligence (AI) can play an important role in the support of children dealing with disabilities that make speech and cognitive expansion difficult, not only in assisting, but to break down the communication barrier. Tools like Speech-to-Text and Text-to-Speech and Speech synthesis form the backbone to accomplish this. Voice recognition software like Google's Speech-to-Text and Dragon NaturallySpeaking use AI to translate spoken language into the written word, allowing students with speech or physical impairments to communicate. For example, students unable to type because of a physical disability can instead speak into a microphone and the system will transcribe what it hears. These are important facilities, especially for students with mobility problems or for students who are reluctant to write, encouraging students to engage in writing and communicate (Matusov et al, 2015). AI-powered text-to-speech platforms, such as Microsoft's Speech SDK or Kurzweil 3000, support learners who have dyslexia or reading difficulties by converting their written text to speech. Now, the students and the clients can hear the stories be read to them, that way they can comprehend the stories more and they can practice their reading. These systems, appropriate for students with developmental delays, or students

who struggle to attempt to decode print, offer important aural support to increase their opportunities to learn.

Case Examples of AI Aiding Communication:

AI-powered speech recognition solutions for students with speech impairments are a case in point. Alharthi et al. (2020) reported AI-based speech recognition tools integrated in their teaching were useful in improving pronunciation and fluency for hearing-impaired students during language learning. The AI system offered instantaneous feedback on their speech performances, and they could rehearse and improve over time. Similarly, students with cognitive disabilities have proven able to interact with ELL content through AI-driven synthesized speech systems that read lessons aloud so they can understand the content without decoding the words on the page.

Additionally, assistive communication devices driven by AI technologies, for example, the AAC (Augmentative and Alternative Communication) systems, allow students with severe speaking challenges to be capable of communicating. Inclusion Devices: Devices equipped with AI solutions Students choose words or phrases through a variety of symbols or onscreen choices, and the device voices the choices. This technology will make language learning and social interaction activities accessible for students with severe speech impairments (Seitz et al., 2018). Finally, AI-enabled communication tools such as voice-to-text and text-to-speech systems have been game-changers for students who have difficulty speaking or processing information. These tools fill in the communication gap and allow students like these to engage in learning a language as if they were more confident and independent.

Ethical Challenges

AI in education is also fraught with ethical considerations, particularly relating to privacy, security and access. Privacy is of great concern as AI-based platforms accumulate vast amounts of data that students generate such as personal information, performance indicators and ways of behaviour. This information is critical for individualizing learning, though privacy issues arise regarding safeguarding student data. Careless use of information as sensitive as this could result in data breach, identity theft and unauthorized disclosure (Binns, 2021). As such, it is critical for the AI systems to comply with stringent data privacy policies like the General Data Protection Policy (GDPR) in Europe and be able to handle student data safely.Data protection is also a major issue since AI systems invariably work in cloud contexts while data outsourced in the cloud can face external violences observing from hacking and other challenges. It is not just about creating AI systems with strong security policies that will not compromise unauthorized access, but also how trust in AI could be made coherent, and AI systems does not cause any harm to students or educational institutions (Vasilescu et al., 2020).There are also access barriers when AI systems are not universally designed to capitalize on diverse disabilities. For example, AI tools that help with learning languages may not be accessible to students with certain kinds of visual or cognitive impairments. Students with Visual Impairment Students with visual disabilities due to the limitations of AI enabled learning platforms including the absence of screen readers and customisable user interfaces can be prevented from taking full advantage AI-enabled learning platforms (Seitz et al., 2018). It is vital that AI tools are designed to be universally accessible to support inclusive education for all students.Lastly, access to AI powered educational tools for students with disabilities is a continuing challenge. The availability of high-quality AI systems on the low end of the cost spectrum is usually so cost-prohibitive that it could limit access only to well-funded educational institutions, and leave students in under-resourced settings behind. There must be a policy focus on equitable access, where AI technologies are distributed in such a way that students regardless of access to technological devices or ability have access to the innovations.

Human-AI Collaboration

The infusion of AI in education requires a dialogue involving teachers, AI developers, and policy makers in structuring AI tools to deliver an enhanced classroom experience. Teachers must fill important functions in the introduction of AI tools, given their role in technology integration in their pedagogics in order to meet the needs of all students. They should learn how to use the AI-powered platforms,

including what an AI is good at and bad at, how to read the AI's data, and how they should adapt their own teaching based on the data. This involves learning about how AI can personalize learning and help students with disabilities become proficient in a language.Training needed for teachers in AI in diverse classrooms. Educators need PD to learn about how to actually use the AI tools, how to address student learners with a diverse set of needs, and how to situate AI to create a learning environment that really engages what we might feel to include all children including children with disabilities. Training schools and educators could also consider including ethical perspectives of use, what it actually means that they are working with an AI, and what risks are associated with making sure that AI is actually used for good for all learners (Baker et al., 2017). And AI developers themselves need to be part of ensuring we build systems that are powerful but also ethical, inclusive and user-friendly. They need to cooperate with teachers and education leaders on the customization of AI systems for the unique learning needs of students with disabilities. The making of AI tools should focus on the input of teachers, students and advocates for the disabled to that the technology is made with various needs in mind, so that AI systems improve learning for all. Policymakers also play a critical role in ensuring this type of responsible and inclusive AI-based tooling is utilized. They can create policies and recommendations for the ethical use of AI in education, oversee the implementation of privacy and security requirements, and promote equitable access to AI resources in under-resourced educational environments (VanLehn, 2011).

Cross-Cultural and Emotional Considerations

Cultural appropriateness is also a major concern of AI in education, particularly in multiculturally diverse educational contexts. AI-powered learning programmes will need to be able to acknowledge and accommodate cultural distinctions to prevent any biases and to make all students feel appreciated and understood. For example, language learning systems should not merely be flexible to the user's cognitive level, but should also be flexible to the user's subcultures, regional dialects and education background's differences in the ways they communicate and express themselves. This includes, for example, content free of stereotypes that could hinder student engagement (Binns, 2021). Furthermore, the AI system's language models used should be sensitive to the idiosyncrasies that exists between different dialects, idioms, and other linguistic differences especially from a global perspective where students are linguistic-diverse. And in AI-driven education for students with disabilities, emotional engagement is particularly crucial. Logic-based data-driven feedback is a feature of the AI systems that is specifically designed to be less emotional. But, after all, exciting an emotional response is vital, particularly for students with special needs, as it will help them feel more involved with the learning process. For instance, AI systems could be developed to give praise, providing positive feedback and emotionally intelligent support to construct self-confidence in the students (Vasilescu et al., 2020). Emotionally engaging design can be achieved through embedding feedback systems that are adaptive, empathetic and responsive to learners' emotions with ability to provide personalised learning experience.

Framework for AI in TESOL (Teaching English to Speakers of Other Languages)

The model for integrating AI into TESOL (Teaching English to Speakers of Other Languages) provides a structured method for integrating AI tools in language teaching with an emphasis on the dimensions of personalization, feedback, collaboration, teacher support, and scalability. One key feature is personalization: AI-powered tools customize lessons to a student's individual needs, such as how well they understand the language, how quickly they learn and if they have any disabilities. These tools are content in motion, delivering personalized learning experiences to each child.There is also a big part of AI in feedback & assessment. It is capable of personalized learning, automating formative assessments, and direct and instant feedback, which help teachers monitor student's progress on a timely basis. This information helps educators tailor teaching methods to address changing student requirements and make certain that all students they serve can receive the attention they deserve.The interplay of the teachers, AI developers and policy makers is of essence to successfully integrate AI. At the same time educators can explain realistic ways to apply AI tools in the classroom, while tech developers can work on making their tools as easy to use and effective as possible. Policymakers need to ensure that AI is available for all, by

enabling inclusive education, in particular for disabled students. Cooperating, these actors can drive the development of AI tools in ways that are responsive to educational and ethical concerns, in effect promoting equity in learning. However, ongoing teacher training is essential both to ensure that AI is effectively used in schools and universities. Teacher instruction would have to focus on AI tools, ethical implications and how to incorporate the tools into lessons. This teacher training helps educators improve learning outcomes, particularly for students with disabilities, by using AI to promote and advance language development. AI must be scalable and sustainable for it to make a lasting impact. The tools should be adaptable to different educational settings, including low-resource environments. It is therefore the role of policy makers to ensure equitable allocation of AI resources with a view to availing quality education to all children regardless of their circumstances. Educational bodies could take up the practical implementation of this framework by pinpointing how AI can add value in existing EFL teaching formats. AI can customise vocabulary, automate grammar, and bring your students interactive practice at their personal proficiency. Success in the integration of games and games-based learning requires a three-pronged approach in which educators give good feedback, developers create accessible digitools, and policymakers ensure equal access. Together, we can build a sustainable AI-integrated educational ecosystem that serves all students, including students with disabilities.

CONCLUSION AND RECOMMENDATIONS

The goal of this study is to investigate the potential use of AI for students with disabilities' ELL. The findings underline several key insights from the empirical investigations of AI-enabled platforms. AI based-platforms, specifically ones offering a mix of the gamification, personalization, adaptive learning really added a powerful kicker to the student engagement levels. These platforms were also able to adjust content based on student performance and not overwhelm them or the be too easy and keep the students engaged and constantly growing. The AI tools also work to build student agency, as students are given more room to work at their own pace and monitor how they are doing on their way to driving more student ownership of learning—an important element of the process for students with disabilities who often benefit from a more flexible offering. And the role of AI in language learning was evident in apps that utilized speech recognition and real-time feedback to help learners improve pronunciation, grammar and writing more quickly. AI also plays an important role in bridging the learning gaps of the students with disabilities. They have a tendency to stand in the way of the personalized learning experience that a diverse group of students require, students with vast cognitive, sensory, and physical differences. AI-based platforms can remove such barriers (e.g., enhance the accessibility of content, including the ability to tailor content to the personal learning needs of individual learners), thereby providing equal opportunities for all students, including those with disabilities to overcome such barriers. This flexibility means A I is a transformative tool for facilitating inclusive education, providing personalized support so that every student is able to achieve significant progress in language learning. However, despite these encouraging findings, there are a number of issues to be addressed in future work. One such gap is the literature for the long-term effects of AI on students with disabilities, because the majority of the existing literature is limited to short-term effects. It remains to be seen whether enhancements to engagement and language performance are maintained over time. Further, more work should be done on creating AI-based tools customized for individuals with specific types of disabilities in order to get AI programs that are tailored to best support the learner. Inter-disciplinary research is necessary to developing AI systems that are both effective and ethical, and investment in the creation of low-cost, scalable AI tools will be needed to achieve equal distribution of these technologies, particularly in resource-scarce educational contexts. This research highlights how AI can help revolutionize how English language learning is improved for students with disabilities. By individualizing learning experiences and through instantaneous, adaptive feedback, AI can transform language learning into an accessible, engaging, and equitable pursuit. Pairing AI with educational settings will require cooperation between educators, AI engineers, and policymakers to guide the responsible and inclusive application of these tools. Schools themselves should invest in the technology, give teachers the skills they need to use it and make sure students have access to artificial intelligence across different settings. Policymakers will have to ensure

that all students have access to these tools, that and AI developers will need to continue to prioritize in inclusive and user-friendly designs that address the needs of all learners.Artificial intelligence holds great promise for an inclusive, equitable, and stimulating environment for students with disabilities, yet none of this potential can be tapped without continuous partnership and creativity. The potential of AI in education is promising, with sustained investment and inquiry, AI can help to build a more equitable world where all students have the opportunity to succeed.

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