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Bosh muharrir:
Shoumarov G‘ayrat Bahromovich, psixologiya fanlari doktori, akademik

Bosh muharrir o‘rinbosari:
Qodirov Umarali Do‘stqobilovich, psixologiya fanlari doktori (DSc), professor

Mas’ul kotib:
Muqimov Alisher

Texnik muharrir:
Qarshiyev Jamshid Murotaliyevich, pedagogika fanlari bo‘yicha falsafa doktori (PhD), dotsent v.b.

TAHRIR HAY’ATI:

01.00.00 – FIZIKA-MATEMATIKA FANLARI
Ayupov Shavkat Abdullayevich, fizika-matematika fanlari doktori, akademik
A’zamov Abdulla, fizika-matematika fanlari doktori, akademik
Zohidov Erkin A’zamovich, fizika-matematika fanlari doktori, professor

02.00.00 – KIMYO FANLARI
Normaxamatov Nodirali Soxobataliyevich, kimyo fanlar doktori, professor
Tojibayev Komiljon Sharobitdinovich, kimyo fanlar doktori, akademik

03.00.00 – BIOLOGIYA FANLARI
Abdurahmonov Ibrohim Yo‘lchiyevich, biologiya fanlari doktori, akademik
Sulaymonov Botirjon Abdushukurovich, biologiya fanlari doktori, akademik

04.00.00 – GEOLOGIYA-MINERALOGIYA FANLARI
Fayziyev Abdulhaq Radjabovich, geologiya-mineralogiya fanlari doktori, professor
Husanov Sultonboy To‘xtayevich, geologiya-mineralogiya fanlari doktori, professor

05.00.00 – TEXNIKA FANLARI
Allayev Qahramon Rahimovich, texnika fanlari doktori, akademik
Majidov Inom Urishevich, texnika fanlari doktori, professor
Turobjonov Sadritdin Maxamatdinovich, texnika fanlari doktori, akademik
Shaumarov Said Sanatovich, texnika fanlari doktori, professor

06.00.00 – QISHLOQ XO‘JALIGI FANLARI
Namozov Shodmon Ergashovich, qishloq xo‘jaligi fanlari doktori, akademik
Shoumarov Hikmat Bahromovich, qishloq xo‘jaligi fanlari nomzodi, professor

07.00.00 – TARIX FANLARI
Ziyo Azamat Hamid o‘g‘li, tarix fanlari doktori, akademik
Sagdullayev Anatoliy Sagdullayevich, tarix fanlari doktori, akademik
Yusupova Diloram Yunusovna, tarix fanlari doktori, akademik

08.00.00 – IQTISODIYOT FANLARI
Abdurahmonov Qalandar Xodjayevich, iqtisod fanlari doktori, akademik
Musayev Behzod Anvarovich, iqtisod fanlari nomzodi
To‘xliyev Nurislom, iqtisod fanlari doktori, akademik
G‘ulomov Saidahror Saidahmedovich, iqtisod fanlari doktori, akademik

09.00.00 – FALSAFA FANLARI
Nazarov Qiyom Normirzayevich, falsafa fanlari doktori, professor
Saifnazarov Ismoil Saifnazarovich, falsafa fanlari doktori, professor

10.00.00 – FILOLOGIYA FANLARI
Mengliyev Baxtiyor Rajabovich, filologiya fanlari doktori, professor
Sirojiddinov Shuhrat Samariddinovich, filologiya fanlari doktori, akademik
Xidirov Rajab Gulmatovich, filologiya fanlari nomzodi, dotsent (Tojikiston)

11.00.00 – GEOGRAFIYA FANLARI
Nigmatov Asqar Nigmatullayevich, geografiya fanlari doktori, professor
Tojiyeva Zulxumor Nazarovna, geografiya fanlari doktori, professor

12.00.00 – YURIDIK FANLAR
Rustamboyev Mirzayusuf Hakimovich, yuridik fanlar doktori, professor
Saidov Akmal Xolmatovich, yuridik fanlar doktori, akademik
Xolmo'minov Jumanazar Toshtemirovich, yuridik fanlar doktori, professor
Qodirov Bobiromon Bekmurodovich, yuridik fanlar doktori, professor

13.00.00 – PEDAGOGIKA FANLARI
Djurayev Risboy Haydarovich, pedagogika fanlari doktori, akademik
Ibraimov Xolboy, pedagogika fanlari doktori, akademik
Musurmonova Oynisa, pedagogika fanlari doktori, professor
Umarov Bahrom Norboyevich, pedagogika fanlari bo'yicha falsafa doktori, dotsent

14.00.00 – TIBBIYOT FANLARI
Akilov Xabibulla Ataullayevich, tibbiyot fanlari doktori, professor
Nazirov Feruz Gafurovich, tibbiyot fanlari doktori, akademik

15.00.00 – FARMATSEVTIKA FANLARI
Abdullabekova Viloyat Nurillabekovna, farmatsevtika fanlari doktori, professor
Tulaganov Abduqodir Abdurahmonovich, farmatsevtika fanlari doktori, professor

16.00.00 – VETERINARIYA FANLARI
Daminov Asadullo Suvonovich, veterinariya fanlari doktori, professor
Jabborov Shuhrat Abdumajidovich, veterinariya fanlari doktori, professor
G'afurov Aktam G'afurovich, veterinariya fanlari doktori, professor

17.00.00 – SAN'ATSHUNOSLIK FANLARI
Ahmedova Nigora Rahimovna, sanatshunoslik fanlari doktori, professor
Hakimov Akbar Abdullayevich, san'atshunoslik fanlari doktori, akademik

18.00.00 – ARXITEKTURA
Nozilov Dodo Avazovich, arxitektura fanlari doktori, professor
Uralov Axtam Sindarovich, arxitektura fanlari doktori, professor

19.00.00 – PSIXOLOGIYA FANLARI
Abdusamatov Hasanboy Usmonjon o'g'li, psixologiya fanlari doktori, professor
Barotov Sharif Ramazonovich, psixologiya fanlari doktori, professor
Karimova Vasila Mamanosirovna, psixologiya fanlari doktori, professor
Halimova Mashraboy Vohidovna, psixologiya fanlari doktori, professor
Lazar Drajeta, psixologiya fanlari doktori, professor, Belgrad, Serbiya
Karpinskiy Konstantin Viktorovich, psixologiya fanlari doktori, professor, Grodno, Belarussiya
Suletbayeva Ella Serikbayevna, psixologiya fanlari doktori, dotsent

22.00.00 – SOTSIOLOGIYA FANLARI
Bekmurodov Mansur Bobomurodovich, sotsiologiya fanlari doktori, professor
Toshmuhamedova Dilorom Gafurdjanovna, sotsiologiya fanlari doktori

23.00.00 – SIYOSIY FANLAR
Fayzullayev Alisher Omonullayevich, siyosiy fanlar doktori, professor
Hasanov Otabek Abdurashidovich, siyosiy fanlar doktori
Paxrutdinov Shukritdin Ilyasovich, siyosiy fanlar doktori, professor
Omonov Baxtiyor Axtamovich, siyosiy fanlar doktori, professor
Quronboyev Qahramon Qo'chqorovich, siyosiy fanlar doktori, professor
Avazov Komil Xolliyevich, siyosiy fanlar bo'yicha falsafa doktori

24.00.00 – ISLOMSHUNOSLIK FANLARI
Ibrohimov Ne'matulla, filologiya fanlari doktori, akademik
Islomov Zohidjon Mahmudovich, filologiya fanlari doktori, professor

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THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH AS A SECOND LANGUAGE WITHIN INCLUSIVE EDUCATION

Abstract. This article examines the growing role of artificial intelligence in teaching English as a second language within the framework of inclusive education, a field devoted to ensuring equitable access to instruction for learners of differing abilities, backgrounds and support needs. It analyzes how adaptive learning systems, assistive technologies and natural language processing tools may be aligned with the principles of Universal Design for Learning in order to accommodate learners with visual, hearing, cognitive and language related differences. Particular attention is given to the tension between the efficiency promised by automated systems and the individualized, relationship centered approach that inclusive pedagogy has traditionally required of the classroom teacher. The article also considers ethical questions surrounding data privacy, algorithmic bias and unequal access to technology among learners with special educational needs. It concludes by proposing a framework in which artificial intelligence functions as a complement to, rather than a substitute for, the professional judgment of teachers working in inclusive classrooms, and by outlining directions for future research grounded in applied linguistics, special education and educational technology.

Keywords: Artificial Intelligence, English as a Second Language, Inclusive Education, Universal Design for Learning, Assistive Technology, Special Educational Needs, Adaptive Learning, Accessibility, Language Pedagogy, Digital Equity.

INKLYUZIV TA'LIMDA INGLIZ TILINI IKKINCHI TIL SIFATIDA O'QITISHDA SUN'IY INTELLEKTDAN FOYDALANISHNI RIVOJLANTIRISH

Annotatsiya. Ushbu maqolada inklyuziv ta'lim doirasida ingliz tilini ikkinchi til sifatida o'qitishda sun'iy intellektning ortib borayotgan o'rni ko'rib chiqiladi, bu soha turli qobiliyat, kelib chiqish va yordamga muhtojlik darajasiga ega o'quvchilar uchun ta'limga teng huquqli kirishni ta'minlashga qaratilgan. Maqolada moslashuvchan o'quv tizimlari, yordamchi texnologiyalar va tabiiy tilni qayta ishlash vositalari qanday qilib ko'rish, eshitish, kognitiv va nutq rivojlanishida farqlari bo'lgan o'quvchilarni qo'llab-quvvatlash uchun o'quvni loyihalashning umumiy tamoyillariga moslashtirilishi mumkinligi tahlil qilinadi. Alohida e'tibor

avtomatlashtirilgan tizimlar va'da qiladigan samaradorlik bilan inklyuziv pedagogika tomonidan an'anaviy ravishda talab qilinadigan, o'qituvchi va o'quvchi o'rtasidagi shaxsiylashtirilgan, munosabatga asoslangan yondashuv o'rtasidagi ziddiyatga qaratiladi. Maqolada shuningdek, maxsus ta'lim ehtiyojiga ega o'quvchilar orasida ma'lumotlar maxfiyligi, algoritmik noxolislik va texnologiyalarga notekis kirish bilan bog'liq axloqiy masalalar ham ko'rib chiqiladi. Yakunda sun'iy intellekt inklyuziv sinflarda ishlaydigan o'qituvchilarning kasbiy mulohazasi o'rnini egallamaydigan, balki uni to'ldiruvchi vosita sifatida xizmat qiladigan model taklif qilinadi hamda amaliy tilshunoslik, maxsus pedagogika va ta'lim texnologiyalari sohasida kelgusi ilmiy izlanishlar uchun yo'nalishlar belgilab beriladi.

Kalit so'zlar: sun'iy intellekt, ikkinchi til sifatida ingliz tili, inklyuziv ta'lim, o'quvni umumiy loyihalash, yordamchi texnologiyalar, maxsus ta'lim ehtiyojlari, moslashuvchan o'qitish, qulaylik, til pedagogikasi, raqamli tenglik.

РАЗВИТИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ПРЕПОДАВАНИИ АНГЛИЙСКОГО ЯЗЫКА КАК ВТОРОГО ЯЗЫКА В УСЛОВИЯХ ИНКЛЮЗИВНОГО ОБРАЗОВАНИЯ

Аннотация. В данной статье рассматривается возрастающая роль искусственного интеллекта в обучении английскому языку как второму в рамках инклюзивного образования, области, направленной на обеспечение равного доступа к обучению для учащихся с разными способностями, происхождением и потребностями в поддержке. Анализируется, каким образом адаптивные обучающие системы, вспомогательные технологии и инструменты обработки естественного языка могут быть согласованы с принципами универсального дизайна обучения для удовлетворения потребностей учащихся с особенностями зрения, слуха, когнитивной сферы и речевого развития. Особое внимание уделяется противоречию между эффективностью, которую обещают автоматизированные системы, и индивидуализированным, ориентированным на отношения подходом, традиционно требуемым инклюзивной педагогикой от учителя. В статье также рассматриваются этические вопросы, связанные с конфиденциальностью данных, алгоритмической предвзятостью и неравным доступом к технологиям среди учащихся с особыми образовательными потребностями. В заключение предлагается модель, в которой искусственный интеллект выступает дополнением, а не заменой профессионального суждения педагогов, работающих в инклюзивных классах, и определяются направления дальнейших научных исследований в области прикладной лингвистики, специальной педагогики и образовательных технологий.

Ключевые слова: искусственный интеллект, английский язык как второй, инклюзивное образование, универсальный дизайн обучения,

вспомогательные технологии, особые образовательные потребности, адаптивное обучение, доступность, языковая педагогика, цифровое равенство.

Introduction. Inclusive education emerged over the past several decades as a response to the recognition that learners with disabilities, learning differences and other forms of diversity had too often been placed in separate settings or denied access to a curriculum designed for their peers. Within language teaching, and especially within the teaching of English as a second language, this movement carries particular weight, since acquiring a new language already places considerable cognitive and emotional demands on any learner, and these demands can be intensified for learners who also experience sensory, cognitive or communicative differences. The arrival of artificial intelligence as a widely available instructional resource has therefore entered a field that was already engaged in a long standing effort to remove barriers and to design instruction flexible enough to serve a genuinely diverse population of learners. Understanding how these two developments intersect requires more than a simple inventory of available software, since the deeper question concerns whether machine mediated instruction can genuinely support the individualized, dignity affirming approach that inclusive pedagogy demands, or whether it risks imposing a new form of uniformity under the appearance of personalization. This question forms the point of departure for the analysis presented in this article, which treats the intersection of artificial intelligence, second language teaching and inclusive education as a subject worthy of sustained scientific attention rather than a matter to be resolved through commercial enthusiasm alone.

Inclusive education is generally understood as an approach that seeks to guarantee meaningful participation and achievement for every learner within a shared learning environment, regardless of disability, linguistic background, socioeconomic circumstance or other individual characteristic. This commitment implies more than physical placement within a mainstream classroom, since genuine inclusion requires that curriculum, instructional method and assessment be designed from the outset with variability in mind, rather than adapted afterward as an exception for a small number of learners. When such an approach is applied to English as a second language teaching, it becomes necessary to consider learners who may already face a double challenge, namely the ordinary difficulty of acquiring a new linguistic system together with an additional difference such as a hearing impairment, a specific learning difficulty like dyslexia, a condition on the autism spectrum, or limited prior schooling. These learners frequently receive less attention in mainstream applied linguistics research than their peers without additional needs, despite representing a substantial proportion of language classrooms worldwide. Situating artificial intelligence within this population therefore requires a shift in emphasis away from questions of efficiency alone and toward questions of equity, dignity and genuine access, since a tool that accelerates

learning for the majority while leaving a minority further behind cannot be considered successful from the standpoint of inclusive pedagogy, however impressive its aggregate performance figures may appear.

Artificial intelligence contributes to this landscape through an expanding set of applications that hold direct relevance for inclusive English as a second language classrooms. Automatic speech recognition and text to speech engines allow learners with visual or reading related difficulties to access written material through listening, while simultaneously allowing learners with hearing related difficulties to access spoken material through generated captions or transcripts. Predictive text and grammar assistance tools reduce the mechanical burden of writing for learners whose motor coordination or working memory makes conventional composition especially demanding, and adaptive platforms capable of adjusting the pace and difficulty of tasks in response to individual performance offer a plausible technological answer to the long recognized difficulty of differentiating instruction within a single classroom containing widely varying levels of readiness. Conversational agents further extend opportunities for low pressure spoken practice to learners who experience heightened anxiety in traditional classroom interaction, a group that frequently includes learners with social communication differences. Taken together, these applications suggest that artificial intelligence possesses genuine potential to operationalize several of the core commitments of inclusive pedagogy at a scale that individual teachers, however skilled, would find difficult to achieve unaided, provided that such tools are selected and implemented with sufficient attention to the specific needs of the learners for whom they are intended.

The central research problem addressed in this article may be formulated as follows, namely how artificial intelligence can be integrated into English as a second language teaching in a manner that genuinely advances the goals of inclusive education rather than merely extending existing patterns of access to those learners who already possess the resources, literacy and confidence needed to benefit from digital tools. Addressing this problem requires attention to technical capability, to pedagogical design and to the ethical and institutional conditions under which such tools are deployed in real classrooms containing learners of markedly different needs. The present article therefore aims to examine current evidence regarding artificial intelligence applications relevant to inclusive English as a second language instruction, to analyze how these applications relate to established principles of Universal Design for Learning and special education, and to propose a balanced conceptual framework that neither overstates the transformative capacity of automated tools nor dismisses their genuine contribution to accessible language teaching. In pursuing these aims, the article adopts a cautious and evidence oriented stance, treating claims of inclusion or personalization made by commercial technology providers as hypotheses to be examined rather than conclusions to be accepted without scrutiny, since the population most directly affected by these tools,

namely learners with additional support needs, has historically been vulnerable to well intentioned but poorly evaluated educational innovation.

Methodology. The methodology adopted in this study is qualitative and analytical, drawing on a systematic review of recent scholarly literature concerning artificial intelligence applications in English as a second language teaching together with descriptive analysis of the special education and inclusive education literature relevant to accessibility and individualized instruction. Sources were selected according to their relevance to three interconnected themes, namely assistive and adaptive technology, the principles of Universal Design for Learning, and the sociolinguistic and psychological dimensions of second language acquisition among learners with additional support needs. Particular attention was given to publications that combine empirical observation with theoretical discussion, since the purpose of the present study is not merely to catalogue available technologies but to interpret their pedagogical significance for a population whose needs are frequently underrepresented within mainstream applied linguistics research. The analysis also considered documentary sources describing international frameworks for inclusive education, which provide a stable normative reference point against which claims made about artificial intelligence assisted instruction can be evaluated. Sources were screened for methodological transparency and for explicit attention to learners with disabilities or additional needs, since much of the available literature on artificial intelligence in language teaching addresses general learner populations without disaggregating findings for learners who experience sensory, cognitive or communicative differences, a gap that the present analysis attempts to acknowledge explicitly rather than to obscure through generalized claims.

In addition to literature review, the study employs comparative analysis to examine the relationship between the three core principles of Universal Design for Learning, namely multiple means of representation, multiple means of action and expression, and multiple means of engagement, and the specific artificial intelligence tools currently available to English as a second language teachers. This comparison allows the study to identify which categories of tool most directly support which principle, and to highlight areas in which current technology remains insufficiently developed to meet the full range of learner variability found in an inclusive classroom. Attention was also paid to how such tools interact with individualized education plans and with the collaborative practice of co teaching between language specialists and special education professionals, since inclusive instruction rarely depends on a single teacher acting alone. By combining literature based analysis with a comparative framework grounded in an established educational model, the study seeks to produce conclusions that remain sensitive to the practical realities of classrooms serving learners with markedly different needs, rather than treating inclusive education as a peripheral application of technology designed primarily for general learner populations.

Results. The analysis indicates that artificial intelligence tools make their most consistent contribution to inclusive English as a second language teaching through the principle of multiple means of representation, meaning the presentation of information through more than one sensory or cognitive channel. Automatic captioning and transcription allow spoken input to be simultaneously available in written form, benefiting learners with hearing related difficulties as well as learners who process written text more reliably than spoken language. Text to speech engines perform a complementary function for learners with visual impairment or with reading difficulties such as dyslexia, converting written material into spoken form without requiring a human reader to be present at every moment of instruction. Machine translation, when used judiciously rather than as a substitute for genuine language learning, provides a scaffold that allows learners with limited prior exposure to English to access grade level content in other subjects while their linguistic proficiency continues to develop. These findings confirm that artificial intelligence can operationalize the representational flexibility called for by Universal Design for Learning in a manner that would be difficult to sustain manually across an entire school day, provided that teachers retain responsibility for judging when a given representational format serves a particular learner and when it does not.

A second significant finding concerns the capacity of adaptive learning platforms to support differentiation for learners with cognitive or attentional differences within the same English as a second language classroom. Systems capable of adjusting task difficulty, pacing and the amount of repetition offered allow a learner who requires additional practice with a given grammatical structure to receive it without disrupting the progress of classmates who have already mastered the same material, addressing a long standing practical difficulty faced by teachers responsible for groups of considerable internal diversity. Conversational agents further extend low pressure opportunities for spoken practice to learners who experience heightened anxiety, including some learners with social communication differences associated with autism spectrum conditions, since interaction with a patient, non judgmental artificial system can serve as rehearsal before a learner attempts a more demanding exchange with a human interlocutor. However, the analysis also reveals an important limitation, namely that automatic speech recognition systems, which underlie much of this functionality, are frequently trained on data drawn primarily from typical speech patterns, and therefore perform less reliably for learners whose pronunciation is affected by a speech or language impairment, a hearing loss, or a strong influence from a first language phonological system. This limitation indicates that the benefits of adaptive and conversational technology are not distributed evenly across the full range of learners found in an inclusive classroom.

The results additionally point to a significant redefinition of the teacher role within technology enriched inclusive classrooms, a redefinition that closely parallels developments observed in mainstream English as a second language teaching but

carries added weight given the vulnerability of some learners served by inclusive settings. Rather than functioning as the sole source of accommodation, teachers increasingly assume responsibility for selecting appropriate tools, monitoring their effectiveness for individual learners, and interpreting the outputs of artificial systems in light of information contained within a learner's individualized education plan, information that no current artificial intelligence system possesses independently. The analysis further suggests that classrooms in which teachers, special education professionals and language specialists collaborate to evaluate and adjust technology use tend to produce more consistent outcomes than classrooms in which learners are provided with tools but left largely without structured guidance regarding their appropriate use. This finding reinforces the broader conclusion that artificial intelligence functions most effectively within inclusive English as a second language teaching as an extension of coordinated professional judgment rather than as an autonomous solution, since the interpretive, relational and advocacy functions performed by teachers and specialists remain difficult to replicate through automated systems alone, however sophisticated those systems may become in the near future.

Discussion. These findings, considered together, support the interpretation that artificial intelligence and the framework of Universal Design for Learning share a genuine and productive affinity, since both are concerned with offering multiple pathways to the same instructional goal rather than expecting every learner to progress through an identical sequence of activities. The discussion therefore emphasizes a principle of complementarity similar to that observed in mainstream applications of artificial intelligence to language teaching, according to which technology broadens the range of representational and expressive options available to a learner, while the deeper responsibility for interpreting individual need, maintaining relational trust and advocating for appropriate accommodation remains anchored in human professionals who understand the particular learner in front of them. This principle offers a constructive response to a concern voiced by some special education researchers, namely that increasing reliance on automated systems might reduce the perceived necessity of specialist staff within inclusive classrooms. The discussion presented here suggests instead that the value of specialist judgment is likely to increase rather than diminish as available tools multiply, since someone with appropriate training must determine which tool serves which learner under which circumstance, a determination that requires understanding of disability, language development and classroom context simultaneously, an understanding that current artificial systems do not possess in any integrated form

The topic examined in this article is inherently interdisciplinary, and its scientific significance can only be fully appreciated when perspectives from several fields are brought into dialogue. From the standpoint of computational linguistics, understanding why automatic speech recognition performs unevenly across different speakers requires familiarity with how such systems are trained on large datasets that may underrepresent atypical speech patterns, a technical limitation with direct

educational consequences for learners with speech or hearing related differences. From the standpoint of special education, the same technology must be evaluated against the principle of individualization enshrined in legal and professional frameworks governing education for learners with disabilities, a principle that resists any tool promising uniform benefit across an entire population. From the standpoint of educational psychology, questions of motivation, self efficacy and anxiety must be considered alongside technical accuracy, since a tool that is technically precise but delivered without sensitivity to a learner's emotional state may discourage further engagement rather than encourage it. Bringing these disciplinary perspectives together clarifies that terms such as accommodation, personalization and accessibility carry meanings that differ somewhat between educational law, computer science and applied linguistics, and this article has attempted throughout to use such terms with explicit attention to their disciplinary context rather than treating them as interchangeable.

The discussion also acknowledges important ethical considerations that carry particular weight when artificial intelligence is applied to learners who already occupy a vulnerable position within educational systems. Data collected through adaptive platforms and conversational agents often includes highly sensitive information regarding a child's disability status, communication patterns and academic performance, and questions concerning who may access this information, for what purpose and for how long remain insufficiently regulated in many national contexts. Algorithmic bias represents a further concern, since systems trained predominantly on data from learners without additional needs may perform reliably for the majority while systematically underserving the very learners that inclusive education is designed to protect, a pattern that risks reproducing existing inequities under the appearance of neutral, data driven decision making. Unequal access to reliable devices, internet connectivity and trained support staff compounds this risk, meaning that schools serving economically disadvantaged communities may be least able to provide the human oversight required to use artificial intelligence responsibly within inclusive settings, even though such communities often contain a disproportionate number of learners with unmet support needs. These considerations do not diminish the genuine pedagogical value documented throughout this analysis, but they do require that institutions adopting such tools accompany implementation with clear data governance policies, ongoing bias monitoring and sustained investment in the professional development of both language teachers and special education specialists.

Conclusion. In conclusion, the integration of artificial intelligence into English as a second language teaching within inclusive education represents a development of genuine scientific and practical significance, one that this article has sought to examine through an analytical and evidence based approach grounded in applied linguistics, special education and educational technology. The findings suggest that artificial intelligence can meaningfully advance the representational, expressive and

engagement related goals articulated within Universal Design for Learning, offering learners with disabilities and other additional needs forms of access that would be difficult to sustain through unaided human instruction alone, while simultaneously introducing new risks connected to algorithmic bias, data privacy and unequal access that require careful institutional attention. A balanced pedagogical model, in which artificial intelligence functions as an extension of coordinated professional judgment involving language teachers, special education specialists and families rather than as an independent decision maker, appears best suited to preserving the individualized, dignity affirming character that inclusive education requires. Future research would benefit from studies that disaggregate outcomes by disability category and language background rather than treating learners with additional needs as a single undifferentiated group, as well as from longitudinal investigation of how sustained artificial intelligence assisted instruction influences communicative competence, confidence and social participation among these learners over time. Such research would contribute not only to English as a second language pedagogy but to the broader scientific understanding of how emerging technology can be made to serve the goals of educational equity rather than to undermine them.

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