Optimizing English Language Learner Instruction through Artificial Intelligence: Bridging Educational Gaps and Alleviating Teacher Workload

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Abstract: I discuss how AI tools can meaningfully support education of English Language Learners (ELLs) while easing demands on teachers. Current technologies — chatbots, automated feedback systems, personalized learning platforms — assist students in developing language proficiency through real-time response and customized learning experiences. AI can take up mundane tasks such as grading and lesson planning so that more time is available for teachers to interact with students and give concentrated instruction. I also discuss some of the perils involved while implementing AI in education and investigate ethical considerations, teacher training, and equity in students' access to AI. I weigh opportunities and limitations to provide a pragmatic response for educators, school leaders, and policymakers on how AI can effectively be used to enhance student learning and help teachers devise sustainable teaching practices.

Knowledge of English is essential for achieving success in the United States in school, job, and social life. However, English Language Learners (ELLs) suffer greatly in language learning. Difficulties include problems with speaking a new language, lack of personal assistance, and disparities in money and resources (Dai & Liu, 2024; Praphan & Praphan, 2023). All these obstacles make it hard for ELLs to learn; and contribute to continued unfairness in non-native language instruction. It is crucial that we address these problems that are both urgent and universal (Hockly, 2023). The rise of Artificial Intelligence (AI) gives some hope for resolving these issues. AI tools, such as chatbots, personalized learning platforms, and automated feedback systems, are increasingly being used in education. Technologies provide quick feedback, can adjust teaching to fit each student's needs, and handle regular administrative tasks automatically. AI can allow teachers to spend more time on important activities that focus on students' socialization into English language use (Praphan & Praphan, 2023; Belda-Medina & Kokošková, 2023). Moreover, AI technologies can make learning more interactive and engaging, which helps students feel more motivated to learn a new language (Huang & Zou, 2024).

While this all sounds promising, there are some challenges associated with integrating AI into ELL instruction. Concerns include data privacy, algorithmic bias, and equitable access to technology (Hockly, 2023; Mohammed Al-Othman, 2024). Another major challenge entails the continuing professional development of teachers so that they are enabled to effectively integrate AI tools into their instructional practices. Likewise, schools face resistance from both educators and communities who fear AI encroachment on conventional teaching methods (Du & Gao, 2022). Nonetheless, AI may optimize ELL instruction by filling pedagogical gaps and lightening teacher workloads. Evaluation of the pros and cons of current AI-driven solutions reveals a framework for effective implementation of AI that addresses objections and challenges to these technologies. I aim to guide equitable and ethical integration of AI into ELL instruction by making practical recommendations for educators, school leaders, and policymakers.

Considering AI in Context of Its Use

Using AI in education cannot be seen as simply a technical task. Teaching and learning bear important social, cultural, and human elements, so the focus of education should always remain on people. ELLs face many challenges beyond merely language skill; these relate to cultural

identities and economic situations. No surprise, then, the Social Foundations of Education indicates the need for teachers to appreciate students' cultural and linguistic backgrounds in the classroom. Teachers are obliged to handle student differences because classroom teachers are the primary instructors in schools. But systemic issues, including underfunded schools, high teacher-student ratios, and a lack of training in culturally responsive teaching practices, act as barriers to equitably supporting inclusive goals. Traditional educational structures are made for monolingual and monocultural people, thus placing ELLs in a system that should address — but has trouble addressing — their special needs (Dai & Liu, 2024). This mismatch leads to poor school performance, low self-esteem, and a higher-than-average rate of dropping out among ELLs, perpetuating cycles of inequity and injustice. I have watched as outside pressures, like standardized testing, steered resources away from vital programs, including bilingual support and cultural enrichment. There's a real risk that AI's stress on efficiency and data will end up taking us down a pathway where we ignore the fact that in education investment in people is what matters most. My students need more than just tools; they need caring teachers who understand their special experiences and nurture their success.

The technological gap, as well, is a huge problem facing proposals to turn teaching totally over to AI, as low-income schools usually cannot afford the resources needed to use the latest AI tools. Likely, this techno-gap will force ELLs from poor backgrounds further away and exacerbate educational unfairness instead of solving it. Simply put, it is very hard to use AI in poor schools, such as the ones I have worked in. Most of my students lack good internet and modern devices at home, making it hard to use AI tools outside of class. Even at school, the limited resources often mean they must share technology or use old systems that cannot keep up with the newest AI. Those differences create a gap where the students who need the most help are the least likely to get it. Equitable access to AI curriculum would require systemic investment in technology, professional development, and ongoing support for schools serving underserved communities. Wise investment in technology can help bridge the digital divide. Policymakers must ensure that funding for schools that lack resources is provided so every student can get good internet, up-to-date devices, and the help they need to use AI tools well (Mohammed Al-Othman, 2024). Public-private partnerships in technology could also come in handy, with companies donating equipment or covering expenses of software licenses in low-income schools.

Another crucial aspect is protection of data privacy, mainly when AI systems collect and examine sensitive information about students. Top on my list of concerns about AI must be data privacy. As a teacher, it is always an important task to create an environment that makes students feel okay about sharing problems and feel good about making progress. A huge amount of data collected by AI could potentially break that trust. Many of my students come from at-risk backgrounds, including immigrant families who may feel worried about institutions gathering their personal information. The thought that private student data could be misused or not well protected raises important ethical issues. If my students knew their progress data might be kept forever, or looked at outside my classroom, how safe and comfortable would they feel about their learning? The issue of data privacy is further compounded by algorithmic bias: biased data sets can perpetuate stereotypes and further disadvantage already marginalized groups (Hockly, 2023). For example, an AI tool developed primarily using native speakers of a language may not account for the linguistic differences of English Language Learners, thereby making incorrect assessments and recommendations. Quite often, AI systems use data that might not be representative of the diversity of ELLs and their special languages and cultural backgrounds. I have witnessed how small misunderstandings about students' accents, or their way of speaking

can result in unfair judgments. For example, AI may mark some pronunciation errors as mistakes because AI is oblivious to patterns of speech from the student's first language, leaving students feeling unvalued and treated unfairly by this "cultural outsider." Algorithmic bias is solvable by carefully designing and using different types of data. AI tools must use data representing language and cultural differences of ELLs to reduce the chance of spreading stereotypes and indulging other forms of unfairness (Mohammed Al-Othman, 2024). Developers should collaborate with teachers to improve the algorithms, ensuring that they take into consideration likely cultural and linguistic challenges of ELL students in order to address and overcome those challenges. The system could, for example, learn to understand and adjust its usage to the way different kinds non-native speakers tend to talk when using English and view these as "socio-syncrases," that is, as cultural differences, not individual, idiosyncratic mistakes. This fits the Social Foundations principle of recognizing and valuing diversity in education.

For AI (as for school), addressing issues of cultural diversity means ensuring its own house is in order regarding clear, fair systems that work to achieve goals of social justice. Already marginalized students run the risk of being left much further behind, as current inequalities will be exacerbated by AI if investments are not made both in school infrastructure and in resources for low-income communities. Policymakers are to ensure that schools in less privileged communities are given adequate funding. It is also important to invest in community involvement. As an ELL teacher, I have found very instrumental inviting families into discussions concerning different educational tools and strategies relevant to their children. Conducting workshops or information sessions regarding the use of AI allows parents and students to raise concerns, and provide suggestions so that implementation suits their culture and language (Praphan & Praphan, 2023). Finally, using AI in education also gives us a chance to turn a critical eye towards AI. Teachers can prepare students for a future where technology is critical in their lives by showing how to use AI responsibly and smartly. For example, I could include talks about data privacy, unfair algorithms, and instructional limits of AI, helping students learn to deal carefully and wisely with these issues.

It's difficult to learn how to use AI in teaching. I'm willing to try new tools, though many colleagues have expressed feelings of stress when adopting another new technology without sufficient training or support. There aren't many opportunities for professional development, so teachers often must find out how to use these tools on their own. Lack of preparation, however, not only decreases the effectiveness of AI but also increases resistance among educators who fear AI will become a burden rather than a benefit. Adding AI to ELL teaching means equipping teachers with the wherewithal to use these tools effectively. One of the important areas is teacher training. From an ENL (English as a New Language) teacher's point of view, the benefits of learning will make teachers feel confident and competent with new tools. The training programs should do more than teach the technology; they should also show how AI can help instructors respect diverse cultures and build good relationships with students (Du & Gao, 2022). Workshops could show case studies of practical examples that connect with teachers' experiences that demonstrate how AI has been successfully deployed in different classrooms.

Teachers must be instructed on using AI systems and reflect carefully on their limitations and ethical concerns re: AI. Teachers using AI will need to be ready to address their own biases, ensure equitable access, and integrate the technology into culturally responsive teaching practices (Mohammed Al-Othman, 2024; Hockly, 2023). The focus of professional development programs should be on collaboration between teachers and AI, rather than on how AI can replace

or get in the way of human-centered teaching. Similarly, AI systems can review data on students to present tendencies and areas that need more effort from the teachers for better interventions. In my class, this might mean using AI to flag patterns in student errors, which would inform my lesson planning and targeted feedback. Integrating AI in ELL instruction certainly challenges the traditional view of a teacher as the only source of knowledge. Rather, it recasts teachers as learning facilitators who lead students through navigation in our complex, technology-enhanced world. Reframing teachers as facilitators reflects the broader movement within Social Foundations of Education toward greater inclusivity and shared responsibility for learning. As a teacher, I see AI as a collaborator that will augment what I can do, not replace me. For example, AI can be used for looking at and reporting on student performance. I, the teacher, am the one who interprets this information with regard to the cultural and language background of each student. It is this use of AI that really helps me work more efficiently and spend more time on relationship-building and creative teaching. In doing so, I ensure my students get the technical skill and emotional support they need to do well. With equity, relationality, and ethical considerations at the forefront, AI really empowers educators and students alike by ensuring that Artificial Intelligence is a tool for inclusion and progress rather than division and retrogression.

Reframing Our Understanding of AI as a Neurodiverse Educator

AI technologies hold the promise of scalable learning experiences that are individually suited to each student. Chatbots and apps using NLP (Natural Language Processing) tailor learning to needs of individuals and give real-time feedback, which helps students improve their skill in a new language without fear of judgment from other people (Belda-Medina & Kokošková, 2023; Praphan & Praphan, 2023). Such integration of technologies, though, needs to be critically examined considering its social implications. A most concerning objection to AI is it will dehumanize instruction, it will take down meaningful teacher-student interactions and turn learning into an impersonal, machine-driven process. We may be able to get a handle on concerns about dehumanization by drawing an analogy between AI and teachers who are on the autism spectrum. Few have looked into this comparison. However, Bloh's (2020) interview with Harry (a pseudonym), a student teacher diagnosed with Asperger's and PDD-NOS (Pervasive Developmental Disorder-Not Otherwise Specified), reveals some important similarities, and an even more important dissimilarity, in the two cases.

Bloh's (2020) conversation with Harry breaks new ground in looking at how ASD informs teachers' abilities and difficulties in the classroom. While there are blogs from teachers with ASD (E, 2013; Wylam, 2018), there is little information, especially in the form of data, about autistic teachers or students on the spectrum who are training to be teachers. Characteristics vary in ASD but include, in parallel to common complaints about AI, deficits in social communication, deficits in social interaction, stereotyped or repetitive movements, insistence on sameness, and highly restricted and fixated interests (American Psychiatric Association, 2013). Harry struggles to read social situations and get along well with co-workers and students. He noted that his autism gave him special insights but also required adjustments and support for the social entanglements of teaching. When placed in an ASD-support classroom as a student teacher — a happy coincidence rather than a planned assignment — Harry could relate very easily to the students. The shared experience of being on the spectrum helped him understand and meet his autistic students' needs better than many teachers might have who do not share the autistic experience. However, in contexts and classes unsupportive of his autism Harry's social skill

deficits, including an academically distracting feeling he couldn't work well with others, affected his work both as a student and as a teacher. As Harry tells us:

> I don't think about my social skills while I'm teaching, but I may not be able to catch on to social cues in the classroom. I could be doing something and the students might be giving cues to which I am unable to respond. That happened in my recent placement but not as much with the students but with other teachers. It was not my cooperating (special education) teacher but other general education teachers with whom we were working. I had some miscommunications with them and they became frustrated with me. I didn't realize this until my cooperating teacher told me, which was very helpful. It worries me for my future and I need to find a way to let my future colleagues know that I may not successfully communicate what I really intend. I think I want to self-identify my disability to my future colleagues so they don't misinterpret my meanings. I'm aware of this.

The final sentence of Harry's comment about how awareness of his autism helps him overcome challenges presented by it underscores an important disanalogy in the analogy constructed here between AI as an instructor and autistic teachers. To complete the thought, hear Harry one more time:

> *You need to be incredibly aware of your deficits*. Social skills were my issue, not having difficulties in other areas. I know that I, sometimes, have trouble working with people. So, I really try to work on that and make others aware of my difficulties. It will depend in what area(s) the teaching candidate has difficulties. In general, they should be aware of where these struggles may be and where they could occur before any issues occur. For me, I try to improve these areas and try not to make the same mistakes again.

Emphasis has been added to Harry's remark to point out that *Harry has awareness of his limitations*. Self-awareness is something AI does not have and cannot do. AI technologies excel in many areas of teaching, including data-driven personalization and efficiency in repetition; but AIs acting as instructors irremediably lack emotional intelligence and relational depth, the core features of human-centered education.

Concerns about AI dehumanizing education underscore the need to view AI not as a replacement for human connection but as a support system that can augment it. AI should be harvested to reinforce these links not to weaken them (Hockly, 2023; Bloh, 2020). For instance, AI can take care of repetitive, time-consuming administrative tasks such as grading and keeping track of attendance, freeing me, the teacher, to build personal relationships with students and engage in complex teaching tasks with them (Praphan & Praphan, 2023). Students will correctly view AI as an assistant rather than a master. I may use AI in my class to identify areas where students need extra support while I'm investing more of my time in personal conversations and mentoring. For example, an AI tool may suggest students improve their writing; however, I would help students select which improvements to work on and how to blend the machine's feedback with their voice. Such collaboration aligns with the Social Foundations' objective of increasing students' participation in their own learning process. Relationality is preserved and promoted if AI helps teachers emphasize the emotional and social dimensions of learning, which are especially crucial for ELLs facing language acquisition amid cultural change. AI systems should be viewed as facilitative tools to enhance teaching, not as a replacement for humane

teachers. As a 7th-year English as a New Language teacher, I have experienced firsthand the nuanced challenges of ELLs. My experiences have shown me the need for solutions that honor the social and emotional foundations of education, leveraging technological advancements to make participation in my classes more meaningful for me and my students. In a word, since AI, unlike Harry and other autistic teachers, cannot self-regulate when working as a teacher, teachers who incorporate Artificial Intelligence into their classroom instruction have to be sure to set firm limits and boundaries when forming a co-teaching relationship with AI. While AI can address many issues in ELL instruction, the platform must be actualized in a classroom environment honoring the relational, equitable, and human-centered core principles that define good teaching.

Making Strong Pedagogical Connections with AI

Teaching is all about relationships. The best moments in my work are when I listen to students telling their stories, when I get to join in celebrating their victories, and when I help them through difficulties. Moments like these may be the best reason to speak in any language. The times most important to my work as a teacher, especially for ELLs who might already feel left out of the new society to which they are adapting, are the interactions with students that build trust and motivation. While AI can provide very fast feedback, it cannot match the level of human understanding and feeling that is so necessary for teaching English Language Learners. For instance, I once had a student who struggled with grammar but had a lot to say about storytelling. I was able to help him feel more confident in his writing through personal talks and special support. An AI tool might have pointed out his mistakes and suggested ways to improve, but it would not have noticed his talent as a storyteller or understood how important it was to support his passion. My students need to feel that they are more than a data point or an item in an algorithm. They should feel valued for who they are as individuals.

One of the biggest worries about AI is that it might weaken interpersonal connections in teaching and learning. Again, teaching is about relationships, and that certainly includes working with colleagues. Recasting AI as a colleague, as a co-teacher, allows us to see that AI can assist in reinforcing good instructional relationships. For instance, a chatbot could help a student when out of class to practice the language more regularly and with more confidence, while in class I can focus on coaching and mentoring the student on learning the social and emotional aspects of English. This teamwork view of AI and teachers goes well with the view that education involves acquiring knowledge, growing personally, and building community (Hockly, 2023). Integrating AI in ELL instruction is not about deciding between technology and humanity; instead, it is about using technology to intensify the relational and human-centered aspects of teaching and learning. As an ENL teacher, I have seen how it is important to create a place where students feel valued, supported, and empowered. AI could help improve education and relieve teacher stress when used to help us focus on what matters most: relationships that facilitate growth and learning. Teachers, education policymakers, lawmakers, and AI creators can ensure that AI keeps its promise to better education by focusing on fairness, inclusiveness, and respect for divergent cultures in the use and operation of AI. That path ahead requires us to think big and work together, but the possible benefits of a fairer, more active, and people-focused education system make the hard work worthwhile.

I have experienced the challenges of meeting the needs of ELLs while managing the increasing demands of teaching. AI can help bridge educational gaps and alleviate the workload of teachers, all while keeping in mind the social aspects of education. With a focus on

relationships, fairness, and understanding of cultures, AI can support teachers' work, improve student results, and enhance teacher happiness. The best future of AI in ELL instruction is one that can provide the best aspects of equity and efficiency in education without losing the relational and human-centered perspectives of teaching. Continuing to improve, AI can become a transformative tool that will assist in language acquisition and promote cross-cultural understanding and empathy. For example, future AI systems may incorporate the understanding of multiple languages and cultural backgrounds into their design. This will enable students to learn in ways that respect their identity and experiences (Dai & Liu, 2024). AI can change the way teachers and students interact. If the routine tasks are taken care of, teachers will have more time to get involved with students personally, making learning more meaningful. Additionally, improving AI could help with academic growth and social-emotional skill, fitting AI into a broader view of education (Hockly, 2023).

AI can support both practical and ethical concerns in ELL teaching if and only if it allows us to reimagine education by foregrounding social connections. While many authors discuss how effective AI can be, few reflect on how it can bring about deeper relationships and inclusions. For example, it can help students tell their cultural stories in different languages, bringing about conversations and understanding among classroom cultures (Bloh, 2020). Understanding AI as a colleague is a paradigm shift that positions AI not only as an instrument of instruction but also as a catalyst in community building and mutual understanding. Moreover, AI can redefine what achievement in education means. Current systems hinge on standardized metrics that miss the student's holistic development. AI tools might record data on well-being indicators, such as social engagement and cultural integration, which fall within a broader and more inclusive definition of success (Praphan & Praphan, 2023). These ideas for using AI well align with the Social Foundations of Education principle that education must be an instrument through which students empower and actualize themselves. AI modifies the idea that teachers represent an absolute source of knowledge and authority. Instead, AI makes teachers guides and partners with whom students walk together through a world full of technology. This change in pedagogy aligns perfectly with the focus of recent times on inclusiveness in education and shared responsibility for learning. As an ENL teacher, I see AI as a helpful tool to increase my reach and effectiveness. It allows me to focus on what I do best: building relationships, encouraging creativity, and inspiring students. By using AI to take care of regular tasks and provide information about learners' strengths and challenges, I can spend more energy on the critical human-centered parts of teaching that make education a unique experience for each of my students.

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