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Artificial intelligence and English language teaching: Preparing for the future

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Artificial intelligence and English language teaching: Preparing for the future

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A collective thanks to the 1,348 anonymous English language teachers from around the world who took time to respond to our survey for this publication. Their voices helped us capture the views of teachers worldwide, arguably the most important stakeholders for this report (see Part II).

Thanks also to the lead researcher on the systematic review that forms the basis of Part I of this publication, Dr Helen Crompton, as well as Senior Research Associate at ODUGlobal Diane Burke.

We would also like to thank our reviewer – Amy Lightfoot, Director Insight and Innovation, British Council – who also contributed the foreword to this piece.

Finally, thanks to the British Council's English Programmes EdTech Innovation and English Connects teams. Their input to discussions around the topic and help with the teacher survey were invaluable.

Abbreviations

AI	artificial intelligence
CALL	computer-aided language learning
CEO	chief executive officer
CPD	continuing professional development
ELT	English language teaching
ELT/L	English language teaching and learning
EU	European Union
GenAI	generative AI
GPT	Generative Pre-trained Transformer
L2	second language
LGC	learner-generated context
LLM	large language model
SDG	Sustainable Development Goals
STEM	science, technology, engineering and mathematics
TOEFL	Test of English as a Foreign Language
TOEIC	Test of English for International Communication
UNESCO	United Nations Educational, Scientific and Cultural Organization

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Foreword

Artificial intelligence has captured the world's imagination, generating countless headlines and causing heated debates. These discussions are very live among those working in education – what impact will AI have on how our learners gain knowledge and develop skills? What impact will it have on how we recruit and train our teachers? Will teachers ultimately be replaced by technology?

Language teaching in particular presents multiple opportunities for the integration of AI-powered technologies. Even prior to the development of generative AI tools like ChatGPT, we have seen many successful applications developed using AI to create adaptive learning pathways for language learners. Generative AI tools now provide incredible potential for language practice. However, realising that potential requires motivation and skills from learners, teachers and many other stakeholders. It is clear that there are both barriers and risks which need to be explored, and the voices of those whom these technologies are aimed at must be listened to and carefully considered.

This publication aims to do just that. It recognises the changes that AI is bringing to the world of English language teaching and seeks to understand the implications, and people's feelings about them, through the examination of three sources of evidence: the literature, teachers and a group of expert key witnesses who reflect on the possibilities and considerations unfolding before us.

At the British Council, we contribute to the development of sustainable education systems. Recognising the opportunities it brings, we have a particular focus on supporting the teaching, learning and assessment of the English language. All of this work is underpinned by evidence, and by listening carefully to our partners and the educators we work with. By doing this, we help to improve the quality of classroom practice around the world, with intentional use of education technologies to provide support where this is appropriate. We are excited to learn about how AI might help to move our field forward, and mindful of the need to prepare and support those who will use it to mitigate risks and remove obstacles where we can.

This publication gives us all important insight into current attitudes of the relationship between artificial intelligence and English language teaching, and how teachers are using the new technologies. It also raises key questions for further consideration and points to critical next steps that will help to promote its safe integration into our classroom practice.

Amy Lightfoot
Director Insight and Innovation
English Programmes
British Council

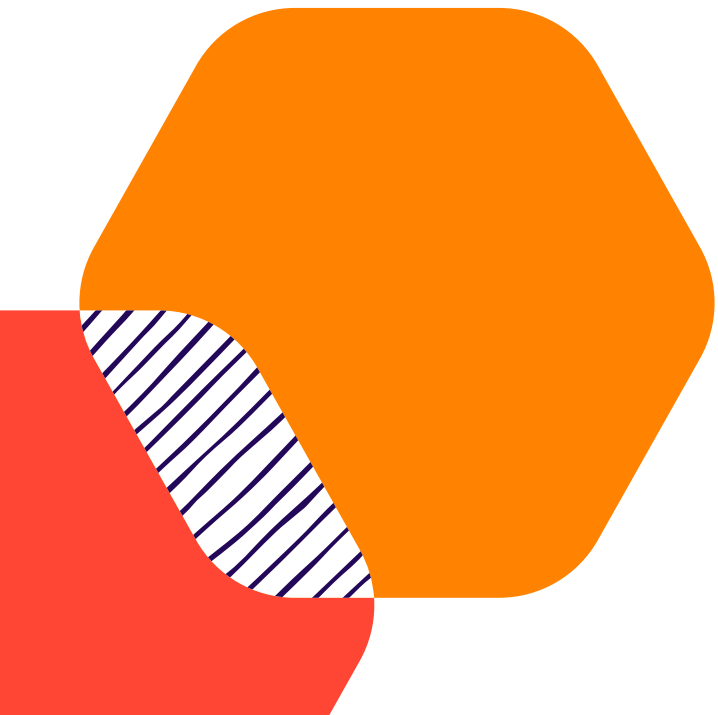
Introduction

The discussion around how artificial intelligence (AI) will impact every field of human activity has gained traction following developments in conversational AI. Since late 2022, AI-powered technology, such as ChatGPT and its iteration GPT-4 and similar large language models (LLMs), has taken the world by storm. These have been accompanied by the release of other generative AI tools that can rapidly produce language, images and computer code with remarkable ease.

There is increasing recognition that 'these emerging technologies present immediate – as well as far-reaching – opportunities, challenges and risks to education systems' (UNESCO, 2023). However, in the context of implementing artificial intelligence in the educational sector, the existing research and guidelines are relatively limited, and there is a need for more extensive exploration of these issues.

In the specific field of English language teaching and learning (ELT/L), although there are now a wide range of resources available for teachers on classroom-based use of AI tools (such as blogs, webinars, 'how-to' guides), there is a need for a deeper engagement with the opportunities, issues and challenges AI presents. This publication was therefore commissioned by the British Council to contribute to emerging research specifically around the impact of AI on the teaching of English in education systems.

As a first step towards understanding the current scenario, education technology experts at the British Council and Dr Helen Crompton, Director of the Research Institute of Digital Innovation in Learning (RIDIL) ODUGlobal, sought to investigate the current state of research evidence around the use of AI in ELT/L. The team initially completed a first-of-its-kind systematic literature review that maps out the last ten years of research focused on the topic. Part I of this publication summarises the main findings from this review, including the main affordances and challenges that emerged and the implications for practitioners. For readers who would like more information about how we approached the



In the specific field of English language teaching and learning [...] there is a need for a deeper engagement with the opportunities, issues and challenges AI presents.

systematic review, the coding we employed and the detailed findings, please see our open-access peer-reviewed article in the British Journal of Educational Technology.[1]

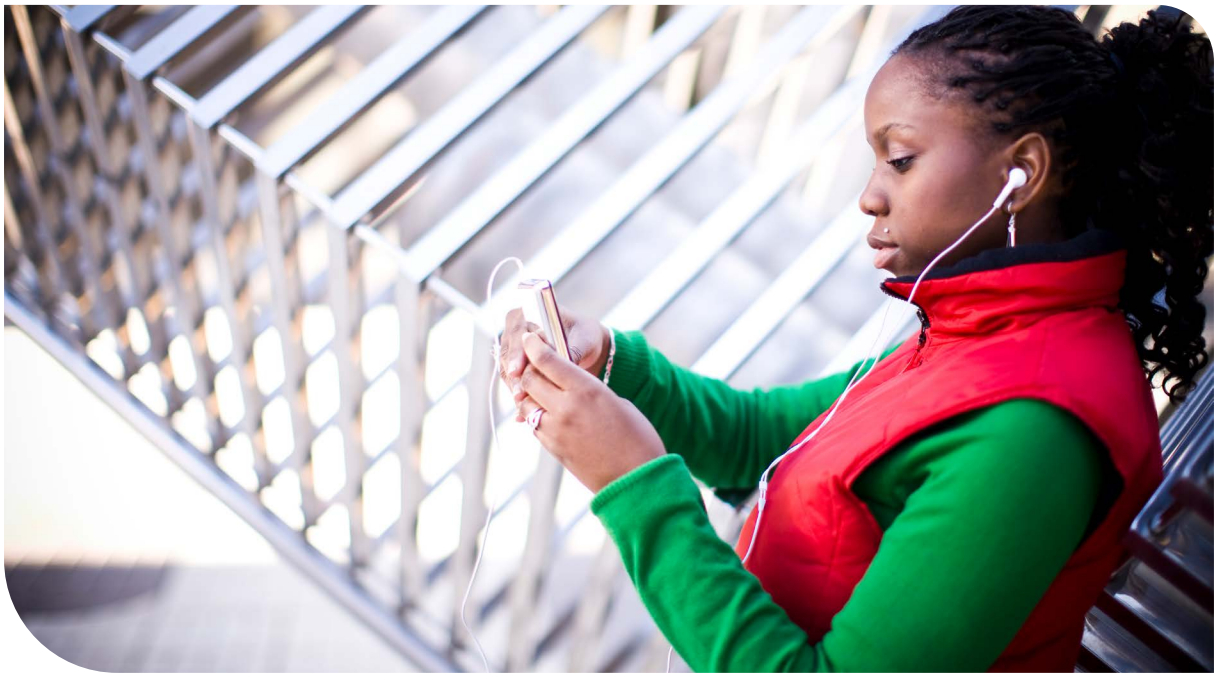
Having studied the literature to establish how AI is currently being used for English language teaching (ELT) – and taking into account the fact that the majority of this peer-reviewed literature was written prior to the widespread availability of more recent generative AI tools – it was felt that any commentary on the current situation and the possible future of AI in ELT required capturing a wider range of stakeholder voices. Therefore, this report builds on our learning from the systematic review and incorporates views and opinions from across the world.

Following the brief overview of the literature in Part I, in Part II we present the results of a global survey of 1,348 English language teachers from 118 countries, capturing their views through both numerical analysis of their aggregate responses as well as the sentiments of individuals captured through more in-depth commentary that many of them provided.

Next, in Part III, we explore the major themes emerging from 19 in-depth interviews conducted with our key witnesses: practitioners and decision makers from a range of geographies, including teachers, government representatives, researchers from higher education, representatives of private language schools, and ELT and EdTech sector experts. Through this publication, we aim to have a multiplicity of voices represented in the conversation on AI in ELT and its future in our field.

It is critical that we explain how we understood the term 'AI' for this work, as it is used in a variety of different ways by different people. AI can be defined as computer systems that simulate human intelligence (Sindermann et al., 2021) and can learn, understand and remember human language (Xiaohong & Yanzheng, 2021). The literature we analysed encompassed various AI technologies and systems: 1) learner-facing, used by pupils to learn, 2) teacher-facing, used by teachers to help in teaching activities, for example grading, and 3) system-facing, which is used by administrative staff to manage and examine pupil data (Pokrivčáková, 2019).

Crucially, **use of the term AI remains intensely problematic as it is used to refer to a range of different systems**. Where possible, in this publication, we refer to more specific forms of AI such as generative AI (GenAI) or LLMs. In Part III, the need for more nuanced definitions of AI is explored in more depth.



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[1] https://bera-journals.onlinelibrary.wiley.com/doi/10.1111/bjet.13460

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Part I

Background: What the literature says

Background: What the literature says

A scan of the existing literature indicated that an up-to-date, comprehensive study was needed to present the current use of AI for ELT/L across learners of all ages. The resulting systematic review, commissioned by the British Council, was one of the first formal studies to examine how AI has been used across all ages of learners who are studying English as a second or additional language. It involved gathering research studies on AI in ELT that fulfilled specific criteria and carefully analysing these for trends and patterns. At the end of the search selection process, 43 peer-reviewed articles met the inclusion criteria and were studied in detail.[2]

The overarching question for this review of the literature was **How is artificial intelligence being used for English language teaching and learning?** This section summarises our key findings.

Demographic trends

- Asia is currently at the forefront of AI in ELT research, with over two-thirds (72 per cent) of the articles coming from Asia, 19 per cent from China.
- More studies are now being conducted on AI in ELT than there were five or ten years ago, mirroring the recent rise in the number of AI tools available and public interest in AI.
- Interestingly, the findings show a significant gap in peer-reviewed research on AI in adult ELT outside of the formal education system. The majority of studies focus on learners in higher education. This perhaps echoes the general demographic shift towards people learning English at younger ages (Trajectory Partnership, 2018).

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[2] For more detailed information about the methodology, please see here: https://www.britishcouncil.org/sites/default/files/ai_in_english_language_teaching_systematic_review.pdf

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Educational benefits of AI in ELT

The review identified five key areas in which AI is being used in ELT: for the development of speaking, of writing and of reading skills, to support pedagogy and for self-regulation. Interestingly, among the language skills, listening did not emerge as an area where AI is being used for support.

Speaking

Pronunciation was the key sub-skill revealed in the studies related to the use of AI in speaking, with a variety of AI-powered systems and programs available for learners. For instance, a study with Taiwanese leaners by Liu and Hung in 2016 found that the use of AI – and the visual representation of the pitch as a spectrogram – significantly improved learners' pronunciation by reducing the flatness of pitch and intonation patterns.

Pedagogy or teaching methods in relation to teaching speaking also emerged as an area of interest. AI was used as a conversational partner, a language coach and in a multimodal capacity. For example, Dizon and Tang (2020) had learners converse with Alexa, a personal voice assistant. They found that it promoted meaningful interactions, supported vocabulary acquisition, improved language skills and provided interesting, enjoyable learning. Other studies highlighted the use of coaching and multimodal systems (employing multiple ways to present information, such as text, images, audio and video). For instance, in a study by Shivakumar et al. (2019) in a higher education setting, learners were provided with an AI coach that tailored instruction to each learner's learning patterns and needs, resulting in the ability to speak more fluently using consistently accurate language structures.

Other technologies used for improving speaking skills included using AI for speech recognition, adaptive learning, automatic speech analysis and voice assistance. One example is where Kazu and Kuvvetli (2023) developed an AI-supported pronunciation model for Turkish learners. This system helped learners practise, record and react to learners pronouncing words, resulting in longer retention of the vocabulary and significant benefits in learning consonant and vowel sounds.

Writing

AI use in writing related mainly to vocabulary learning and grammar. For example, Lo (2023) found that access to neural machine translation programs resulted in learners' vocabulary improvement, especially when specialised or unambiguous expressions were involved. Another common use of AI in writing is the use of AI grammar checkers. For instance, a study by Dizon and Gayed (2021) in higher education found that learners using the AI-powered tool Grammarly made fewer grammatical errors and wrote with more lexical variation than learners who did not.

Only one pedagogical focus, to support giving feedback, emerged in AI use for writing skills. Studies looking at pedagogy in writing were often connected to AI tools providing feedback via spelling and grammar checkers, along the lines of Dizon and Gayed's (2021) study with Grammarly (above). Nazari et al. (2021) also examined the use of Grammarly as a feedback tool for English language learners. They reported positive outcomes, with an improvement in behavioural, emotional and cognitive engagement, as well as self-efficacy in writing.

A variety of AI technology tools were used to support writing skills, including grammar checkers, writing assistants, translation tools and pattern checkers. A study by Chon et al. (2021) with South Korean college learners explored the use of machine translation as a reference tool for second-language (L2) writing, finding that using Google Translate helped less-skilled learners to display a level of writing proficiency that was not significantly different from that of skilled learners. It also found that machine translation aided learners to produce essays with a greater number of lower-frequency, more complex words and higher-quality syntax.

Reading

Although some studies did involve the use of AI for developing the receptive skill of reading, these were far less common than for the productive skills of speaking and writing. Vocabulary was the only aspect of developing reading skills that appeared to be a key focus, while only gaming emerged as a specific use to support pedagogy. For instance, Zheng et al. (2015) explored how vocabulary learning in reading occurs during gaming quest-play mediated in English, in the game World of Warcraft (WoW). The findings suggest that learners have opportunities to learn vocabulary and understand meaning via games beyond what a textbook or classroom can provide, by contextualising often decontextualised vocabulary. WoW uses AI to provide that context through the inclusion of AI characters (i.e. those not operated by a human) and pathfinding navigation algorithms that make the environment dynamic and engaging.

Pedagogy

This refers to the methods, strategies and techniques used to facilitate ELT. It is noteworthy that even with the rapid changes in available technology, many conventional forms of pedagogy, such as lectures and explanations, are still in use. Some studies examined multiple approaches that appear to provide a more personalised learning approach. For example, Kim (2022) explored the effects of the pedagogical approaches of score predictions, lectures, explanations and practice tests on Korean learners studying for their Test of English for International Communication (TOEIC). Learners began with a diagnostic assessment in which the AI then used the data to provide lectures, explanations and practice tests at the level required by the learner.

Lee et al. (2023) explored a learner-generated-context-based (LGC) approach. They defined LGC as the creation and use of digital technology that enables learners to build a 'learner-generated context' and learn within it. This context is derived from data that is collected as the learners perform actions and make choices. The system then adapts to the learners and provides them with more content that suits their preferences. The researchers reported that the LGC AI-powered pedagogical approach fostered learners' self- autonomous learning experiences.

Self-regulation

Learners' emotions, or affect, can influence their choices and actions they take. Several studies in our review explored using AI to promote self-regulation – the ability to manage and control one's thoughts, emotions, behaviours and physiological responses to achieve personal goals and maintain well-being. This research investigated the results of engaging learners in active thinking, especially regarding their goals and learning autonomy. What emerged is the trend for AI to allow learners to actively participate in goal setting and become independent learners. For example, Hew et al. (2023) used chatbots in ELT to support learner goal setting and social presence in fully online activities. This helped learners to clarify their learning goals, create techniques for setting goals and raise awareness of learning strategies in goal setting.

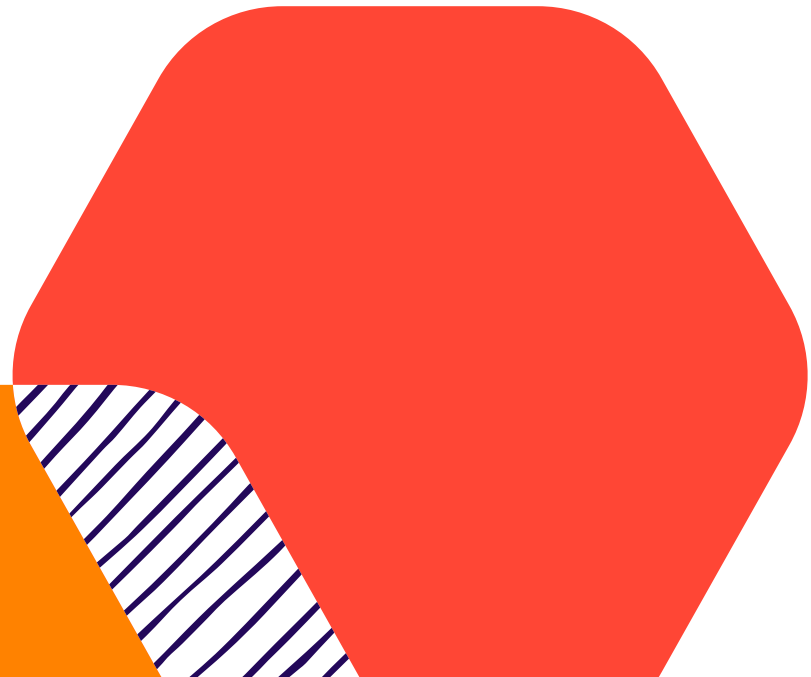
In another study, Chen, Hsu et al. (2022) examined robot-assisted language learning, where AI and virtual reality were combined to create a system to use robots as a tool for training English language tour guides to develop a sense of autonomy. The findings of the study identified benefits including increased autonomy, motivation and engagement.

Finally, some of the studies we reviewed explored using AI to reduce anxiety, which relates to learners feeling anxious about learning English, for example around speaking in public, making mistakes with vocabulary and interacting with others. Chen, Koong et al. (2022) reported that anxiety was reduced when an AI automatic speech recognition tool was used with fifth-grade Taiwanese learners. In addition, both Çakmak (2022) and Chen, Koong et al. (2022) found that their use of AI both raised the learners' skills and lowered anxiety.

Challenges of AI in ELT

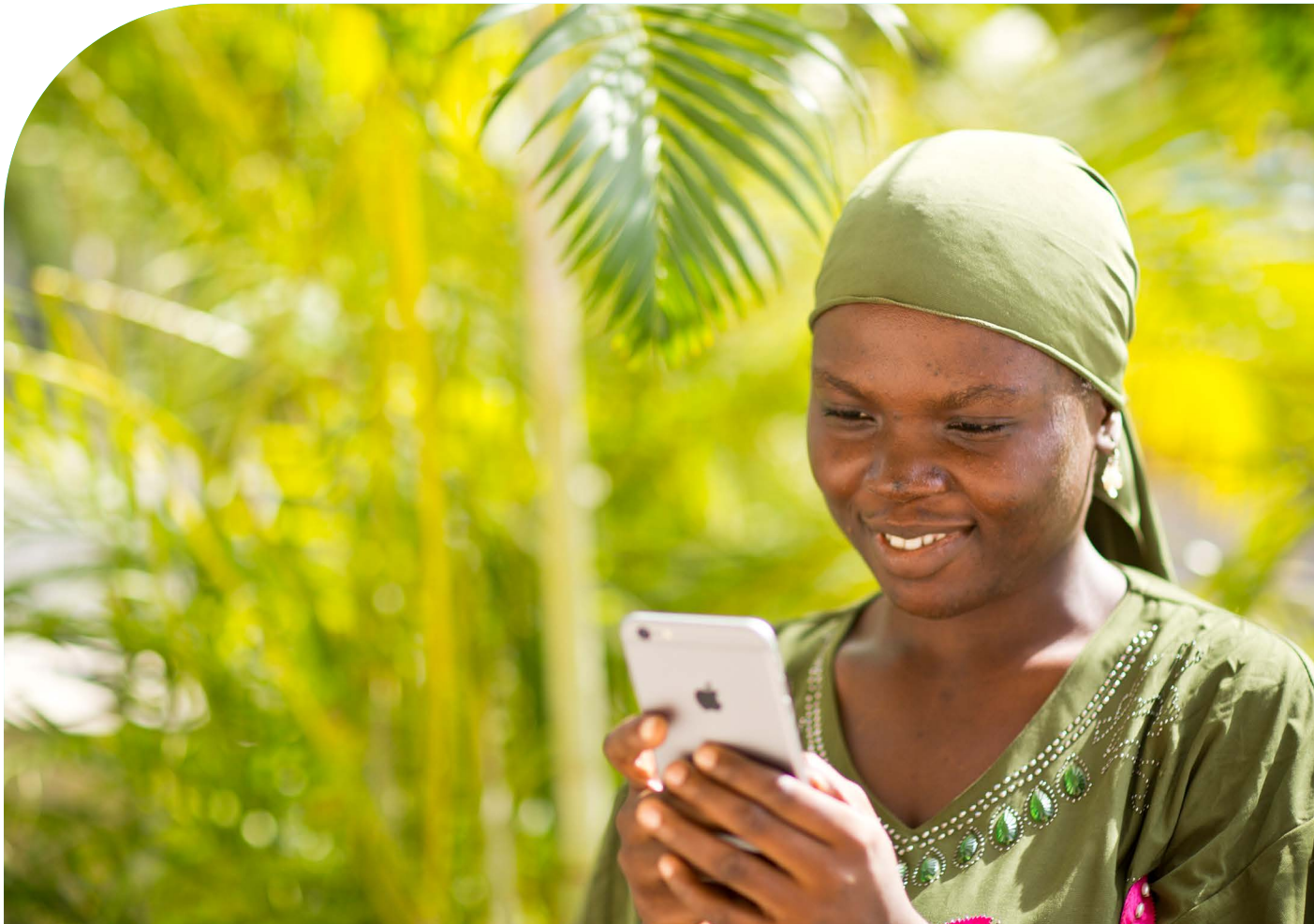
Remarkably, the challenges and risks of AI systems in ELT were not as well reported as its benefits in the research literature we reviewed. However, where they were, there were four main challenges that emerged.

- **Technology breakdowns** included technical malfunctions and poor connectivity. One specific technology breakdown was incorrect answers given by the AI.
- **Limited capabilities** where users required more advanced functionality. For instance, some learners wanted better chatbot capacity and others wanted more natural interactions (Thompson et al., 2018). These limited capabilities led to learners becoming uninterested in using the chatbot.
- **Fear** took several forms, including 1) a lack of clarity on how personal information would be stored and shared, 2) fear of the unknown, i.e. uncertainty about how the AI was operating, and 3) fear of losing a natural learning environment and, along with it, real emotions connected to learning (for example Viktorivna et al., 2022).
- **Standardising languages and ideologies** emerged as one of the most compelling challenges – our interviewees also discussed this in detail (see Part III 'Bias'). Rowe's (2022) study of learners in a second-grade American classroom found that Google Translate's programming appeared to carry messages about what is considered appropriate and standard language use, disregarding nuances in language groups. One learner using the tool found that Tagalog was not listed as a language by Google Translate, and the only available option for the Tagalog-speaking pupil when translating her own language to English was Filipino (which has been the official standardised language of the Philippines since 1987). Rowe (2022, p.884) reports that this left the learner 'in essence, engaged in a negotiation of what counts as a language, who decides what it is called, and which language was "correct".' This suggests that by recognising some historical and political language boundaries over others, Google might re-enforce standardised language use.



Implications for practice

- As English language learning is likely to be the most common discipline for AI use in education (Crompton & Burke, 2023), English language teacher education and **training must include a focus on AI literacy**.
- **Teachers also need to develop their learners' AI literacy** so that they can understand the limitations and risks of AI and discuss the ethical issues around its use.
- Practitioners should **carefully consider how models are chosen**, as AI may carry messages about language use and exclude certain groups/varieties of English.
- **AI can provide a conversational partner**, provide language practice outside class and alleviate learner anxiety about speaking. However, **more evidence is needed** on whether the gains persist independent of such AI tools.
- Accessible and unambiguous **ethics statements for AI in ELT** should be developed and committed to, along with clear systems to ensure data privacy.
- Practitioners should **be realistic about the current limited capabilities** of AI and cautious about the hype.



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Areas for future research

- The majority of studies meeting our selection criteria were from Asia (72 per cent). **Future studies conducted in a wider range of geographies** would make results more widely generalisable.
- Many were conducted in higher education. **More studies are needed in K–12 (school-level education) and adult learning**.
- The challenges of AI use in ELT are not as well reported as the benefits. Further efforts are needed **to make explicit the challenges of using AI in ELT**.
- Future research could **focus on AI use for developing receptive skills**, which did not emerge as strongly from the research data as productive skills.
- Despite the rapid changes in available technology, conventional forms of pedagogy, such as lectures and explanations, persist. Future researchers could **investigate and expand on how AI can create new opportunities for learning**.
- There is a lack of **research on specific tools and longer-term impact** on learning, e.g. grammar, translation, AI-powered gaming.
- **AI has clear applications for assessment**, as well as implications for how learners' skills can be assessed without them using AI for support. This is a significant area of need for research in future.

Our systematic review provided a much-needed overview of the field of AI and ELT, gathering the published research of the past decade. The findings reveal current benefits of using AI as well as some of the challenges and issues that need to be addressed. The British Council team were able to use these findings to help inform the questions and statements for the teacher survey, the findings of which are presented in Part II, as well as the questions posed to the stakeholders interviewed for the third part of this report. Together, these three avenues of study help to triangulate the emerging themes and provide a more holistic understanding of the current use of AI in ELT and how we might work to shape it for the future.

Part II

The survey: What teachers say

The survey: What teachers say

About the survey

The perspective and views of English language teachers were underrepresented in studies analysed for the literature review. In response to this, a survey was designed to gather data on their use of and opinions about AI in ELT. This survey was shared through various ELT-focused social media channels and mailing lists, including the British Council's TeachingEnglish Facebook community.

Contributing teachers

Data was provided by 1,348 English language teachers, from 118 countries and regions, on where they teach, who they teach, how long they have taught for and whether they teach face-to-face, online or both.

Respondents were mainly experienced English language teachers, with a majority (64 per cent) having taught English for over ten years and a further 21 per cent having taught for five to ten years. Only 16 per cent of respondents had taught English for fewer than five years.[3]

Just over half (53 per cent) taught exclusively face-to-face, while 42 per cent taught both face-to-face and online. Only six per cent taught solely online.

In terms of where they teach, state schools (33 per cent) were the most common, followed by private/fee-paying schools (23 per cent) and university/college (22 per cent). A smaller percentage (18 per cent) worked at English language schools, while 15 per cent chose 'Other' (this included those working as private tutors, for in-company corporate training, volunteers or with NGOs and international organisations).

Respondents taught a range of age groups, with 14- to 18-year-old learners most common (47 per cent), followed by 11- to 13-year-olds (36 per cent). Similar numbers taught university (30 per cent) and adult (28 per cent) learners. Five- to ten-year-olds (20 per cent) and those under four years old (3 per cent) were the least common age groups taught.

Respondents were from various world regions, with Asia (27 per cent) and Europe (27 per cent) being most represented, followed by the Middle East and North Africa (MENA) at 23 per cent. Eighteen per cent of respondents were from the Americas, while the percentage of respondents from sub-Saharan Africa (SSA) stood at four per cent.

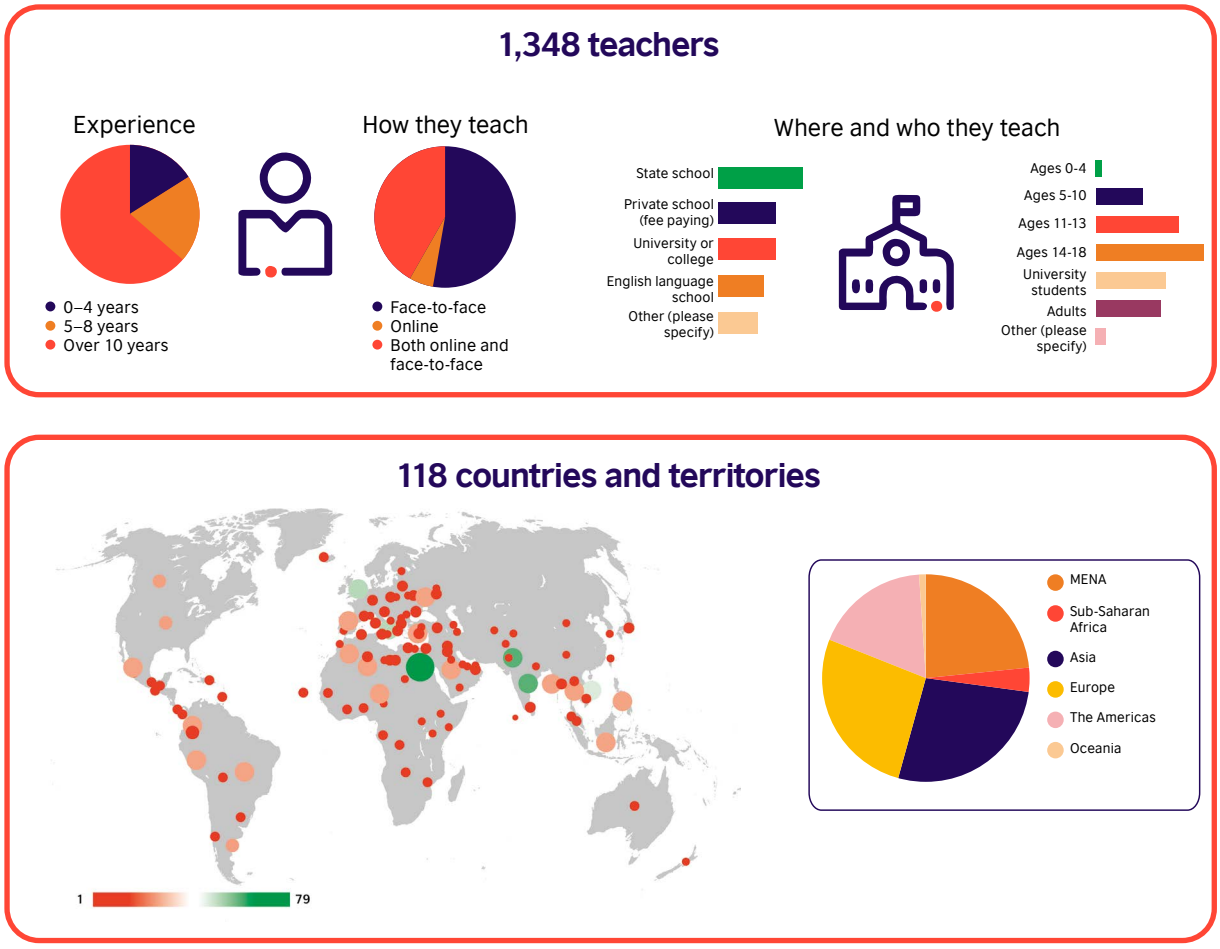


Figure 1 Teacher survey respondent demographics

[3] Throughout this section, survey result numbers have been rounded, as a percentage, to the nearest whole number for readability.

How teachers are using AI in ELT

The 1,348 respondents provided data on what AI tools they use and how they use them. A simple definition of AI headed this section of the survey: 'AI (artificial intelligence) refers to technologies that mimic human behaviour to conduct tasks normally done by people'. Respondents were then asked to select from two separate lists: 1) the AI-powered tools they used and 2) the specific tasks they used AI tools for (see Appendix A).

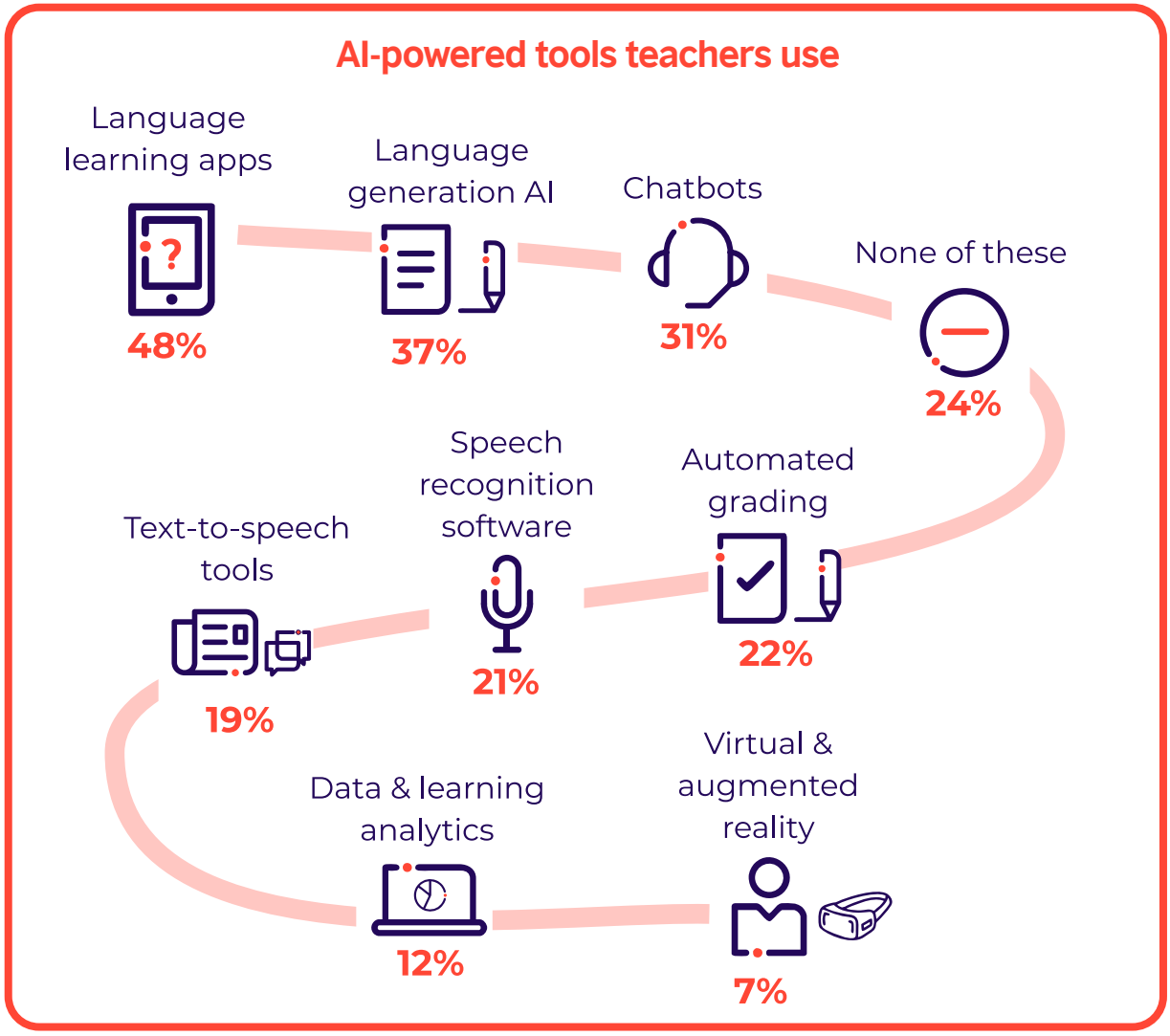


Figure 2A Teacher survey results: Which AI-powered tools teachers use

The most popular AI-powered tools that respondents used were language learning apps (48 per cent). Language generation AI (37 per cent) and chatbots (31 per cent) were the next most widely employed. Automated grading (22 per cent), speech recognition software (21 per cent) and text-to-speech tools (19 per cent) had fewer reported users. Data and learning analytics tools (12 per cent) and virtual and augmented reality tools (7 per cent) were the least used tools. A significant percentage of respondents (24 per cent) reported that they did not use any of the types of AI tools listed.

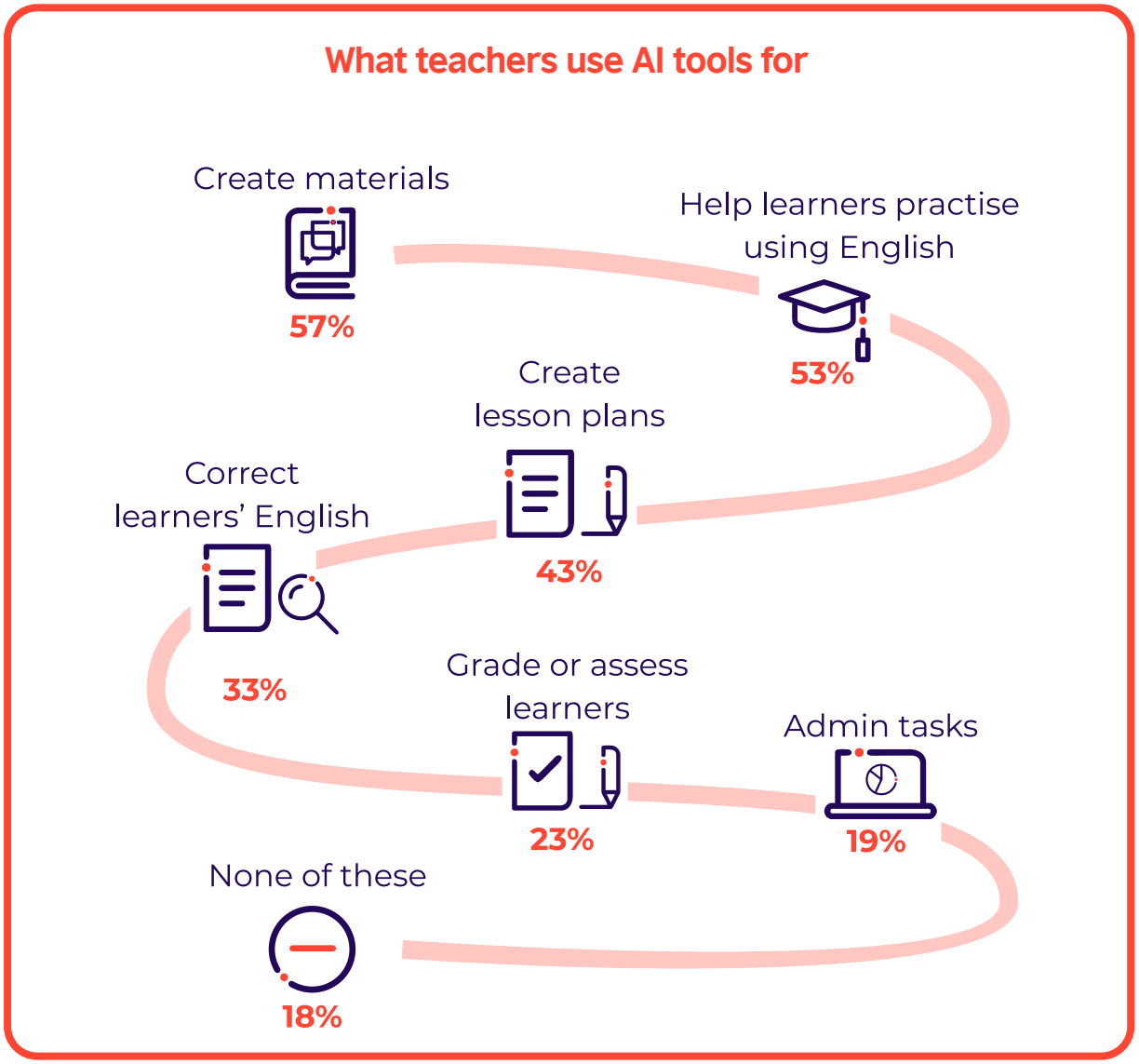


Figure 2B Teacher survey results: The tasks teachers use AI tools for

From the list of specific tasks teachers used AI tools for (see Appendix A), the most selected options were creating materials (57 per cent) and helping learners practise using English (53 per cent). Creating lesson plans (43 per cent) and correcting learners' English (33 per cent) were the next most popular selections.

Grading or assessing learners (23 per cent) and admin tasks (19 per cent) were selected the least. However, 18 per cent of the respondents said they did not use AI for any of these purposes.

Teachers' views on AI in ELT

The next section of the survey was completed by 1,112 teachers from 115 countries and regions. They were asked to rate 13 statements about AI in ELT (see Appendix A) on a five-point scale of agreement: I strongly agree / I agree / neutral / I disagree / I strongly disagree. These statements reflected themes that had emerged from the review of the literature (see Part I), as well as other areas of interest. Some of the respondents also provided written comments (ranging from 84 to 204 per statement) to explain their rating decisions. The results are presented in this section.

Analysis of the written responses to each statement was initially generated using the AI tool ChatGPT. These analyses were then reviewed, redrafted and added to by the publication authoring team.

AI in ELT: the present

Statements 1 to 4:
AI can help learners improve their English speaking/writing/listening/reading skills.[4]

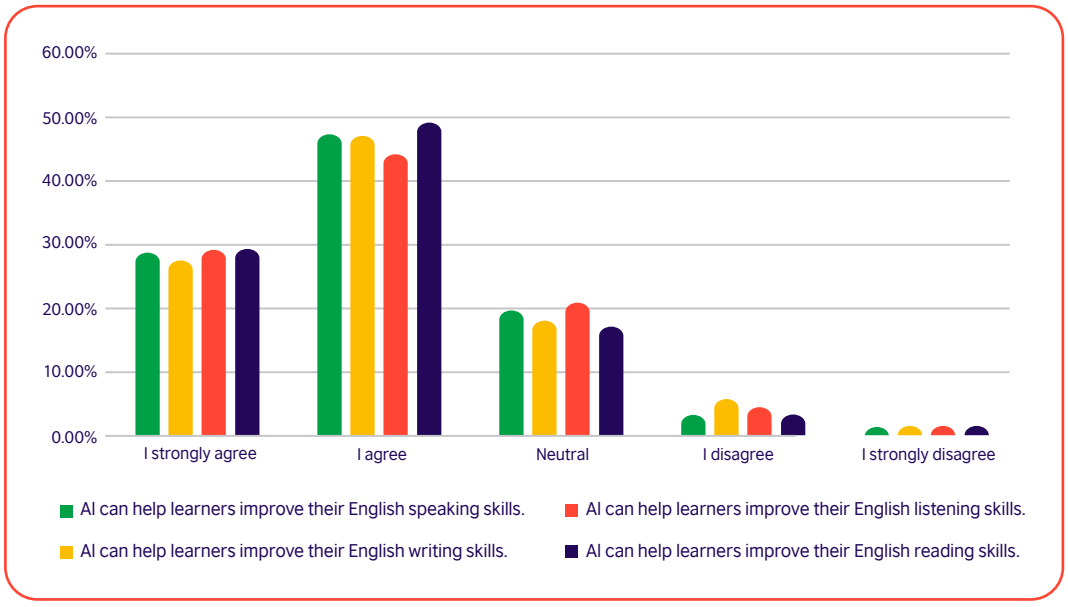


Figure 3 Responses from 1,112 teachers to survey statements 1 to 4

There were similar levels of agreement among the 1,112 respondents for all four statements, demonstrating that teachers saw little difference in the ability of AI to support learners' development in these four areas. Agreement that AI can help improve productive skills (76 per cent for speaking, 75 per cent for writing) was similar to that for receptive skills (74 per cent for listening, 79 per cent for reading). This is interesting because the literature (see Part I) suggests that in practice there is more focus on AI being used for productive skills, at least where research projects are taking place.

In the 613 written explanations provided by teachers (204 for the statement on speaking, 167 for writing, 123 for listening and 119 for reading), several patterns emerged. Positive perceptions of AI's capabilities were noted across these skills, with

[4] Teachers responded to four separate statements in the survey itself.

teachers praising 'innovative tools for learning', 'real-time editing', the ability to adapt to learners' levels and offer 'engaging reading materials'. A recurring theme was AI's potential to enhance autonomous learning and provide 'non-judgmental practice opportunities'. However, responses also pointed to the technology's limitations: AI's lack of 'human emotions', inability to fully grasp language nuances like 'humour', and concerns about over-reliance were cited. A shared belief across all four skills was that the integration of AI-powered tools and content should complement, rather than replace, existing methods.

Statement 5:
AI can have a negative impact on learners' ability to improve their English.

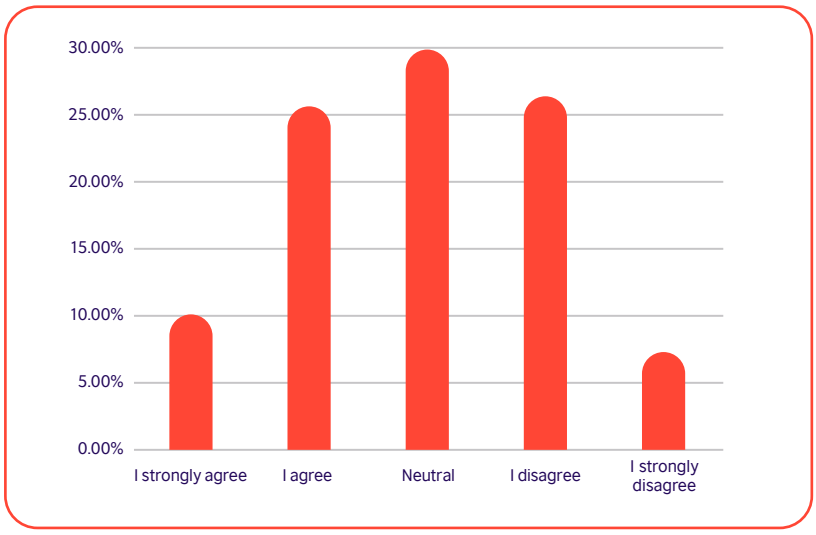


Figure 4 Responses from 1,112 teachers to survey statement 5

There was a range of responses to the question, indicating fairly balanced levels of agreement and disagreement among the 1,112 respondents. The number of teachers who strongly agreed or agreed (36 per cent) was nearly equal to the number who strongly disagreed or disagreed (34 per cent). About a third of the respondents (30 per cent) felt more neutrally about this, which suggests some teachers have mixed feelings about whether AI might have negative impacts – or that it's simply too early to make a judgement (perhaps because of a lack of experience with using AI-powered tools themselves).

Many of the 129 written explanations provided expressed concerns about dependency, noting that learners might 'misuse' AI or 'rely on it more than their natural abilities'. Quotes like 'What's the point in learning English when AI can speak for me?' and 'Students will rely [too] much on AI, resulting in a lack of confidence' illustrate the perceived risk of over-reliance. However, several educators acknowledged that the outcome hinges on how the technology is used and 'the quality of the AI product', suggesting the potential for both beneficial and detrimental effects. 'Guidance from the teacher' was highlighted in some cases, it being pointed out that educators themselves need to be 'confident and have a clear purpose on how to use the tool for learning'. That such issues are not exclusive to AI is also noted: 'Any teaching tool can have a negative impact if not used correctly'. Common concerns about cheating, plagiarism and the potential for AI to replace critical thinking, while promoting a 'wooden, dead version of the language', were cited, indicating a cautious attitude towards AI in ELT.

Statement 6:
Learners should be able to write in English without the help of AI tools (e.g. Grammarly, ChatGPT).

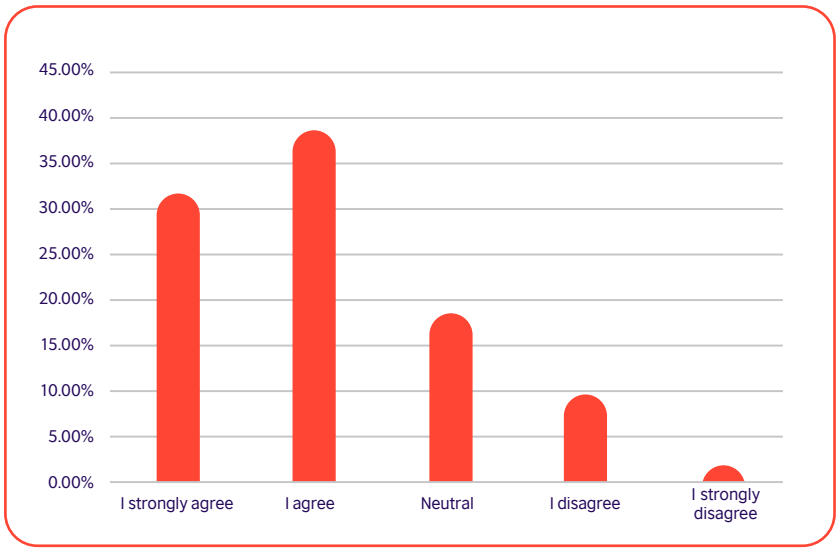


Figure 5 Responses from 1,112 teachers to survey statement 6

The 1,112 responses showed general agreement (70 per cent) with this statement, while only 12 per cent disagreed.

A considerable number of the 120 written explanations expressed the belief that learners should be able to write independently to ensure skill development. Phrases such as 'students should develop their cognitive capacity' and 'I'm not sure [AI-supported writing] gives more than the illusion of progress in many cases' highlight this perspective. Conversely, others acknowledge the potential benefits of AI tools for reinforcement and feedback, noting that they can 'help [students] learn and understand the writing process' and that 'some students do seize this as a learning opportunity'. The fear of over-reliance or misuse is again a common theme, with concerns about 'laziness' or decreased 'creativity'. However, the fact that such tools are now a common and accepted part of English writing is touched on, one respondent pointing out that 'if native speakers use it why shouldn't learners use it too'. Overall, while many respondents see value in AI-powered tools, there is a consensus that learners need to develop autonomous writing skills.

Statement 7:
AI can plan effective English language lessons for teachers.

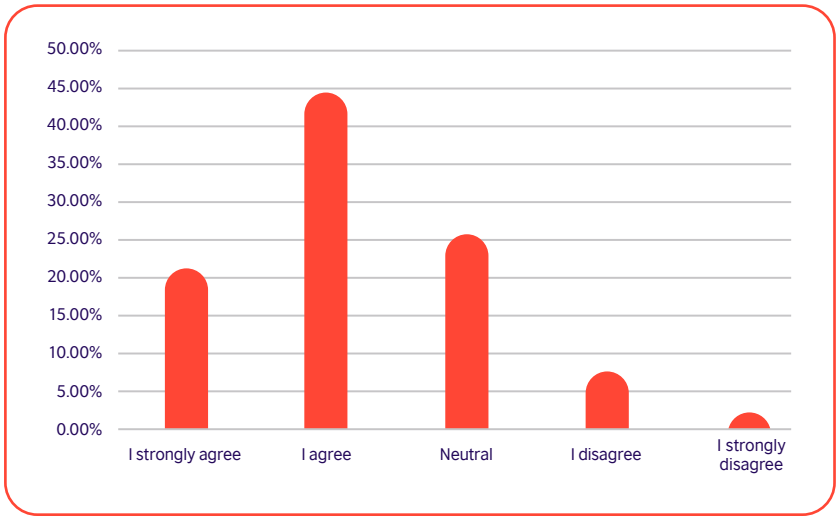


Figure 6 Responses from 1,112 teachers to survey statement 7

Responses highlighted broad agreement with this statement, with 65 per cent agreeing and only nine per cent disagreeing. The fact that a sizable 25 per cent remained neutral may suggest that this is a function of AI that is still less familiar to these teachers.

A prevalent sentiment in the 143 written explanations is one of caution, with respondents asserting that while AI might offer structural or preliminary assistance, the 'human touch' and ability to adapt plans – whether from traditional sources or those generated by AI – remains paramount. Statements such as 'AI is a tool, not a professional' underscore the perceived superiority of expert human planning. However, others felt that AI was actually well suited to this task: 'Lesson plans are often formulaic, and AI excels in the formulaic'. Some also acknowledged the potential of AI for saving time, generating initial frameworks to adapt and build on, and pointed out its ability to 'embellish' existing plans. One teacher stated that, as someone new to teaching, their 'lesson [plan] quality has vastly improved' due to AI. However, a recurrent theme was the need for teachers to review, check for errors and adapt plans for their learners, perhaps as they would with any provided lesson plan. Many respondents, either due to inexperience or scepticism, had not yet fully engaged with AI for planning.

Statement 8:
I have received enough training to incorporate AI into my teaching.

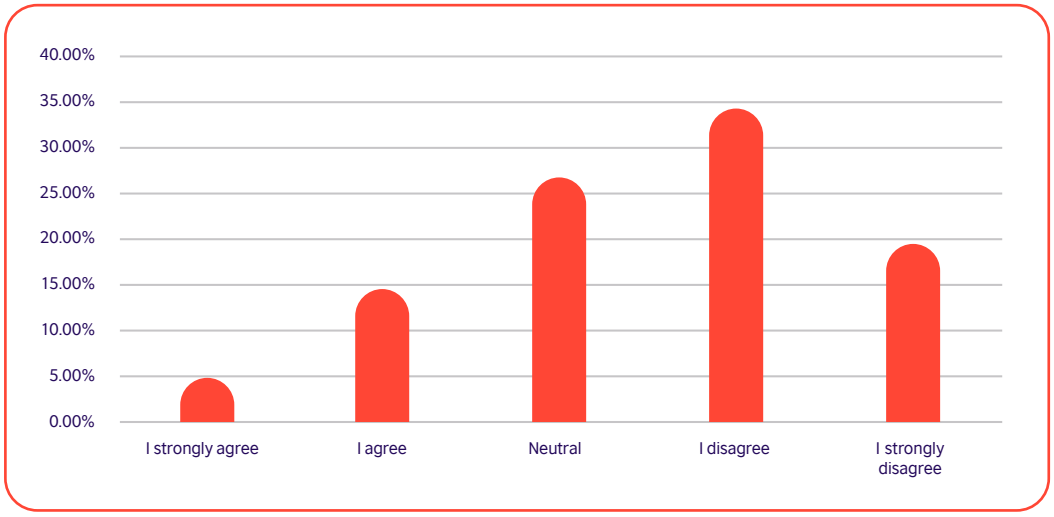


Figure 7 Responses from 1,112 teachers to survey statement 8

There was predominant disagreement with this statement among the 1,112 respondents. Only 20 per cent felt sufficiently trained to use AI in teaching and 54 per cent felt inadequately trained. A significant 27 per cent remained neutral, indicating possible uncertainty about their AI training needs.

Disagreement with the statement from a majority of the respondents and analysis of the 100 written explanations show a predominant feeling of unpreparedness. A high number of respondents voiced that they had not received any formal training. One educator, from a private school, wondered if this lack of training is, in part, due to the fact that their private school is primarily 'selling access to human teachers' and therefore does not believe AI-led education 'can be monetized'. Another pointed out that their initial training took place '16 years ago', making the lack of an AI focus unsurprising. Some educators have taken the initiative to self-educate, as noted in responses like 'I am trying to learn as much as I can by myself' and 'I have completed online [...] courses to develop my knowledge of AI in teaching'. A few indicated positive experiences, but the overarching theme is a call for more structured and comprehensive training opportunities.

Statement 9:
AI is more useful for English language teaching than other subjects.

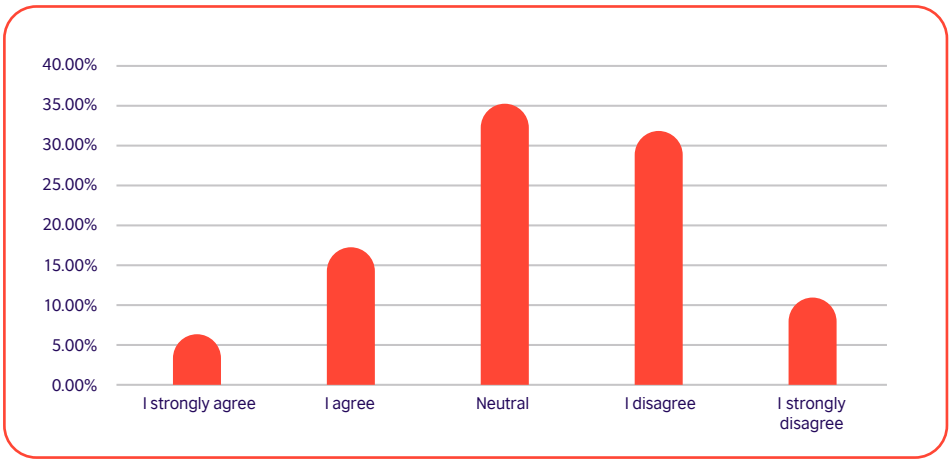


Figure 8 Responses from 1,112 teachers to survey statement 9

Responses from 1,112 teachers indicate some disagreement with this statement. Only 23 per cent believed AI is more beneficial for English language teaching than other subjects. In contrast, 42 per cent disagreed. A noteworthy 35 per cent remained neutral, suggesting possible ambivalence on the topic.

A fraction of the 86 written explanations felt that AI's current proficiency was particularly apt for English teaching, with comments such as 'AI excels at English language analysis and inference' and 'students [...] in EFL context need more practice outside the classroom'. Conversely, many expressed the belief that AI's benefits spanned across all academic subjects, exemplified by remarks such as 'AI can be used for all subjects including science, commerce, history'. There was also a substantial group of respondents who were uncertain or lacked enough knowledge to provide a definite stance. Overall, while some educators see AI's immediate applications in English teaching, a significant number believe in its broader pedagogical potential.

AI in ELT: the future

Statement 10:
AI should be developed to support the learning of different varieties of English around the world (e.g. localised pronunciation and expressions).

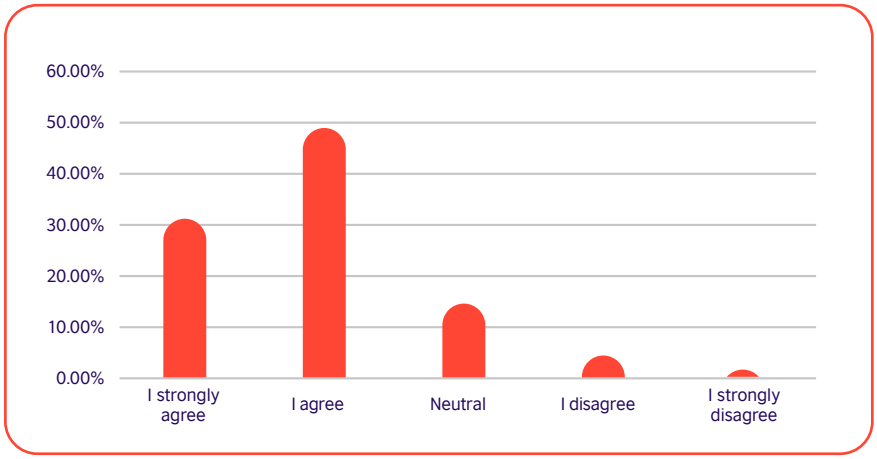


Figure 9 Responses from 1,112 teachers to survey statement 10

Responses indicated strong agreement. A substantial 80 per cent of the 1,112 teachers surveyed believed AI should be developed in this way, and only five per cent expressed disagreement.

Many of the 84 written explanations expressed the value in this suggestion, noting 'Different people have their different language needs' and that such an approach is 'more lifelike and natural'. The importance of embracing diversity is clear in statements like 'If only some form of standard English is taught, this will reinforce many forms of bias' and 'students need to be exposed to global Englishes'. Conversely, some expressed reservations about diverging from standard English, as evidenced by comments including 'BBC English is enough' and 'I think it's not good cause speakers of English couldn't understand other speakers of English'. Furthermore, there was recognition of the fact that this is not a new issue, or one specific to AI: 'I'm not convinced that AI is the best way to achieve this', 'Software that promotes the use of language and cultural expression, within "videos" and/or animations, already exists'. Overall, while many appreciated the need for more inclusivity and realism in language learning, concerns about standardisation and efficacy remain.

Statement 11:
By 2035, AI will be able to teach English without a teacher.

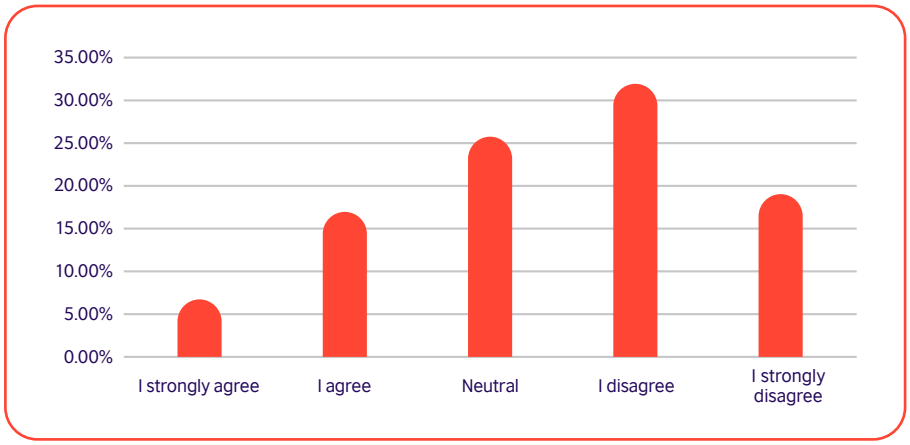


Figure 10 Responses from 1,112 teachers to survey statement 11

There was prevailing disagreement with this statement. Only 24 per cent of the 1,112 respondents believed that this would come to pass, compared to 51 per cent who expressed scepticism. However, 26 per cent remained neutral, indicating significant uncertainty about the potential of AI in this area.

A majority of the 125 written explanations expressed the belief that while AI can aid the teaching process, it cannot substitute the unique human touch. Statements such as 'The human experience is unique and no machine can substitute it' underscore the perceived value of human connection in education. A few, however, acknowledged technological advancements, suggesting that while AI may not replace teachers entirely, its role in education will grow: 'AI already knows more about language than most human teachers'. There was also some acknowledgement of AI's potential to provide broader access to learning, with one respondent predicting that 'those who can afford it will continue to prefer human teachers [but] the opportunities for those without means will expand exponentially'. These 125 respondents generally appeared to think of teaching as something that will remain within a traditional classroom, 'a class of 20 to 40 kids – AI won't be able to control the class'. Overall, while there was recognition of AI's potential, the consensus among those providing written explanations – who are of course teachers themselves – leaned towards the enduring importance of human educators.

Statement 12:
AI and automated translation will eventually make learning languages unnecessary.

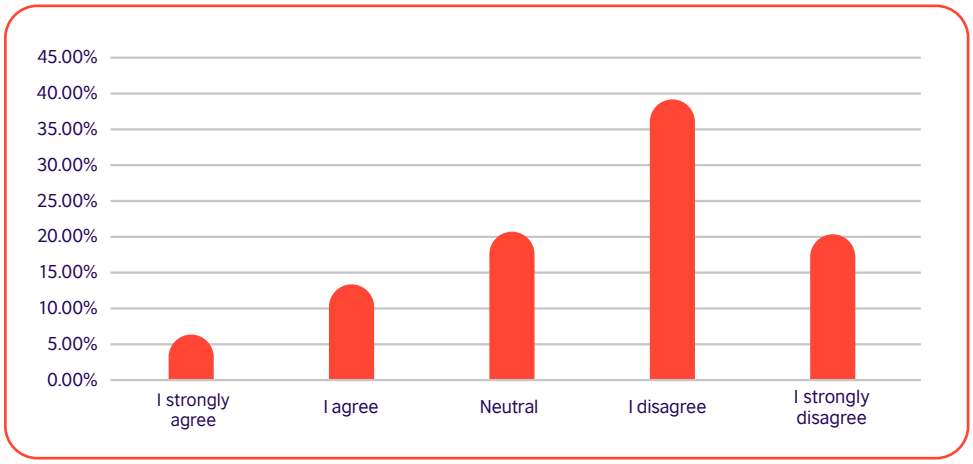


Figure 11 Responses from 1,112 teachers to survey statement 12

Only 19 per cent of the 1,112 respondents agreed with this statement, while a sizeable 60 per cent disagreed. A notable 21 per cent remained neutral, indicating some uncertainty about the enduring value of language learning.

Analysis of the 104 written explanations reveals a dominant scepticism towards complete replacement. Many respondents emphasised the deep cultural, social and emotional facets of language, as illustrated by comments like 'languages are beautiful and historical and let us know our roots' and 'Learning languages is learning cultures, new ideas, different perspectives'. Several educators recognised the benefits of improving technology but believe the nuances of human interaction are irreplaceable, pointing out that 'AI will not make the human connection flow' and that even minor miscommunications 'can lead to unforgivable misunderstandings among cultures with different traditions.' The pleasure of learning languages was also raised by several respondents, one educator suggesting that 'Language learning may become slightly more niche or less widespread, but it will hopefully still be considered a valuable skill and some people love to learn a language purely for enjoyment'. Some acknowledged the potential of AI in easing communication, especially during short trips or visits, but overall the consensus underscores the enduring value of human interaction that doesn't pass through the filter of AI-driven translation.

Statement 13:
I worry about the impact AI will have on my role as an English language teacher.

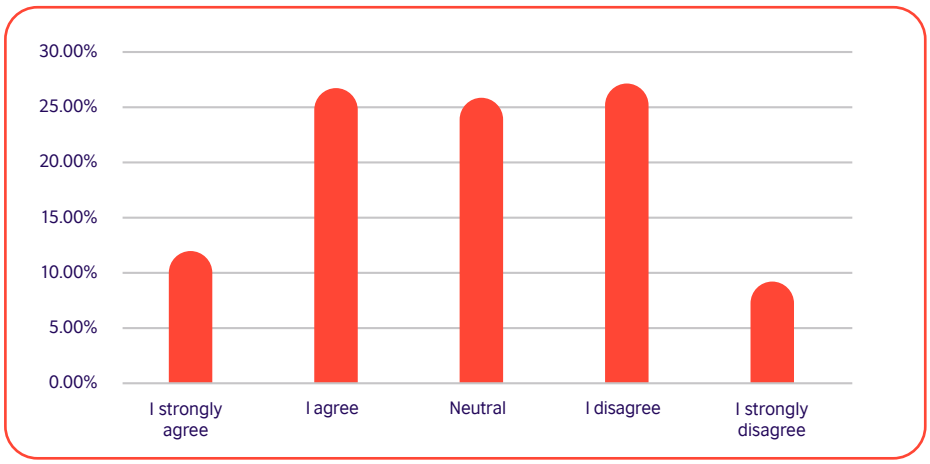


Figure 12 Responses from 1,112 teachers to survey statement 13

There was a balance of agreement and disagreement among the 1,112 respondents, with 38 per cent expressing concern by agreeing, 36 per cent disagreeing and a significant 26 per cent remaining neutral.

Analysis of the 84 written explanations provided reveals a predominantly optimistic outlook, with many educators believing that AI cannot replace them. Common views included the belief that 'All our kids (pupils) love us in a way they could never love working with AI only', indicating a strong trust in the unique human connection between teacher and learner. Some welcomed the additional tools and support provided by AI, believing that 'expert teachers who are early embracers of AI will adapt'. Others were not concerned, for instance, one teacher said, 'I'll be retiring soon.' However, concerns like 'I worry companies will want to abuse it to reduce staff costs' were raised. Overall, while there is recognition of AI's potential, there was a prevailing view that teaching entails more than mere knowledge transfer; it involves human connection, emotional understanding and cultural appreciation, elements that respondents believe AI cannot replicate entirely.

Summary

AI-powered tools, or at least those labelled as such, are reported as being used by a significant number of the 1,348 English language teachers who responded to the first part of this survey.

Several common themes emerged from the written explanations provided by some respondents. These expressed an optimism around AI's potential as a supplementary tool, notably its ability to provide tailored resources, promote autonomous learning and improve specific linguistic skills. However, this enthusiasm is tempered by reservations about over-reliance on technology, concerns about diminished human interaction, the potential for misuse and the perceived inability of AI to truly grasp the subtleties of language and culture. There is a consistent emphasis on the irreplaceability of the unique human touch in teaching, highlighting the emotional, cultural and social facets of ELT. The lack of formal training and readiness for AI in the teaching space is again evident, with many of these educators feeling unprepared and calling for better training in AI integration. In essence, while AI is seen as a promising tool in ELT, there is a strong consensus that it should complement rather than replace human-led teaching and learning.

Key takeaways

- Teachers are using AI-powered tools for a range of ELT tasks.
- Teachers feel AI benefits the development of all four English language skills fairly equally.
- There is an even balance of teachers who see the potential for AI to impact on their learners' English development either negatively or positively.
- Teachers generally feel that they have not received enough AI-specific training.
- There is an even balance between teachers who are concerned about the impact of AI on the teacher's role and those who are not.
- Teachers lean towards the likelihood of ELT remaining in the hands of human teachers.
- A significant number of neutral responses to several statements indicates a degree of uncertainty around AI's impact on the present and future of ELT.

Part III

The interviews: What our key witnesses say

The interviews: What our key witnesses say

This part of the report is based on the views of 19 stakeholders from across the globe: writers, academics, ministry of education representatives, chief executive officers (CEOs) of EdTech companies, training institute directors, teachers and teacher educators. The aim was to capture diverse perspectives in the discussion on AI in ELT and its role in the current scenario and future of our profession. The following text presents 11 major themes emerging from a series of in-depth interviews conducted with these key witnesses.

It was noteworthy from the systematic review (Part I) that the existing research studies on AI in ELT take place in a wide range of countries, many of which do not use English as their primary official language. This shows the far-reaching interest in, and importance of, ELT/L. For this reason, it was recognised as important to include stakeholders from as broad a range of geographies and contexts as possible.

Approach

Requests were sent to contacts around the globe, and those willing and available contributed their thoughts. The hope was for higher representation from outside the United Kingdom, but short timelines and the limited availability of interviewees made this a challenge. Nevertheless, among the 19 interviewees, we were able to include voices representing 12 countries and territories. In terms of gender balance, there were fewer female contributors (five out of 19, or 26 per cent), but this reflects a ratio similar to estimates of the workforce in technology and STEM (science, technology, engineering and mathematics) more generally.[5] Profiles of all the interviewees can be found in the 'Interviewee profiles' section later in the report.

To accommodate preferred styles of sharing ideas and people's schedules, interviewees were given a choice of responding to questions via a spoken interview or in writing. This has impacted the number and length of direct quotes used, as written responses are ready-made for quotation, whereas ideas within spoken interviews developed over longer exchanges. However, this has not affected the understanding of overall attitudes around the issues, and the conversations allowed for greater probing of ideas expressed by interviewees. The summary we present in the next sections aims to capture the key insights from contributors in a concise and accessible manner. The topic area clearly elicits strong reactions, and we hope we have managed to do justice to the views and opinions expressed.

The 11 themes we discuss here emerged from the authors' collective analysis of the interview transcripts and submitted written responses to the interview questions. Naturally the themes will have been influenced by the questions asked (see Appendix B), and these questions, in part, were derived from trends and findings of note from our review of the literature (see Part I). The 11 themes, in no particular order or weighting, are AI and: definitions, pedagogy, Big Tech and neoliberalism, replacing humans, relevance for ELT, bias, teacher readiness, motivation, inclusion, assessment, ethics frameworks and regulation.

[5] UK government census figures from July 2022 to June 2023 show that 26 per cent of the STEM workforce in the UK are female (Office of National Statistics, 2023).

Emerging themes

Definitions

Several interviewees began by highlighting the problem of definitions. 'AI' is not a recent phenomenon (Roser, 2022), and decades of AI evolution has meant the term covers very different types of technology: from machine learning algorithms to expert systems, personalised learning engines, large language models (LLM) and, more recently, to generative artificial intelligence (GenAI). These are very different technologies but are typically referred to with this same umbrella term – AI. This lack of clarity has likely been exacerbated by a commercial imperative to cash in on the present enthusiasm for all things 'AI'. Even tools that were previously described as simply digital or online are now being described as AI. Unsurprisingly, most EdTech suppliers will be looking to develop some form of AI enhancement for their non-AI product.

Interviewees did describe more nuanced definitions, for example the difference between strong AI (that can do any task a human can, and ultimately could be sentient) and weak or narrow AI (that performs specific, programmed tasks). What AI is and what it will be capable of is a contentious area, and there is much discussion, as will be seen below. However, as a starting point, the lack of agreed definitions is not helping the debate. There is also possibly a need for domain-specific terms for AI in ELT that better communicate its uses in this specific context.

> **When we talk about AI and we use words like generative AI or just AI generally, I think we do need to have a sense of history and a sense of which ones we're talking about.**
>
> **Nicky Hockly, UK**

> **Many products that claim to be AI, are not AI.**
>
> **Al Kingsley, UK**

Key takeaways

- There is a clear need for a set of agreed definitions of AI so that when we discuss AI in ELT, we are talking about the same type of technology.
- We may require domain-specific definitions for AI in ELT.

Pedagogy

Several interviewees spoke about AI and pedagogy, and this was usually unprompted or in response to more general questions around how the technology might impact ELT. There was significant critique around 'less progressive' theory that informed the instructional design of AI and EdTech more generally. The systematic review referenced in Part I of this publication finds evidence that substantiates this view, with 'lecture' emerging as a distinct pedagogical category in the research literature. Warshauer (1996) notes the influence of learning theory on the way that technology is used in education. For example, the early use of computers in language learning (computer-aided language learning or CALL) was influenced by the predominant learning theories of that time – i.e. behaviourism in the 1960s – before moving to a more communicative approach in the 1970s and 1980s. As a result, in the early use of CALL, we find software with drills that require a user to repeat an utterance, or self-study quizzes with a single correct answer, i.e. behaviourist/ cognitivist. Similarly, Edgar (1995, p.1) sees parallels between the development of learning theory and the evolution of personal computer technology. The advent of personal computing allowed for constructivist approaches as individual learners were now able to experiment with the computer as a tool in 'open-ended environments'. This replaced the 'centralized and autocratic' mainframes – designed around 'behavioural objectives' – whose main purpose was content distribution.

So, will AI allow for new pedagogies, or will we just see a new technology designed around existing ones? Where interviewees commented on this, they expected the latter. Dr Ramanujam Meganathan, Professor of English at the National Council for Educational Research and Training, India, pointed out that, to date, AI has been mainly deployed to aid learning for the individual. This does not mean AI cannot also be used as part of a methodology that also prioritises collaboration, of course. The question is how best to balance the benefits of learners learning at their own pace – with the aid of AI – and the benefits of co-operative learning among peers. AI could be left to provide impactful self-study that then feeds into collaborative activity between learners. It could also take on an increasingly direct role in these collaborative elements of learning.

> **In my 35 years in the industry I've yet to see a technology-driven language learning experience that is innovative, stimulating and makes use of modern pedagogical approaches. One look at the audio-visual methodologies employed by VR companies should be enough to show that we have a long way to go yet.**
>
> **Gavin Dudeney, UK**

> **There is a concern [...] that learning may become individual, rather than individualised learning. In other words, AI should not become learners individually working to learn, rather it should promote cooperative learning, learning at their pace.**
>
> **Dr Ramanujam Meganathan, India**

The importance of a collaborative classroom came through strongly in many of the interviews, suggesting the need for methodologies and technologies that integrate AI into an ELT classroom where the focus is on learner-to-learner collaboration. Professor Rodney Jones, University of Reading, UK, was one interviewee to talk about a specific collaborative methodology, seeing a range of advantages that AI could bring to this type of approach. He spoke about the use of LLMs and generative AI to help learners develop their collaborative writing skills, while still working individually:

> *There is something about assessment in universities that makes teachers reluctant to ask students to collaborate on assignments. And students don't like to collaborate on assignments either. But the problem is that when they go out to the workplace, pretty much everything they write is collaborative and they don't know how to collaborate in their writing. And so, to have this kind of artificial classmate, this artificial student with whom you can work to collaborate in your writing – who is not going to be a free rider, who's not going to hurt your grade, who's not going to disappear when you have to hand in the assignment, but who's going to be responsible. Then that's enormously useful in at least creating a kind of step for them to then learn to collaborate with human beings more in their writing. And of course, when they get to the workplace, they'll have to collaborate with both human beings and with machines.*

The 'always on', 24/7 and potentially situated nature of AI was mentioned by several interviewees. This is not a pedagogy as such but the ability to access the learning you need at the time that you need it. This affordance could be described as anti-syllabus – only learning what you require, i.e. organically, rather than learning superfluous items of a 'synthetic' syllabus. However, it is worth noting that 'just in time' and 'on demand' learning is not a new phenomenon nor unique to AI. Advocates of mobile learning in the 2000s suggested this new capability, made possible by smartphones, would revolutionise education. While it is fair to say our lives have been transformed by mobile devices, formal state systems of education have not. At least, not yet.

> **AI gives instant feedback, AI gives an instant response. That's the teacher they don't have. So, the plus is there and 24/7. If I need help, desperately need help, I'll go to AI. Then the ball is rolling, then I can learn more and more.**
>
> **Dr Gumawang Jati, Indonesia**

Key takeaways

- AI may have the potential to be transformative, but will it be held back with outdated learning theory?
- Using AI in collaborative methodologies has potential, but needs further exploration and research.

Big Tech and neoliberalism

'Big Tech' is a term that refers to the most dominant or highly influential information technology companies. Concern around the influence that large, predominantly US-based, tech companies could have on ELT classrooms was evident, but perhaps not to the degree expected. A more nuanced understanding of the situation emerged with examples where local companies and initiatives were responding to specific contextual requirements. Nicky Hockly, Director of Pedagogy at The Consultants-E, UK, for example, described a Berlin-based startup which, out of necessity, developed a machine translation product that worked with Ethiopian languages.

Similarly, Joe Yiming Lee, a teacher and teacher trainer in Taiwan, described a project where authorities were proactively looking to create generative AI that was better suited to Taiwan, commenting that language generators like ChatGPT are not contextualised enough. This was linked to language, but also Asian knowledge, concepts and skills that were not properly understood or interpreted by AI trained on Western data.

Others talked about commercial, neoliberal imperatives and the prioritisation of revenue streams over pedagogical soundness and validity. This is not an AI-specific characteristic: the global EdTech market size was valued at US$106.46 billion in 2021, with North America having a 35 per cent share of that revenue (Yelenevych, 2022). In line with this, interviewees still saw the US as the main player when considering Big Tech and AI, but there were several mentions of China, which has 'a lot of data to work with' and has been developing comparative technologies for at least as long as the United States. The perception is still that the US leads, whereas our review of the literature (Part I) shows a heavy skewing in favour of Asia-based research, overwhelmingly from China.

Another important influence was seen to be ELT publishers and decisions they will make, given the reach and impact that coursebooks still have. An important aside here was how AI would impact the creative process within publishing and the intellectual property rights of writers whose original work could be used by AI to produce 'new' material for publication. There are obvious implications here (and not particularly positive ones) for authors, but also for how this plays out

> **So, there is perhaps space in this global model for more local representation. It seems a bit of a shame to me that that local representation only occurs when the big ones like ChatGPT aren't very good at it. But I think this is definitely a space.**
>
> **Nicky Hockly, UK**

> **In the context of Africa, taking in all of the data that is coming from, if you wish, a Western perspective because most of the data is coming from there and then we're applying it over here. And so, what does this say about our efforts? How does Africa come out of it? So yes, I think I'm worried about that.**
>
> **Mohammed Mahmoud, Nigeria**

from a regulatory perspective. Dr Marcin Opacki, Assistant Professor, Institute of English Studies at the University of Warsaw, Poland, said:

> *I do not think that tech companies are a particular threat in terms of decision-making. I do – however – think that some decisions that can potentially be made by higher courts, such as the uncopyrightability of generated content or royalties for training data might change the scene in general. If generated content is rendered uncopyrightable, then using GPT content in one's work and presenting it as one's*

own will always amount to plagiarism from a legal standpoint. Whereas imposing royalty fees on training data content will have the potential to make it very difficult for tech companies to develop their software in the exponential pace that we are currently bearing witness to.

Some interviewees also mentioned the step change brought about by the recent pandemic and how this allowed tech companies to get into classrooms at a rate and scale not previously possible. This tied in to concerns about the dependence of national education systems on such technology and what happens when, for whatever reason, this becomes unavailable.

Specific reference to the collection of data by Big Tech did not come up as frequently as may have been anticipated. Also known as the 'Datafication of Education', this refers to the process whereby most of our everyday practices online and offline – including aspects of the world not previously datafied and measured, such as social relations and emotions – are converted 'into online quantified data, thus allowing for real-time tracking and predictive analysis' (Van Dijck, 2014, p.198). Professor Rodney Jones highlighted the dangers implicit in the race to endlessly improve AI by giving it what it needs most – data, and every type of data:

In order for it to simulate communication at that very, very high level, it is going to have to gather more data about us, yes. And so, it will, for example, have to be able to access our camera to be able to look at our embodied reactions. It will need to be able to access the location of our computer. It will perhaps want to access all of our e-mails, our clicks and our Facebook friend page are all of these kinds of things in order to make it better and better. And we will lose sight of the dangers of that kind of mass surveillance if we focus just on this kind of imperative of making the AI a better and better teacher … We may end up having a better teacher, but what are going to be the costs to our society, the cost of our privacy, and particularly our students' privacy as well?

Researchers who publish articles about their AI developments and user testing generally focus on the technical designs and findings and hardly ever discuss social or cultural values, priorities or legacies. Sometimes they mention their countries' policies and aspirations to be leaders in smart education and to transform their society.

Professor Agnes Kukulska-Hulme, UK

Key takeaways

- It is not all Big Tech. There is both a place and a need for local, grassroots and more context-sensitive AI.
- The US is still seen by some as the leader in this field, but our wider research shows that AI developments are happening around the world and particularly in Asia.
- Improving AI may require increasing datafication of our lives. Do we accept that?

Replacing humans

In line with teachers canvassed in our survey, the majority of interviewees saw the future as one of continuity rather than widespread disruption of educational systems. This is because AI was seen to be able to do some of the things that humans do, but not everything that a good teacher does. These views could then be split into those that tended towards scepticism that any future AI technology would be capable of replicating all that is human, while others focused on the deficiencies of the current models that AI is based on. Dr Marcin Opacki said:

> *To put it bluntly, I do not believe that any kind of AI is currently developed to a degree that would outclass human teachers. Even in light of remarkable technological progress, we should never underestimate the significance of the shared human experience or overestimate the potential of – as I have said previously – a Mathematical Optimization that stiches words together based on a predictive algorithm applied to contexts and topic areas. We can never dismiss the possibility that AI will supplant teachers one day, but it is decidedly not this particular type of AI. A much greater technological leap would need to occur if this is to ever come to pass.*

Distinct human qualities such as experience, intuition, creativity and higher-level cognition came up quite frequently as the differentiators between AI and humans, and communication via natural language processing was only one part of the picture. Dr Marcin Opacki added:

> *Any linguist worth his salt will tell you that as far as natural language is concerned, 80 per cent of communication is extralinguistic, body language, gestures, context, etc. Meaning is – therefore – constructed through a complex interplay of presuppositions (shared knowledge), implicatures (intended meaning stated by the speaker), and inferences (how the recipient understands the message). A hypothetical fully immersive experience would need to not only model language accurately, but this complex interplay as well.*

Nevertheless, interviewees also spoke about where they did see AI replacing certain human teacher activity and, as detailed in our survey, teachers are already using AI for a range of tasks. Some interviewees suggested that teachers with

> **AI simulations, regardless of their sophistication, cannot replicate the authenticity of human interactions [...] While AI has made substantial progress in mimicking verbal human conversation, truly replicating both verbal and non-verbal cues in a manner indistinguishable from genuine human interaction remains almost impossible.**
>
> **Dr Nguyen Ngoc Vu, Viet Nam**

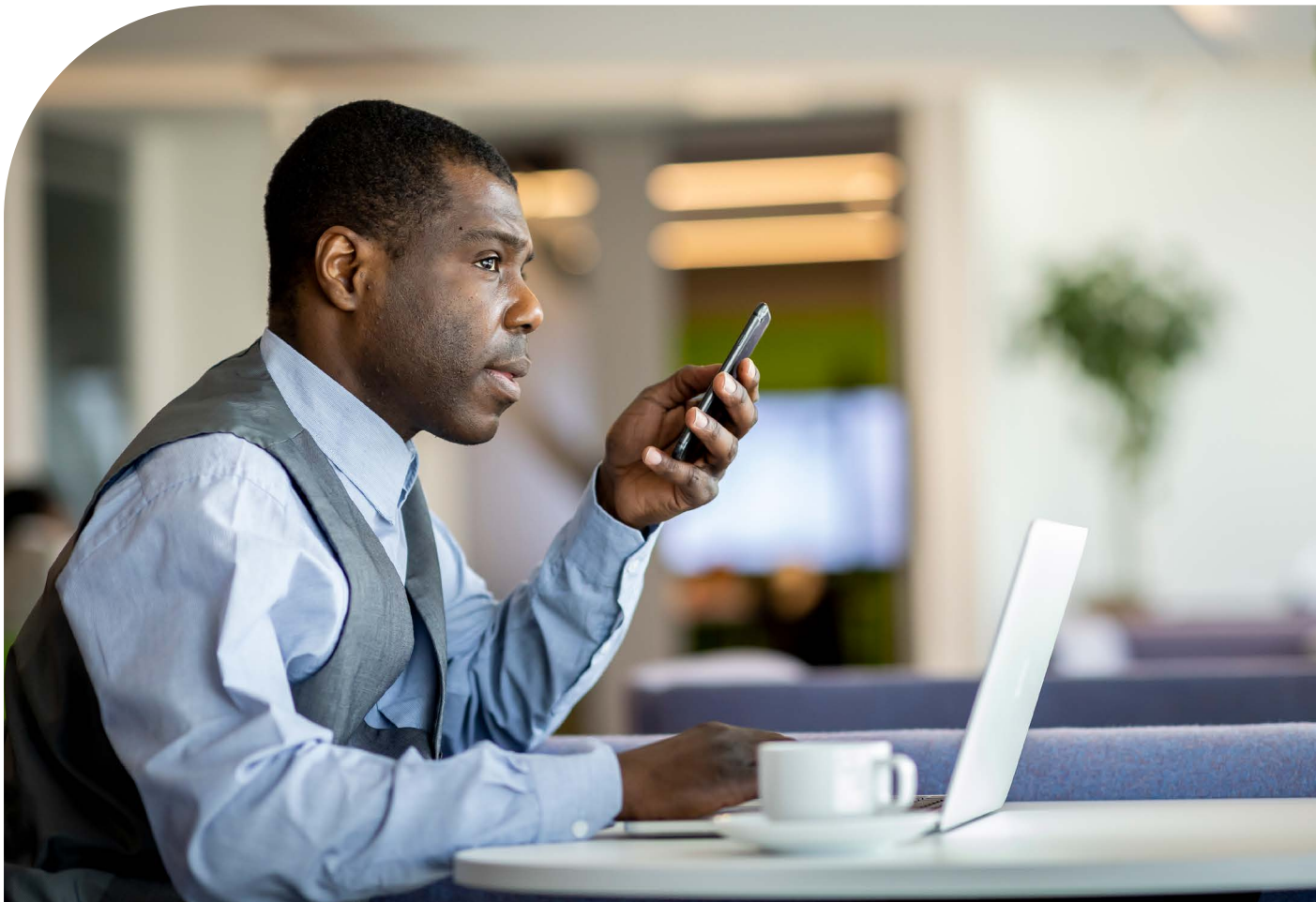
> **AI, it's not replacing the teacher, but replacing the types of tasks that take the teacher away from the students.**
>
> **Dr Gumawang Jati, Indonesia**

lower language proficiency and/or teaching experience would benefit the most from AI tools, a view supported by the comments of some surveyed teachers. This might be also backed up by research undertaken by Boston Consulting Group. The study (Candelon et al., 2023) found that consultants performing at the lower end of metrics were given a larger uplift from AI assistance in their work than those at the higher end. In terms of concerns around teacher quality and Sustainable Development Goal 4 (SDG 4),[6] this is certainly of interest. It could be that AI is able to give a larger professional lift to teachers more in need of help.

Interviewees also touched upon learner preferences, mirroring a finding in the systematic review: learners may feel less anxiety around making mistakes with an AI conversational partner than with a human one. Some commented that current AI may be better for conversational exchanges with lower-level language learners because such exchanges are more formulaic, have more predictable turn-taking and the context is less critical to understanding.

> **Students like the remote AI to practise with so they can make mistakes by themselves, but need the human touch to build improvement and achievement.**
>
> **Wendy Edie, UK**

[6] SDG4: 'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' https://sdgs.un.org/goals



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Professor Rodney Jones spoke about the limitations of using AI for spoken communication practice:

> *One of the problems that many students have with communication is that they have this idea that conversation is this kind of like a tennis game where you say something, I say something, you say something, I say something. And then when they actually get into a situation with the L2 and they're actually having a conversation, they have a lot of trouble because conversation isn't like that. People talk over each other. There's a lot of work that is done in managing things like turn taking and that sort of thing in conversation. And I don't think that AI is nearly there for that. And so, in that way, I think that probably better for lower proficiency learners in that regard rather than upper proficiency learners, who will probably find conversing with an AI fairly easy but may have trouble conversing with real human beings because they manage conversation quite differently.*

Other interviewees pointed to the idea that AI is particularly suited to replacing the need for a human to do certain 'teacher tasks', for example writing a lesson plan. The survey of 1,348 teachers carried out for this publication (Part II) provides evidence that at least part of some teachers' typical daily activity is being delegated to AI. For instance, one respondent to the teacher survey described AI as saving time and improving teaching quality, but that human analysis was still needed at the final stage: 'Lesson quality has vastly improved, as a new teacher, [I] have had to neglect adding to lesson plans, wasted hours doing dictionary searches [...] I can do all research in seconds but yes sometimes not error free'.

Similarly, stakeholders interviewed voiced caution on the quality of AI's output, Thom Kiddle, Director, Norwich Institute for Language Education, UK, commenting:

> *I've seen experiments where you give it a reading text and ask it to make reading comprehension questions from it and it's laughable what it does. You know it's the 101 of item writing that you would never fall in those traps.*

More research and analysis are required on which tasks could, should or should not be assisted by AI and where in the process a human still needs to be involved. This might take the form of an 'encyclopaedia' or 'A–Z' of language teacher activity (inside and outside of the classroom), with a breakdown of the advantages and disadvantages that AI can bring to each of those tasks. Any such resource would need to take the local context and teachers into consideration, e.g. low-resource/high-resource context, levels of digital literacy, teacher experience, knowledge.

Despite recognition of its capabilities, there was almost universal agreement among the 19 respondents that AI is unlikely to completely replace human teachers. Interestingly, Dr Gumawang Jati, Senior English Lecturer, Institut Teknologi Bandung, and President of i-TELL Association, Indonesia, described an example where a costly model of sending expatriate teachers from China to Indonesia was being replaced with a combination of AI and online human monitoring. Still, even with this example, we see that human teachers are part of the process, albeit remotely. Only one interviewee, Professor Rodney Jones, had a different perspective, stating it was inevitable that teachers would lose jobs:

> *My most significant concern about generative AI in language teaching or in anything else is not the technology, but the fact that the technology is being driven by a kind of neoliberal imperative. And so, we talk very blithely about AI, you know, being a kind of extra helper for teachers, being a kind of private tutor for students. But given that the imperative of governments and the imperative of businesses is going to be to cut costs, always will be to cut costs, I can guarantee you, I can guarantee you that teachers will lose jobs because of that.*

Key takeaways

- The majority view is that AI will not replace the need for human teachers any time soon and may never.
- AI is already aiding teachers with certain tasks.
- There is a need for more analysis of which teaching tasks can be done by AI and which should continue to be performed by human teachers.

Relevance for ELT

An idea surfacing from our review of the literature (Part I) is that there is more research being conducted in ELT than in other subject areas. Some interviewees suggested the level of demand for learning the English language is a reason for this. However, interviewees also referred to the impact of AI on other disciplines. There was discussion around whether LLMs are better suited to the hard sciences than social sciences and language because the former has 'such clearly defined concepts [that] are just easier to work with for what is basically a search and generation engine' (Dr Marcin Opacki).

Nevertheless, some observed that language learning is not a content subject (in the purest sense) and therefore would have different and perhaps more useful applications of AI. An analysis by Reach Capital (Wan, 2023) of EdTech GenAI tools in their pipeline presents language learning as a distinct category and second only to AI-powered study tools in the more general sense.

Most interviewees saw enormous potential for the development of productive skills (writing and speaking) and the immense benefit of AI feedback on this output came up frequently. The opportunity to practise speaking and get personalised, tailored feedback is a critical need in education systems globally. The constraints are well known: a lack of time within class for all learners to get the speaking practice needed, teachers with low language proficiency struggling to provide a model for learners, teaching that treats English as a content subject rather than a skill, learners not being given the opportunity to speak due to teaching style, inability of a single teacher to provide feedback to every single learner, the problems that come with large class size, and learner perception of the (lack of) usefulness of talking to a fellow learner who is not proficient in English. If AI could overcome many or all of these problems, it would bring significant change to ELT classrooms and, further down the line, English language learning outcomes.

In contrast, input (i.e. reading and listening) was not seen to be as ripe for transformation via AI as output was. This marries with the findings from the review of the literature in Part I, where speaking and writing were prominent, and listening did not emerge as a focus. The use of technology to provide input is not new, and how AI might advance this was not a topic emerging from the interviews. The review of the literature also showed that AI that focused on the development of the skills of speaking and writing is not

> **Yes, AI is poised to have a significant impact on English language teaching and learning, possibly more than in some other disciplines. There is global demand for ELT. The massive demand means there is a continuous search for efficient and cost-effective teaching methods, making AI-powered tools particularly attractive.**
>
> **Dr Nguyen Ngoc Vu, Viet Nam**

> **AI has the potential to significantly improve the development of skills across a range of domains in the Ethiopian education system, including technical and vocational skills, industry-relevant skills, digital literacy and computational thinking [...] AI has the potential to meet changing needs in the labour market.**
>
> **Kedir Urji, Ethiopia**

as prevalent. However, Professor Rodney Jones saw a focus on elements of the writing process as having some of the most exciting potential for AI:

> *I think this is particularly important for academic writing in places like universities because here again there's very, very little attention [paid] in British universities. I would say absolutely no attention at all to the process of writing, everything is about the product. You are assessed on the product. You're never assessed on the process because actually there's no way for us to know what the process is because there's no way that the process can be documented or can be recorded. But then if you're using generative AI as a collaborator, when you write, then that process is automatically being recorded. And as you have conversations with AI, as you critique the kinds of outputs that it makes, as you refine the prompts that you give it to try to get it to create better outputs, this becomes the document of the process that you're going through. And so, I think that's also a really positive possibility for AI use in the teaching of writing.*

Key takeaways

- There is some evidence that AI will be more usefully deployed in ELT than in other disciplines, but, like the teachers in our survey (Part II), not all interviewees were convinced by this idea.
- AI is seen as most useful for 'output', i.e. speaking and writing.
- AI may be able to help with teaching the process of writing, as opposed to simply focusing on the end product.

I see and hear 'instant feedback' regularly, as a benefit of learning using AI. You make a mistake and you get instant correction. There is, however, great benefit when improving fluency of delayed feedback, allowing learners to concentrate on communicating meaning rather than speaking with accuracy. A highly skilled teacher can gauge the usefulness of immediate feedback vs delayed feedback on the spot. AI could be trained to behave the same way, but I don't see anyone doing it.

Carla Wyburn, UK

Bias

There was agreement among interviewees that bias is evident in AI. The issue of algorithmic fairness and biases has been noted in machine-learning research. Namely, bias prevalent in many societies – based on gender, religion, ability, class, gender identity, sexual orientation and ethnicity – may contribute to bias in AI in education systems (Ziesche & Kumar Bhagat, 2022). Importantly, this bias may be harder for users to identify when it comes from computer systems that have a veneer of impartiality, as pointed out by Dr Maciej Rosiński, assistant professor at the Institute of English Studies, University of Warsaw, Poland:

> *... even though LLMs are neither representative linguistic corpora nor search engines, they are already treated that way by some students, teachers, journalists, and influencers, etc. Users of LLM-based tools might be led to believe that an algorithm represents some kind of a consensus view on complex issues of all sorts (social, moral, scientific), when it does not have the capacity to do so. Labelling the algorithms as 'intelligent' is a convincing frame in which answers generated by chatbots seem rational and objective, in contrast to the subjective decisions and opinions of individual people.*

> **Do we really want these biases carried over into what we teach and learn? Where are the gatekeepers?**
>
> **Gavin Dudeney, UK**

While there was concern across the board, some interviewees felt that because awareness of bias in AI was now quite high, this would elicit a response from the tech industry and policy makers. Several referred to EU legislation (European Parliament, 2023) in this area that will ban AI that is deemed as posing a threat to people, for example 'classifying people based on behaviour, socio-economic status or personal characteristics'. This concern around AI and the potentials for harm are reflected in the AI summit held in the UK in late 2023, which led to the signing of an international statement (the Bletchley declaration on AI safety), supported by more than 28 countries and the EU, that

Image © Poyraz Tütüncü/Pinhole Istanbul

acknowledged the need to address risks presented by advances in AI (Milmo & Stacey, 2023).

Others were less optimistic about an appropriate response from Big Tech. Dr Maciej Rosiński observed:

> *Companies such as Microsoft, Google, or OpenAI, are not really that 'open' when it comes to sharing information about the training data used for their language models. With so little transparency, it's impossible to study their models scientifically, which I would expect before their tools get fully endorsed by education systems around the world. It's almost certain that the companies developing LLMs do not care about regional variation in the English-speaking world, or other kinds of sociocultural variation.*

Relating specifically to ELT, our review of the literature (Part I) showed how AI can carry messages about appropriate and standard language use. Professor Rodney Jones talked about the difficulty in challenging the bias when we do not fully understand why a system has behaved in a particular way:

> *There is what computer scientists call the 'explainability' problem with generative AI. We can't explain it. It works, but we can't explain how it works, can't explain why it works. And so, it becomes very, very difficult to question its results. And it's only as good as the data that it's trained on. If it's trained only on samples of spoken English from majority English language speaking countries or countries where a lot of people are learning English, then you will have varieties of English or English pronunciation that are not in its database, which may be perfectly comprehensible to others, but will be flagged as deficient because they're not in the data set.*

Others pointed to the fact that when we talk about GenAI bias, we are typically referring to the output of Western technology such as ChatGPT. However, there are many other non-Western technologies that may also exhibit bias, something that is arguably less discussed in Western media or academic papers. Will there be equal attention to bias in all AI systems globally? The challenge in addressing bias in AI becomes daunting when we begin to consider the number of systems, the number of versions of any one particular system and the fact that the track record in the regulation of technology has historically been poor. Refining the data used to train GenAI could be a way to positively affect outcomes – in this case by removing bias. However, this approach was questioned by some interviewees. Dr Marcin Opacki said:

> *It is a misconception of sorts to think that the data need refinement in a prescriptive sense. . . In Large Language Models (again Foundation Models applied to natural language) any sort of alteration of the source data is – in my opinion – at best futile and at worst potentially detrimental to how the model works. The idea is for the model to make a prediction based on the actual frequencies and distributions typical to a given natural language corpus. The data simply need to be representative. There needs to be a lot of data and the data need to be sufficiently varied.*

This might suggest that human flaws, including bias, are an inevitable part of LLMs while they exist in authentic human interaction (i.e. the corpus). Most contributors did not question attempts to address bias and other flaws through regulation or

Does the system understand my cultural background in order to give me the very best answers based on my understanding of religion, my social upbringing and so on and so forth? So yes, it's looking at that and trying to say, OK look can we have one that is talking to the African perspective?

Mohammed Mahmoud, Nigeria

refinement of training data. It was, however, seen by many as the teacher's job to prepare their learners to critique AI:

> *A critical look at machine-generated output can encourage students to take an ethical stance. I trust many will see why it's not okay to blindly trust an algorithm that cannot tell fact from fiction and is susceptible to all kinds of cultural biases. (Dr Marcin Opacki)*

Professor Rodney Jones took a similar stance in suggesting we re-evaluate our relationship with AI. It should never be viewed as a teacher (with all of the cultural expectations and assumptions that go with that) but as a peer or a friend, and one that is flawed and generally not to be trusted:

> *I think that if we're telling our students this is your tutor, particularly in, you know, cultures where people are meant to have respect for their tutors. I think that sets up a really counterproductive relationship with the AI [...] Basically, if our students can see the AI not as a teacher but as a friend, ... and as like a really smart friend in many ways, but [...] maybe a kind of friend with a lot of difficulties in socialisation who doesn't really understand much about how to talk to people in a kind of polite or subtle way [...] a kind of friend who can give feedback on the kinds of output that students are creating. Feedback which the students then have to interrogate and address with a critical eye.*

Key takeaways

- Bias is evident in AI and needs to be addressed.
- Regulatory frameworks can help to manage bias from the top down, but these may be difficult to enforce universally.
- Teachers need to develop learners' ability to critique their 'AI peer'.
- AI should be set up not as a teacher but as a collaborator.

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Teacher readiness

Interviewees felt that teachers are ill prepared for the increased use of AI. Moreover, existing teacher education and continuing professional development (CPD) provision was seen as lacking when it comes to developing teachers' digital literacies. This poor track record to date makes the challenge of preparing teachers for AI a sizeable one.

An example given by Joe Yiming Lee showed how an educational system is responding to this challenge. This begins with general AI training for all teachers, followed by specific training for subject areas, recognising that the specificity of the discipline should also be taken into consideration. In India, Dr Ramanujam Meganathan noted that the new National Education Policy (NEP, 2020) 'makes a case for use of AI as a mandatory element in both the initial and pre-service teacher education programmes'.

Thom Kiddle described how his teacher training institute had planned to include a focus on AI in their teacher training courses in the summer of 2023, but found that two-thirds of the trainees had not even heard of AI, and that teachers had other priorities. In Indonesia, Dr Gumawang Jati spoke about a lack of expertise within the system because of the pace of change. One private-school teacher responding to our teacher survey (see Part II) observed the opposite, writing that although there was an in-school expert in place, they had received no AI training. This example points towards a conflict between AI and the school's business model, stating 'Presumably, this is because they don't believe it can be monetized, as the school is selling access to human teachers'. This friction between expectations of ELT and the incoming use of AI may also be reflected in the attitudes of some learners or their parents.

Clearly, AI literacy is still a developing teacher training area. For example, prompt design – the textual instruction or input given to a language model like ChatGPT to perform a specific task – was the only area within AI literacy that was mentioned across all of the interviews. As Nicky Hockly noted, there is a need to map out exactly what AI literacy means in terms of specific, codified areas. Currently, this will need to be a rapidly evolving map, and revising content will be a near constant endeavour due to the fast pace of technological change.

Nicky Hockly pointed out the ongoing change in the role of the English language teacher from a general English teacher to more of a coach, noting, 'There's been discussion around this change of the role of the English language teacher for a while now towards the small facilitative coaching role because of all of the resources we have available online.'

> **AI, more than any other development in my time in the profession, has captured the imagination of teachers worldwide, but I am sceptical that many teachers understand how it works, and what its limitations are.**
>
> **Gavin Dudeney, UK**

> **There is one thing that concerns me and that is the kind of cheerleading that we see around Generative AI, which we saw around interactive whiteboards and so on. A very uncritical movement within our profession to take on board new technologies without really thinking about them.**
>
> **Nicky Hockly, UK**

Some interviewees were concerned by the lack of critique around AI in ELT or of its blind acceptance as a 'good' thing and a rush to integrate it. Many interviewees pointed to the huge number of AI talks at conferences, and that most of this focused on the practicalities of using AI rather than any critical discussion of the risks and how to mitigate them.

Key takeaways

- There is already a huge knowledge gap around digital literacies. Addressing AI literacy will be a massive challenge.
- Teachers have multiple competing priorities, and so teacher training in AI needs to be considered in the wider context of all the other demands on teachers.
- Education systems are beginning to grapple with this training need, but questions remain as to how they can keep pace with the rate of change.

> **It is important that the teachers and parents are sensitised to help them understand [AI] as they are the first stakeholders that will handle learners.**
>
> **Dr Mugisha Annet Kajura, Uganda**

Image © Mat Wright

Motivation

A theme that emerged in interviews was the key role that motivation still plays in language learning, regardless of the technology deployed. Some interviewees noted how AI-powered tools had the potential to be inherently more motivating, but others felt that there was little evidence of this to date and what existed was mainly down to individual learner preference rather than a wholesale shift in the motivation dynamic. Dr Gumawang Jati observed that highly motivated learners will get the most out of AI, the least motivated learners will ignore it and 'teachers that are interested in technology, they will play around with the AI, they will advise [their learners on how to use it]'.

Another aspect of motivation explored was how AI-powered automatic translation devices might negatively impact an individual's motivation to learn a language. If a technology could do it for you, why would you invest the time in learning a language at all? Here there was both agreement and push back, with interviewees providing a variety of drivers for learning a language even after the improvement of translation tools. Al Kingsley, Multi Academy Trust Chair and EdTech CEO, UK, did agree ('sadly, yes'), but also noted that for gaining and maintaining employment, competency in a language may become even more of a differentiator than at present. In a competitive marketplace, the ability to actually speak a language may become an even more sought-after skill. Some interviewees also pointed out there will remain those learners that have no reason or motivation other than simply the love of language and tackling the immense but enjoyable task of learning one.

Lastly, an interesting point about the potential of automatic translation was how it might be a force for including the linguistically disenfranchised. Dr Marcin Opacki commented:

> *The good thing about this is that [...] this has the potential to help a lot of people, who have thus far been in a state of cross-cultural exclusion, partake in the bounty of globalization. We – especially in the community that works with or around foreign languages, meaning linguists, teachers, publishers, course designers, etc. – often forget that there are scores of people who have never been successful in learning a foreign language and never will be. Why not finally give them some agency when travelling or interacting with foreigners?*

> **Language is not just to communicate. It's a way to develop an understanding of the history and culture of those who speak it. Speaking a foreign language enables people with different backgrounds to form strong personal connections. Everyone speaking their own language and using AI to understand each other may lead to a more efficient world, but also one that is far less colourful, far less interesting and with far more insular thinking.**
>
> **Carla Wyburn, UK**

Key takeaways

- Motivation remains a barrier or enabler to learning. AI does not appear to be changing that, yet.
- There are many reasons for learning a language, and automatic translation tools will not mean the end of language learning, a (very) human activity.
- Automatic translation tools could promote inclusion by aiding the less linguistically confident.

Inclusion

Some interviewees believed that AI has the potential to improve accessibility for some learners. For example, being able to use the spoken word to interface with a computer will significantly aid those that are unable to use a keyboard or who are visually impaired. Generally, assistive technology enhanced by AI was seen to have great potential, albeit not yet realised to a great extent. One interviewee questioned whether AI for accessibility would itself receive the amount of attention and investment required, being more likely to see incidental advances from more general technological development (for example, speech recognition was not developed with disability in mind). Al Kingsley also spoke about learners who might be excluded from formal schooling due to a range of reasons, such as social anxiety, and how they might benefit from AI-powered educational technology.

In terms of equity of access and the digital divide, interviewees expressed less positivity. Generally, AI was not seen to be worsening the digital divide per se, but it was also not seen as part of the solution. There is some existing scepticism around technology and learning, with its use in schools generally not

> **The AI tech companies cater to the rich and elite schools and families. The poor people and government schools do not have much access to AI and materials.**
>
> **Dr Ramanujam Meganathan, India**

> **Concerns arise that a lack of proficiency in using AI-powered tools might widen the gap in learning opportunities.**
>
> **Dr Toshiyuki Kanamaru, Japan**

Image © Mat Wright

ranked among the highest learning enablers found in meta studies (for example, Visible Learning MetaX, 2023). AI-powered EdTech would have to reverse that trend to change perceptions. However, it should be noted that while bodies such as the World Bank rate technology hardware as among the least cost-effective when not accompanied by well-thought-out complementary measures, software that adapts to the level of the learner – as AI does – is already ranked high in cost-effectiveness once the hardware is bought (World Bank, 2020).

When discussing the possibility that a teacher shortage might bring about a zero-teacher classroom with learners supported by AI, there was general agreement that this should always be the last resort. Joe Yiming Lee provided an interesting real-life example of this scenario in rural Taiwan, where technology access is not an issue, but teacher availability is. In this situation, the problem was seen to be more around developing learners' skills so that they were best able to learn with less teacher support. A related point was made by one of the teachers we surveyed (see Part II). They saw the potential for AI to both preserve privilege while also providing opportunity, writing 'those who can afford it will continue to prefer human teachers [but] the opportunities for those without means will expand exponentially'. Whether this scenario of human teachers educating the better-off and AI-led learning for everyone else would be better or worse than the current digital divide is open for debate.

> **If it is not handled well, it may widen the digital divide [...] in order to address the divide there is a lot to do in the way of creating awareness. Institutions need this information so that people look for a way of supporting the users rather than fighting AI.**
>
> **Dr Annet Kajura Mugisha, Uganda**

Key takeaways

- The digital divide is likely to worsen if AI has significant, positive impact on learning outcomes.
- AI will aid accessibility for some learners. There were fewer downsides highlighted here other than the need for investment.
- While AI may support learning in cases of teacher shortage, there is general agreement that a zero-teacher classroom should always be the last resort.

Assessment

As indicated in the systematic review (Part I), assessment in ELT is an area in need of further research. Several interviewees touched on this subject and anticipated that AI would not necessarily be used to change the nature of assessment itself, rather will do things in an automated and therefore more cost-efficient manner. Gavin Dudeney, Director of Technology, The Consultants-E, UK, commented:

> *I'm concerned about data analytics in an AI world. Many years ago, I watched a talk by a representative of an EdTech language company who claimed their analytics could accurately predict after three to four hours of learner interaction with their content which learners would fail the course. This was hailed as an opportunity to take remedial action and ensure failure wasn't the result. But what would happen in a dystopian future if it were used to stream people into 'winners' and 'losers', consigning the putative losers to the dustbin of learning. These things are deeply troubling, and data analytics only show trends and results, not the person behind them. There is huge diagnostic potential here, but also a potential dark side.*

Concerns were raised not only about the sheer amount of data being collected (as noted previously, the datafication of education and the race to collect as many data points as possible on each learner) but that new types of data will be collected, for example what is sometimes referred to as 'emotion AI'. A recent example of this is where AI is being used as a diagnostic tool in a medical context: 'clinicians are using AI voice detection to identify multiple types of mental illness, including depression, anxiety, schizophrenia, and post-traumatic stress disorder (PTSD)' (Wan, 2023). Here we can see, as is often the case with technology, a well-intentioned motive to help humans that could be subverted for increased surveillance and automated decision making that excludes some populations.

Even thoughts can now be turned into text and analysed, since an AI-based decoder has been shown to translate brain activity into text – so far not very accurately and only if people allow their thoughts to be read, but in time even that may change.

Professor Agnes Kukulska-Hulme, UK

For example, the company [...] which do the TOEFL and TOEIC tests, they've just revised their writing section of their Internet based test [...] You [now] have a live discussion with somebody and your task is to summarise and then extend and give your own views based on the content of that live discussion. Much more of a real-world task, firstly, but you can see it's been influenced by 'how do we make sure that you can't put this into a [AI] prompt? How do we make sure that it has to be based on some kind of live input or multi-sourced input that generates the output?

Thom Kiddle, UK

Thom Kiddle spoke about the potential for AI to impact assessment in a positive manner, as examining bodies struggle to eliminate cheating, i.e. assessment tasks may have to change so that they align more with what a human can do alone rather than what a human can do with a computer. Joe Yiming Lee talked about the potential for AI to create assessment tasks, but that so far the results were somewhat limited:

> *[We can] ask ChatGPT to design worksheets for us [...] They can help us deal with assessment. But remember, their assessments are still for comprehension questions, but not for evaluation, synthesis or creation questions or tasks. I do hope that they can improve that kind of potential or that kind of function for the better.*

Key takeaways

- More research is needed into AI and assessment in ELT.
- Preventing cheating with AI may mean use of new (hopefully better) assessment tasks.
- AI can create assessment tasks, but for lower-level cognition, and results so far are not overly impressive.
- AI could contribute to increased surveillance through a greater amount of data and new types of data – such as emotion AI – being collected.

Ethics frameworks and regulation

Some interviewees commented that while many regulatory frameworks were emerging, there was no global consensus as yet, and this highlights the need to review the current state of regulation and what the future direction might be. Most did not feel that tech companies should be left to regulate themselves, especially given past experience with transformative innovations such as social media. There was reference to UNESCO initiatives, and its work in regulation such as the *Beijing Consensus on Artificial Intelligence and Education* (UNESCO, 2019), but it was unclear if this would cover the additional requirements of ELT.[7]

As for what might be included in an ethics framework, this could come from concerns raised in the themes above, for example the use of data, identification and elimination of human biases, privacy, inclusion, surveillance, standardisation of language and protecting teacher jobs. There were also areas that were only briefly touched on during the interviews, for example the environmental impact of AI (Nicky Hockly).

Drawing up an ethical framework is a relatively straightforward technical activity. The difficulty will be ensuring take-up, that the principles are signed up to and then adhered to and 'that the process is not "owned" by one company, country or culture' (Gavin Dudeney).

> **It's probably a question that we need to be asking at higher levels and we do need some kind of intergovernmental regulation of that moderation from the owners of the platforms and the systems. And, you know, I don't think that they're inherently evil, but, you know, the tools which they generate can certainly be put to that use. I'm sure they don't have education at their heart either, despite what they say.**
>
> **Thom Kiddle, UK**

> **For ELT it is important for the major providers to be involved in the country strategies so they can influence any ethical and societal effects.**
>
> **Wendy Edie, UK**

Key takeaways

- There is a need to review all international, regional, national AI ethics guidelines to establish commonalities, gaps and overall direction.
- There may be a need for a specific AI in ELT framework that addresses the particular requirements and risks that come with language learning.

[7] Note that the interviews took place prior to the summit in the UK, culminating in the Bletchley declaration on AI safety.

Next steps and final thoughts

The combined insights from the three parts of this publication point us towards future activity. First, there is a clear need for an agreed typology of AI with unambiguous definitions so that we can be sure that discussants are referring to the same technology type. Currently the term 'AI' is used to describe fundamentally different systems that bear little resemblance to each other.

Once definitions have been codified, a set of principles can be drawn up that tackle the ethical concerns that come with AI use in ELT/L. This framework would focus on both learner and teacher use of AI, as there is a huge range of potential use cases across these roles. In conjunction, it would be necessary to produce a breakdown of all language teacher activities, with an accompanying commentary on how AI may or may not be used to aid that activity and how context might impact those decisions. This would delineate in a more illustrative way how a new form of hybrid human/AI teaching could improve, and not hinder, the learning process.

While the discussion here focuses on ELT, it is useful to take a step back and remember that in the future, AI will likely transform many aspects of how we live. Education tends to lag behind other sectors for both good reasons (safeguarding, protecting the learning process) and bad reasons (systems that are chronically resistant to change, power structures such as examining bodies that protect interests and revenue).

Steve Jobs famously said 'We're here to put a dent in the universe', but institutional education remains stubbornly dent-free. Whether new technologies will bring the widespread systemic change that matches the AI hype is an ongoing debate. A reading of the history of educational technology would say otherwise.

> **While English language teaching and learning may be uniquely impacted by AI due to its global prominence and widespread demand, it is important to note that AI has the potential to transform various other disciplines as well, such as healthcare, finance, transportation, and more.**
>
> **Dr Xiaobin Liu, China**

Interviewee profiles

Dr Agnes Kukulska-Hulme

Professor of Learning Technology and Communication, Institute of Educational Technology (IET), Open University

Agnes Kukulska-Hulme is Professor of Learning Technology and Communication in the Institute of Educational Technology at The Open University, where she leads the Learning Futures Programme and the Innovating Pedagogy reports. Her work encompasses online distance education, mobile learning, language learning and education for migrants and refugees. She is on the editorial boards of *International Journal of Mobile and Blended Learning*, *ReCALL* and *RPTEL*. She leads and works on large-scale research projects in the UK, Europe, Africa and Asia, addressing diverse experiences of using technology and the English language for access to online services and for formal and informal learning.

Al Kingsley

Multi Academy Trust Chair and EdTech CEO

As well as his Multi Academy Trust Chair and EdTech CEO roles, Al is chair of his region's Governors' Leadership Group and chairs the regional SEND Board. With 20+ years of governance experience, Al also sits on the Regional Schools Director's Advisory Board for the East of England. He is a FED Co-chair, Chair of the BESA EdTech Group and chairs his regional Employment and Skills Board. He's a well-known face in EdTech around the world; author of *My Secret #EdTech Diary*, the bestseller *My School Governance Handbook*, plus his most recent book *My School & Multi Academy Trust Growth Guide*, as well as co-author of *A Guide to Creating a Digital Strategy in Education*.

Carla Wyburn

CEO at English Coach

Carla Wyburn has been working in the field of ELT for nearly 20 years, holding diverse roles such as teacher, writer and Director Operations of English Online, the British Council's flagship online business for adult learners. She is currently CEO and co-founder of English Coach, a language-learning app that harnesses AI to improve learners' speaking skills.

Gavin Dudeney

Director of Technology, The Consultants-E

Gavin is Director of Technology for The Consultants-E, working in large-scale education reform and evaluation, and online teaching and training materials development. He is author of *The Internet & The Language Classroom* (CUP 2000, 2007) and co-author of the award-winning publications *How To Teach English with Technology* (Longman 2007), *Digital Literacies* (Routledge 2013, 2022) and *Going Mobile* (DELTA Publishing 2014).

Dr Gumawang Jati

Senior English Lecturer, Institut Teknologi Bandung, and President at iTELL Association

With a doctorate from Universitas Pendidikan Indonesia, Bandung (2010), an MA from the University of Warwick, England (1989), and an S1 degree from IKIP Sanata Dharma (1987), Gumawang specialises in English language teaching, teacher training, digital material development, and the use of ICT in education. Outside the classroom, Gumawang serves as President of the Indonesia Technology Enhanced Language Learning Association, or iTELL. His partnerships with organisations such as the Adaro Foundation and the British Council Indonesia highlight his proficiency in fusing technology and language instruction.

Joe Yiming Lee

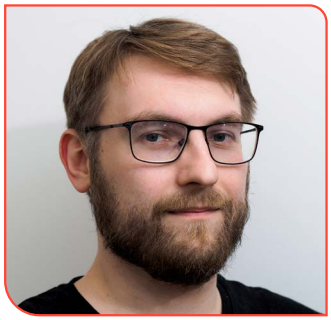
Teacher and Teacher Trainer, Taipei Municipal Zhongzheng Senior High School

Joe Yiming Lee, a teacher hailing from Taipei Municipal Zhongzheng Senior High School, is also a teacher trainer in the realm of Teaching English Through English and Bilingual Education. He has been actively supporting Taiwan's EFL and bilingual subject teachers to help invigorate their teaching. His primary focus centres around the implementation of differentiated instruction and scaffolding techniques within bilingual or EFL classrooms.

Kedir Urji

ICT specialist, Ministry of Education, Ethiopia

Kedir Urji is an ICT specialist at the Ministry of Education, Ethiopia. He has a master's degree in computer science and is currently pursuing a Micro Master in Instructional Design. He wants to bring expertise in leveraging technology to enhance educational practices. With a passion for integrating innovative solutions into the education sector, he wants to play a vital role in driving digital transformation and improving learning outcomes for educators and learners in Ethiopia.



Dr Maciej Rosiński

Assistant professor at the Institute of English Studies, University of Warsaw

Dr Maciej Rosiński is an assistant professor at the Institute of English Studies. He teaches introductory courses in linguistics and linguistic research methods, and MA seminars that explore issues in discourse analysis, figurative language use and multimodal communication. All of his current courses follow the content and language integrated learning approach in their curriculum design. Dr Rosiński's research interests include cognitive linguistics, gesture studies and metaphor use in scientific discourse. He's interested in the media discourse surrounding AI and how this technology is framed.

Dr Marcin Opacki

Institute of English Studies at the University of Warsaw

Marcin Opacki (PhD) is a linguist based at the University of Warsaw (UW). He is an assistant professor at the Faculty of Modern Languages, a researcher at the Experimental Linguistics Lab and a member of the UW Scientific Council for the Discipline of Linguistics. Throughout his career, Marcin has been involved in research on education, the perception of grammaticality, and natural language processing. Outside of the UW, Marcin works as a copy-editor for the *Journal of Language Modelling*, as a consultant for the Polish Central Examination Board, as well as a linguistic expert for the biomedical company .PROT.

Mohammed Mahmud

Head Technical Services, Digital Resource Centre, Universal Basic Education Commission, Nigeria

A software engineer and an avid AI technology follower, Mohammed works in both government and the private sector, delving into IT policy and e-government strategy. He has spent the last eight years working as the technical adviser to the Hon. Minister of Education, Nigeria, leading the design component of the National Digital Learning Policy. He is presently the Head (Technical Services) for UBEC Digital Resource Centre.

Dr Mugisha Annet Kajura

Assistant Commissioner, Teacher Education Training and Development Department, Ministry of Education and Sports, Uganda

Dr Kajura is a teacher by profession, who specialised in teacher education. She has worked as a primary school teacher, tutor in Primary Teachers' College, Inspector of Schools. She currently works with the Ministry of Education and Sports in Uganda as Assistant Commissioner, Teacher Education Training (AC/TET), Teacher Education Training and Development Department, Ministry of Education and Sports. Dr Kajura has a Grade III Teachers' Certificate, Diploma in Teacher Education, bachelor's degree in Education Administration and English Language Studies, master's degree in Education Management and a PhD in Education. She is a national facilitator, has participated in the development of a number of training manuals and curricula for teachers and teacher educators in Uganda.

Assoc. Prof. Dr Nguyen Ngoc Vu

Vice-President of Ho Chi Minh City University of Foreign Languages – Information Technology (HUFLIT)

Associate Professor Dr Nguyen Ngoc Vu is currently Vice-President of Ho Chi Minh City University of Foreign Languages – Information Technology (HUFLIT), and Chairman of STESOL, founded by the Association of Vietnamese Universities and Colleges. With training experience from more than 25 countries, his main expertise is building digital transformation competency and providing consultation services to higher education institutions and businesses across Viet Nam. He won the Viet Nam Technology Innovation Award in 2012 and was recognised as Viet Nam Microsoft Innovative Educator (MIE) Master Trainer in 2014. His research interests include computational linguistics, cognitive linguistics, computer-assisted language learning and ELT methodology

Nicky Hockly

Director of Pedagogy of The Consultants-E

Nicky Hockly is Director of Pedagogy of The Consultants-E (TCE). She is a well-known author, consultant, teacher educator and international plenary speaker. She has published widely on the application of learning technologies in ELT. She is the author of the forthcoming book *Nicky Hockly's 30 Considerations for Using AI*, Cambridge: Cambridge University Press (forthcoming 2024). Other recent books include *Digital Literacies* (Routledge, second edition 2022 – co-authored with Mark Pegrum and Gavin Dudeney).

Dr Ramanujam Meganathan

Professor of English (Language Education), Department of Education in Languages National Council of Educational Research and Training (NCERT)

Dr Meganathan was a member of the Curriculum Group of NCERT, which coordinated the nationwide exercise of developing the National Curriculum Framework – 2005, and also an author coordinator of the *Class X* English textbook. He was the team leader for the curriculum reform exercise in Rajasthan for language education at the school level and part of the textbook and teacher training materials development processes in Rajasthan, Haryana, Jharkhand and Tamil Nadu. He holds a doctorate (PhD) in ELT, master's (MA) and MPhil in English literature and MEd, along with a Postgraduate Diploma in Teaching of English from CIEFL and also a Postgraduate Diploma in Guidance and Counselling. He was a Hornby Scholar and did an MA TESOL (Teaching of English to Speakers of Other Languages) at Lancaster University, UK.

Dr Rodney Jones

Professor of Sociolinguistics, Head of Department, University of Reading

Rodney H. Jones is Professor of Sociolinguistics at the University of Reading. His research interests include language and digital media, health communication and language and sexuality. He has published 14 books and over one hundred journal articles and book chapters. Among his publications are *Health and Risk Communication: An Applied Linguistic Perspective* (Routledge 2013), *Spoken Discourse* (Bloomsbury 2016), and *Understanding Digital Literacies: A practical introduction*, 2nd edition (Routledge 2021). He is also the editor of the *Routledge Handbook of Language and Creativity* (2015) and the recently published collection *Viral Discourse* (Cambridge University Press 2021). He is particularly interested in the ways digital media are changing norms and practices around visibility, learning and community.

Thom Kiddle

Director, Norwich Institute for Language Education (NILE)

Thom Kiddle is Director at Norwich Institute for Language Education (NILE). His role at NILE involves strategic and organisational leadership, and training and consultancy in areas including the CEFR, testing and assessment, learning technologies and language teaching methodology. Previously, he was head of academic research and educational technology at the Chilean-British University in Santiago, and worked in Portugal, the UK, Australia and Thailand. He has a master's degree in Language Testing from Lancaster University and the Cambridge DELTA. Thom is Chair of the Eaquals Board of Trustees, and treasurer and founding director of AQUEDUTO – the Association for Quality Education and Training Online. He has published in *Applied Linguistics*, *Language Assessment Quarterly* and *System* journals. Thom was a plenary speaker at IATEFL 2021.

Dr Toshiyuki Kanamaru

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Toshiyuki Kanamaru is an associate professor in the Institute for Liberal Arts and Sciences at Kyoto University. He holds a PhD in Human and Environmental Studies from Kyoto University. His research interests include teaching and assessing English for Academic Purposes using cognitive linguistics and natural language processing. He has published articles in journals such as *The Journal of Asia TEFL* and the *Review of Cognitive Linguistics*.

Wendy Edie

Managing Director of eCom Learning Solutions

Wendy Edie is Managing Director of eCom Learning Solutions. After studying at Heriot-Watt University, she joined eCom in 2002 and became a director in 2004. Over the years, Wendy has provided a continuity of leadership that has ensured strategic focus on sustainability and growth of the company. Wendy is also a Digital Skills Advisory Board Member at ScotlandIS, a Girl Guiding Rainbow leader, and a former Ambassador for Women's Enterprise Scotland, where she helped inspire and support others to start and grow their own businesses, particularly within the digital field.

Dr Xiaobin Liu

Professor at the School of Foreign Studies at South China Normal University (SCNU)

Dr Xiaobin Liu is a professor at the School of Foreign Studies at South China Normal University (SCNU) in Guangzhou, China. He is also the director of the Research Centre for ICT in Foreign Language Education, SCNU. His research interests include computer-assisted language learning (CALL), technology-enhanced language learning, educational technologies in TEFL, EFL teacher development, etc.

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Ross Crichton

Ross is an education and e-learning consultant who has been involved in language teaching and teacher education for over 20 years. He specialises in instructional design, video-based professional development and project monitoring and evaluation.

References

Çakmak, F. (2022). Chatbot-human interaction and its effects on EFL pupils' L2 speaking performance and anxiety. *Novitas-ROYAL (Research on Youth and Language)*, 16(2), 113–131.

Candelon, F., Krayer, L., Saran Rajendran, R. & Zuluaga Martínez, D. (2023). How people can create – and destroy – value with generative AI. Available at: https://www.bcg.com/publications/2023/how-people-create-and-destroy-value-with-gen-ai

Chen, C.-H., Koong, C.-S. & Liao, C. (2022). Influences of integrating dynamic assessment into a speech recognition learning design to support pupils' English speaking skills, learning anxiety and cognitive load. *Educational Technology & Society*, 25(1), 1–14.

Chen, Y.-L., Hsu, C.-C., Lin, C.-Y. & Hsu, H.-H. (2022). Robot-assisted language learning: Integrating artificial intelligence and virtual reality into English tour guide practice. *Education Sciences*, 12, 437. https://doi.org/10.3390/educsci12070437

Chon, Y. V., Shin, D. & Kim, G. E. (2021). Comparing L2 learners' writing against parallel machine-translated texts: Raters' assessment, linguistic complexity and errors. *System*, 96, 102408. https://doi.org/10.1016/j.system.2020.102408

Crompton, H. & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education*, 20, 22 (2023). https://doi.org/10.1186/s41239-023-00392-8

Dizon, G. & Gayed, J. M. (2021). Examining the impact of Grammarly on the quality of mobile L2 writing. *JALT CALL Journal*, 17(2), 74–92. https://doi.org/10.29140/jaltcall.v17n2.336

Dizon, G. & Tang, D. (2020). Intelligent personal assistants for autonomous second language learning: An investigation of Alexa. *JALT CALL Journal*, 16(2), 107–120. https://doi.org/10.29140/jaltcall.v16n2.273

Edgar, R. (1995). PC is to Piaget as WWW is to Vygotsky. Available at: https://www.academia.edu/14949841/PC_is_to_Piaget_as_WWW_is_to_Vygotsky?auto=downl%20oad

European Parliament (2023). EU AI Act: First regulation on artificial intelligence. Available at: https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence

Hew, K. F., Huang, W., Du, J. & Jia, C. (2023). Using chatbots to support pupil goal setting and social presence in fully online activities: Learner engagement and perceptions. *Journal of Computing in Higher Education*, 5, 40–68. https://doi.org/10.1007/s12528-022-09338-x

Kazu, I. Y. & Kuvvetli, M. (2023). The influence of pronunciation education via artificial intelligence technology on vocabulary acquisition in learning English. *International Journal of Psychology and Educational Studies*, 10(2), 480–493. https://dx.doi.org/10.52380/ijpes.2023.10.2.1044

Kim, N.-Y. (2022). AI-integrated mobile-assisted language learning: Is it an effective way of preparing for the TOEIC test in classroom environments? *English Teaching*, 77(3), 79–102. https://doi.org/10.15858/engtea.77.3.202209.79

Lee, D., Kim, H.-H. & Sung, S.-H. (2023). Development research on an AI English learning support system to facilitate learner-generated-context-based learning. *Educational Technology Research and Development*, 71, 629–666. https://doi.org/10.1007/s11423-022-10172-2

Liu, S.-C. & Hung, P.-Y. (2016). Teaching pronunciation with computer assisted pronunciation instruction in a technological university. *Universal Journal of Educational Research*, 4(9), 1939–1943. https://doi.org/10.13189/ujer.2016.040902

Lo, S. (2023). Neural machine translation in EFL classrooms: Learners' vocabulary improvement, immediate vocabulary retention and delayed

vocabulary retention. *Computer Assisted Language Learning*, https://doi.org/10.1080/09588221.2023.2207603

Milmo, D. & Stacey, K. (2023, 2 November). Five takeaways from UK's AI safety summit at Bletchley Park. The *Guardian*. Available at: https://www.theguardian.com/technology/2023/nov/02/five-takeaways-uk-ai-safety-summit-bletchley-park-rishi-sunak

National Education Policy. (2020). Policy document released by Ministry of Human Resource Development, Government of India. Available at: https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

Nazari, N., Shabbir, M. S. & Setiawan, R. (2021). Application of artificial intelligence powered digital writing assistance in higher education: Randomized controlled trial. *Heliyon*, 7(5), e07014. https://doi.org/10.1016/j.heliyon.2021.e07014

Office of National Statistics (2023). Official census and labour market statistics. Annual Population Survey – Employment by occupation by sex: July 2022–June 2023. Available at: https://www.nomisweb.co.uk/datasets/aps218/reports/employment-by-occupation?compare=K02000001

Pokrivčáková, S. (2019). Preparing teachers for the application of AI-powered technologies in foreign language education. *Journal of Language and Cultural Education*, 7(3), 135–153. https://doi.org/10.2478/jolace-2019-0025

Roser, M. (2022). The brief history of artificial intelligence: The world has changed fast – what might be next? Published online at OurWorldInData.org. Available at: https://ourworldindata.org/brief-history-of-ai

Rowe, L. W. (2022). Google Translate and biliterate composing: Second-graders' use of digital translation tools to support bilingual writing. *TESOL Quarterly*, 56(3), 883–905. https://dx.doi.org/10.1002/tesq.3143

Shivakumar, A., Shukla, S., Vasoya, M., Kasrani, I. M. & Pei, Y. (2019). AI-enabled language speaking coaching for dual language learners. *IADIS International Journal on WWW/Internet*, 17(1).

Sindermann, C., Sha, P., Zhou, M., Wernicke, J., Schmitt, H. S., Li, M., Sariyska, R., Stavrou, M., Becker, B. & Montag, C. (2021). Assessing the attitude towards artificial intelligence: Introduction of a short measure in German, Chinese, and English language. *KI-Künstliche Intelligenz*, 35(1), 109–118. https://doi.org/10.1007/s13218-020-00689-0

Thompson, A., Gallacher, A. & Howarth, M. (2018). Stimulating task interest: Human partners or chatbots? In P. Taalas, J. Jalkanen, L. Bradley & S. Thouësny (eds), *Future-proof CALL: Language learning as exploration and encounters – short papers from EUROCALL 2018* (pp. 302–306). Research-publishing.net. https://doi.org/10.14705/rpnet.2018.26.854

Trajectory Partnership (2018). *The future demand for English in Europe: 2025 and beyond*. British Council.

UNESCO (2019). Beijing Consensus on Artificial Intelligence and Education. International Conference on Artificial Intelligence and Education, Planning Education in the AI Era: Lead the Leap, Beijing, 2019 [3]. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000368303

UNESCO (2023). Ministerial roundtable on generative AI in education. Available at: https://www.unesco.org/en/articles/ministerial-roundtable-generative-ai-education

Van Dijck, J. (2014). Datafication, dataism and dataveillance: Big Data between scientific paradigm and ideology. *Surveillance & Society*, 12(2), 197–208.

Viktorivna, K. L., Oleksandrovych, V. A., Oleksandrivna, K. I. & Oleksandrivna, K. N. (2022). Artificial intelligence in language learning: What are we afraid of? *Arab World English Journal (AWEJ) Special Issue on CALL*, 8, 262–273. https://dx.doi.org/10.24093/awej/call8.18

Visible Learning MetaX (2023). Global research database. Available at: https://www.visiblelearningmetax.com/influences

Wan, C. (2023). AI voice analysis: A new frontier in mental illness detection. Ambiq. Available at: https://ambiq.com/blog/ai-voice-analysis-a-new-frontier-in-mental-illness-detection/

Wan, T. (2023). Pipeline perspectives: Trends from 280+ generative AI Edtech tools. Reach Capital. Available at: https://www.reachcapital.com/2023/09/11/pipeline-perspectives-trends-from-280-generative-ai-edtech-tools/

Warschauer, M. (1996). Computer assisted language learning: An introduction. In S. Fotos (ed.), Multimedia language teaching (pp. 3–20). Tokyo: Logos.

World Bank (2020). Cost-effective approaches to improve global learning. Recommendations of the Global Education Evidence Advisory Panel. Available at: https://documents1.worldbank.org/curated/en/719211603835247448/pdf/Cost-Effective-Approaches-to-Improve-Global-Learning-What-Does-Recent-Evidence-Tell-Us-Are-Smart-Buys-for-Improving-Learning-in-Low-and-Middle-Income-Countries.pdf

Xiaohong, W. & Yanzheng, W. (2021, February). The application of artificial intelligence in modern foreign language learning. In *Proceedings of the 2021 4th International Conference on Big Data and Education* (pp.34–37). London, United Kingdom: ACM. https://doi.org/10.1145/3451400.3451406

Yelenevych, A. (2022). The future of EdTech. *Forbes*. Available at: https://www.forbes.com/sites/forbesbusinesscouncil/2022/12/26/the-future-of-edtech/?sh=49a069666c2f

Zheng, D., Bischoff, M. & Gilliland, B. (2015). Vocabulary learning in massively multiplayer online games: Context and action before words. *Educational Technology Research and Development*, 63, 771–790. https://doi.org/10.1007/s11423-015-9387-4

Ziesche, S. & Kumar Bhagat, K. (2022). *Here, there, and everywhere – AI in education: State of the education report for India 2022*. UNESCO. Available at: https://en.unesco.org/news/state-education-report-india-2022-artificial-intelligence-education

Appendices

Appendix A: Survey questions

Do you use any of these AI tools for English language teaching?

- Language Learning Apps: These provide automated language quizzes and interactive exercises (e.g. Duolingo, Babbel).
- Chatbots for Language Practice: These let students engage in real-time dialogues in English (e.g. HelloTalk, ChatGPT)
- Language Generation AI: These generate language content, such as essays, stories or creative writing prompts (e.g. ChatGPT).
- Speech Recognition Software: These transcribe and assess spoken language, helping students improve pronunciation and fluency (e.g. Google Speech-to-Text).
- Text-to-Speech Tools: These convert written text to spoken language (e.g. Amazon Polly).
- Virtual Reality (VR) and Augmented Reality (AR): These create immersive language learning experiences for learners (e.g. Wonderscope, Oculus Rift).
- Automated Assessment and Grading: These grade assignments, essays and quizzes (e.g. Turnitin, Gradescope).
- Data Analytics and Learning Analytics: These collect and analyse student performance data (e.g. Canvas Analytics, Brightspace Analytics).
- Other (please specify)
- None of the above

Which of the following do you use AI tools for?

- To help your students' practice using English
- To correct your students' English or suggest improvements
- To create lesson plans for your English language classes
- To create materials for your English language classes (e.g. example conversations, songs, reading texts)
- To grade or assess your learners' English language work
- For administrative tasks (e.g. to manage and analyse student data)
- Other (please specify)

To what extent do you agree or disagree with the following statements?

Statements were rated on a five-point scale of agreement: I strongly agree / I agree / neutral / I disagree / I strongly disagree. Respondents also had the option to explain their ratings in writing ('Explain why you feel this way').

- AI can help learners improve their English speaking.
- AI can help learners improve their English writing skills.
- AI can help learners improve their English listening skills.
- AI can help learners improve their English reading skills.
- AI can have a negative impact on learners' ability to improve their English.
- Learners should be able to write in English without the help of AI tools (e.g. Grammarly, ChatGPT).
- AI can plan effective English language lessons for teachers.
- AI should be developed to support the learning of different varieties of English around the world (e.g. localised pronunciation and expressions).
- By 2035, AI will be able to teach English without a teacher.
- AI and automated translation will eventually make learning languages unnecessary.
- I worry about the impact AI will have on my role as an English language teacher.
- I have received enough training to incorporate AI into my teaching.
- AI is more useful for English language teaching than other subjects.

Appendix B: Interview questions

Interviews were semi-structured and other questions were asked that built on those listed here. Those choosing to respond in writing were sent the full question list to select from.

Please select and respond to any questions that interest you. As there is some overlap, you may prefer to respond to one or more questions with a single response.

Suitability for ELT vs other subjects

1. Do the current capabilities of AI make it better suited to the teaching and learning of language than some other subjects?
2. Do you think AI will impact English language teaching and learning more than other disciplines?

Potential/ability of AI to learn

3. Will there come a time when AI has learned from a large enough sample of human interaction to mimic the more intangible elements of human teaching and learning (e.g. relationships, friendship, socialisation, inspiration, culture and ethnography)?
4. Will AI be able to mimic all forms of human conversation (both verbal, non-verbal) to the point that we'll find it difficult to tell the two apart? If so, when?

Influences on the development of AI for ELT

5. Which countries/regions are leading the way in AI for ELT? Do you think this will have an impact on how it develops (e.g. due to different priorities, language or dialects, cultural legacies)?
6. Are you worried that decisions made by AI tech companies will influence what happens in English language classrooms?
7. Who is best positioned to refine the data used to train AI for English language teaching and learning? How can this data and refinement be quality controlled?

Increasing impact on ELT classrooms/approach

8. Will the ability of AI to create contextualised, immersive language learning experiences reduce the need for classroom-based language practice and learning?
9. Will AI and automated translation eventually make learning languages unnecessary?

Benefits and downsides

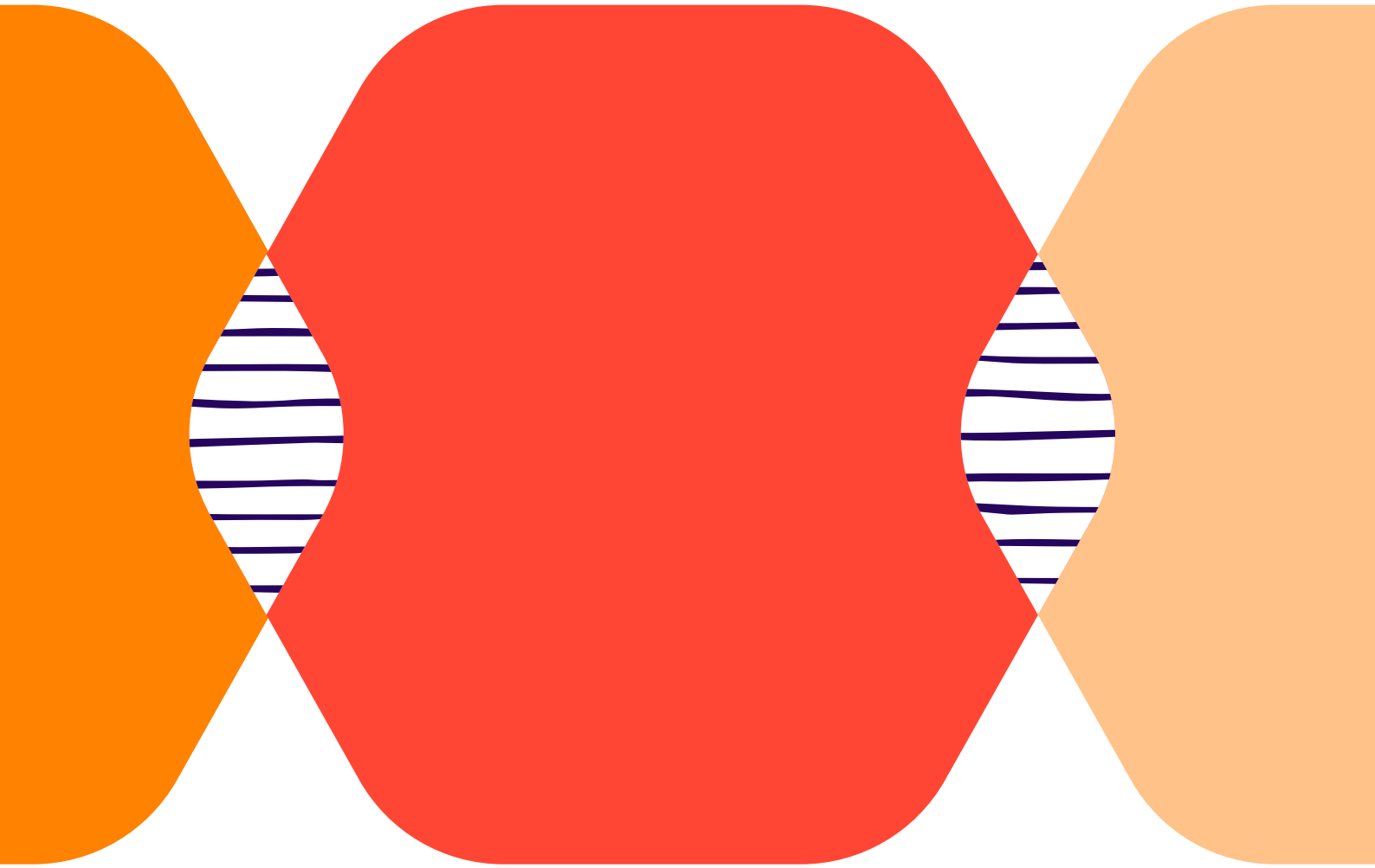
10. Where do you see the most benefits to be gained from AI in English language teaching and learning, and teacher development?

11. Do you see any downsides to English language teaching and/or learning being led by AI systems?
12. Will AI worsen the digital divide?

Specific to your context (not applicable to all respondents)

1. With regard to AI, is language learning being treated differently from other disciplines/subjects in your context?
2. Where and how is AI being used in your education system?
3. Do you think AI will be better at developing certain skills more than others? What are the priorities in your context?
4. Does initial, pre-service teacher education in your context cover AI?
5. Does ongoing, in-service teacher training in your context cover AI?
6. Are there any guidelines for the use of AI in education that might be applicable to ELT in your context (either existing or in development)?

How is artificial intelligence being used for English language teaching and learning (ELT/L) in education systems globally? What are the opportunities, issues, and challenges it presents? In this publication, education technology experts at the British Council and the Research Institute of Digital Innovation in Learning at ODUGlobal investigate the current state of research evidence and key stakeholder opinions on the use of AI in ELT/L. The authors summarise the findings from a first-of-its-kind systematic review that uncovers current trends, including the ways AI is being used, where the research is taking place geographically and with which learner populations. The authors also present the results of a global survey of 1,348 English language teachers and key themes that emerged from 19 interviews with practitioners and decision makers ranging from teachers to government representatives, researchers from higher education, representatives of private language schools, and ELT and EdTech sector experts. Through this publication, we aim to have a multiplicity of voices represented in the conversation on AI in ELT/L and its future in our field.



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