

Students' perception of the impact of AI-generative tools in learning the English language

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Abstract

The advancement of AI techniques has presented several challenges for teachers and learners in language classrooms. Yet, students have demonstrated rapid improvements when given direct opportunities to experiment with advanced software. Despite AI's substantial progress, the core of teacher-learner exchanges remains deeply anchored in human intelligence. As technology becomes more integrated into language classrooms, AI needs to imitate and complement human interactions effectively. This study aimed to investigate students' perceptions of generative tools' impacts on their writing abilities. A quantitative design was employed, and the research was conducted at the National University of Cheasim Kamchaymear. The study involved 120 participants, consisting of 38 males and 82 females. Students' writing capabilities using the generative tools were evaluated across different dimensions as part of a broader research framework. The findings emphasize the significance of AI advancements in enhancing students' writing skills while preserving key human-centered teaching dynamics. Future studies should be conducted with a bigger sample size with more universities using more advanced statistics. Qualitative and combined designs should also be taken into consideration.

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1. Introduction

The English language plays a vital role in the 21st century as it is widely spoken and used in the fields of business, education, entertainment, and science. Enhancing students' ability to learn the language is important and challenging. Many generative tools in artificial intelligence are used to enhance students' abilities to learn various subjects, and these tools have

demonstrated their worth (Ruiz-Rojas et al., 2023). Recent studies on pronoun correction and sentence simplification have shown that these generative tools can provide a beneficial learning platform. Using AI-generative tools in learning has shown good results, as students are able to overcome difficulties and also experience an increase in cognitive engagement (Chan et al., 2024). In English learning, students may have difficulties in sentence correction and sentence simplification due to the complex structures and problematic regions found in the sentences (Pesovski et al., 2024). Lengthy and incomprehensible sentences may lead to lower promotion skills among students. Difficult sentences about the subject matter can also reduce cognitive engagement levels and may hinder the learning process. These problems can be overcome by using appropriate generative tools in AI. However, an important question remains: What is students' perception of the impact of AI-generative tools on learning English? This study aims to determine the students' perception regarding the impact of AI-generative tools in learning English (see Chan & Hu, 2023).

1.1. Background and rationale

The outbreak of the late 2019 pandemic came as a turning point in the educational and linguistic fields, creating a new generation of learners in terms of having a contextual learning environment through the use of AI technologies (Em, 2021, 2023). The outbreak has forced students to interact with their electronic devices in a different way than before, making extensive use of the many technological tools available anywhere in the world (Em et al., 2023; Heng & Sol, 2021; Sim & Em, 2023). Many students today use or interact with AI-generative tools, either with or without the assistance of an adult (Wood & Moss, 2024; Yilmaz & Yilmaz, 2023).

Because of this, we need to find out how students actually feel about the effects of AI-generative tools on their learning by looking at the changes these tools make to the way they learn. These advances have not yet been looked at from the point of view of primary school students around the world. Different studies highlight the importance of giving primary school students a space where they can explore new technologies, stating that children should receive an introduction to media literacy in the early years so they can build coping and resilience while they are still young (Martinez, 2021).

In addition, as children grow older, they will gain greater exposure to technology, thus becoming more proficient in resolving conflicts that arise as a result of developing rational and ethical behavior. We are currently dealing with an era where primary school children are much more sophisticated consumers because of their exposure to television, computers, the Internet, and mobile devices. Students in the digital age have access to an extensive variety of technologies. The possibility of being immersed very strongly in the digital age means that students can gain socio-cultural awareness from the incredible variety of information available, as well as the need to develop new digital skills that are indispensable for the training of future generations to facilitate communication with the digital world in the classroom. This is an interesting avenue for primary school students to develop digital citizenship skills that distinguish knowledge of the digital world and digital media (Williams, 2023).

Defining digital citizenship is associated with education, as primary school students who use digital technologies can do so autonomously and responsibly to minimize risks and maximize positive opportunities, as well as to make informed decisions about their technology use. Our most important goal as educators today is to create a balanced approach to educating young students, addressing the skills that they need to succeed and the knowledge needed to achieve understanding (Parker & Lee, 2022). The ability for students to develop a sense of digital citizenship is not only the responsibility of parents, teachers, and youth but is a comprehensive

process that society can engage in to guide students to have a positive and safe experience in the classroom. This is why there is a need to provide teachers with educational resources to facilitate instructional training if students devote themselves to the use of the tools when they need to use AI devices (Thompson, 2023).

1.2. Research Objectives

The objectives of this study are to explore the following statement:

1. To examine the impact of AI tools on learners' independence, skill development, and task efficiency in learning the English language.
2. To identify to what extent the key challenges learners face when using AI-generative tools in learning the English language.
3. To explore the perception of ethical considerations for using AI-generative tools in learning the English language.

2. Literature review

Language learning using AI-generative tools is quite promising due to the many transformations in the digital era. Generation teaching is no longer dependent solely on the teacher, but involves learning together with AI to create a teaching text that is useful in helping learners' language skills (Adams, 2022). Moreover, the results have been processed routinely at various levels, particularly in internships held because students need to build a portfolio to complement their job search flexibility in today's knowledge economy (Chen & Zhao, 2023). AI tools that are generative and based on language are designed to work particularly in the English language. They are not designed to translate English into Malay or any other language but to produce human-like text, including tasks that involve writing, language generation, translation, self-supervised learning, summarization, and dialogue.

English language practice is identified as one of the key tools necessary for teachers to improve essential skills among university students. However, doing this without increasing the teacher-to-student ratio or requiring student-centered tasks, because the quality of the teacher must be alive and highly skilled, is thus a difficult task for any language teacher for any student (Brown & Smith, 2022). Many online writing platforms are available, but they usually include feedback to correct errors and fix problems or require programs that may or may not be able to generate the human-like programs needed in specific taught language contexts (Lee, 2021). Based on the features of the Fourth Industrial Revolution, improvements in learning English as a Foreign Language must lead to skills beyond those typically associated with traditional language proficiency, including negotiation, participation, and control (Thompson, 2023).

2.1. AI-generative tools in education

Artificial intelligence (AI) tools have been used successfully in different application fields, and education has been one of the most recent (Lopez & Garcia, 2023). Different tools can support education-specific functions and processes, such as automatic generation of questions, trainers for skill development, and artistic production, among others. In language learning, AI can provide generation tools to speed up the composition, assessment, and improvement of texts in English as a second language. Generative tools can be broadly divided into text-generation and image-generation tools (Miller, 2021). AI-generative tools in education is a mixed-method study that aimed to evaluate if tools for the automatic generation of questions and texts, both images and written natural language from AI, which were trained using cross-platform

knowledge transfer with language multimodal learning, showed any improvement in comprehensive learning for Italian students in the first course of the study program with Italian as the primary language of communication (Zhang, 2022).

2.2. Language learning and technology

Learning a language is a very challenging process. Language learners face numerous problems and difficulties during the process. It is generally a time-consuming and expensive process. Most learners do not have the opportunity to learn a second or foreign language in the country where the target language is spoken. Of course, there are countries where learning English is taught in schools, and the environment itself offers a linguistic landscape that helps learn the language effectively (Jones & Taylor, 2022). However, learning English in non-English-speaking countries reveals an expensive process, a lack of competent professionals, limited access to native speakers, and audio-visual support. Most students do not use the target language outside the classroom and don't practice the language often enough. In recent years, much language educational research has focused on the role that technologies play in language acquisition. Research suggests that these technologies have the power to improve language acquisition (Patel, 2021). Students respond favorably to instruction with positive experiences using technology. The new technologies are also motivating for today's learners; the visual and oral components that computer-based materials offer are unbeatable for generating interest, and students gain confidence using technology in the classroom, an attribute that can smooth the integration of technology into instruction in other areas of study (Rivera, 2023).

2.3. Challenges and Opportunities

Artificial intelligence (AI) possesses the potential to allow a certain level of hypothesis-driven learning by providing education and training professionals with a variety of ideas and processes that guide, simplify, and provoke learning (Klein & Hart, 2023). Generative AI tools available today are assisting human beings in the creation of visionary and innovative works in the arts or in creative, high-quality humanistic projects such as the creation of poetry, narrative, music, or the development of conversational bots able to interact with humans engagingly (Nguyen, 2022). All of these tools hold the promise of assisting in the expansion of specific cognitive, communicative, and expressive abilities. Specifically, generative AI can extend the palette that individuals use in their personal learning and development process, implicitly generating knowledge or direct learning materials, or offering the capability for one to learn a new skill or a vocational competence by itself (Smith & Brown, 2021).

The opportunities that arise from the integration of generative AI applications in the current world and the resulting creative enhancement appear to be many and meaningful for education systems and students who will have the opportunity to integrate this new form of technology (Jones & Patel, 2022). Generative AI software confidently guides users in a human experience that lasts just 10 minutes, but the result, fueled by artificial intelligence, is a plausible human-like conversation. As far as language teaching is concerned, it is possible to produce exercises or provide support services to those involved in real-time in removing the barriers and challenges associated with foreign languages (Chan et al., 2021; Nguyen, 2023). Efforts in the use of AI to support or simplify foreign language learning are many and are designed in such a way that they can be easily applied in the classroom context for schools but also to assist students in their autonomous language learning (Smith & Lee, 2021).

3. Methodology

3.1. Research design

This study employs a quantitative survey design to evaluate a logic number, score, mean, percentage, Skewness, Kurtosis, and standard deviation to investigate students' perceptions of AI-generative tools in learning the English language. The study also clarifies students' opportunities to use AI-generative tools, the key challenges faced when using AI-generative tools, and the ethics of using AI-generative tools in the future.

3.2. Population and sampling

The National University of Cheasim Kamchaymear (NUCK), Kampong Cham Campus, was chosen to conduct this study to explore students' opportunities to use AI-generative tools, the challenges of AI tools, and the ethics of using AI-generative tools for future utilization. Bachelor students of the department in English major (years 2–4) in NUCK joined in this study to provide answers for the questionnaires. The students had to offer the answers to students' opportunities for AI-generative tools in English language learning, the key challenges that they face when using AI-generative tools, and the ethics for improving AI-tool's related work in the future.

The study employed a non-probability random sampling technique to select participants for the study, collecting information through questionnaires that explored the opportunities, challenges, and ethical considerations associated with AI-generative tools for English language learning.

3.3. Data collection and procedure

The current study examines students' perceptions of the impact of AI-generative tools on learning the English language and examines their opportunities, challenges, and ethics regarding AI-generated tools. For the data collection procedure, initially, the first author requested a permission letter from the university to conduct the study. After being approved, the first author met the population and chose them randomly as the samples for the study. The details of the data collection processes are presented in Figure 1.

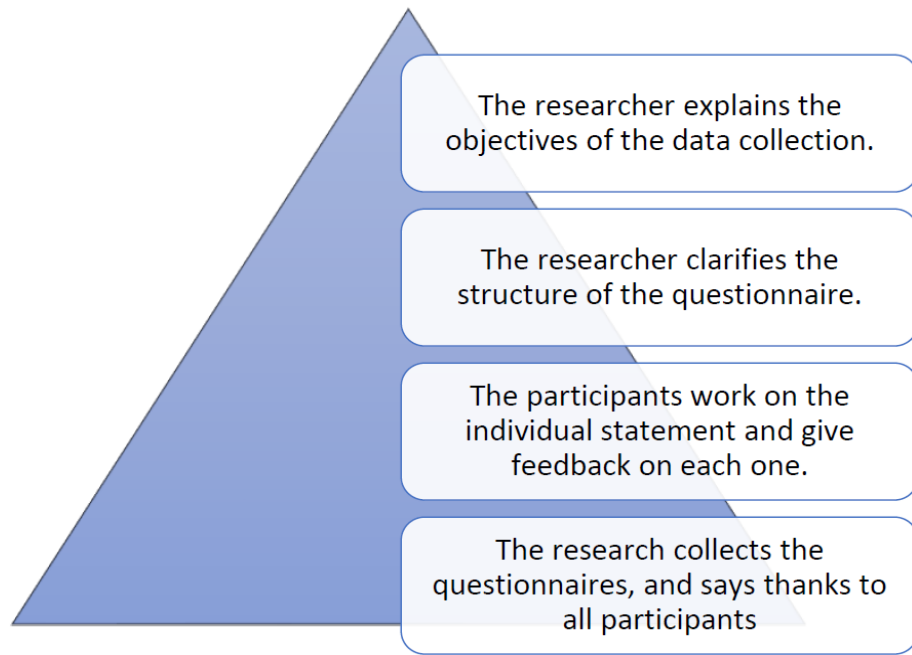


Figure 1. Data collection procedures

3.4. Research instrument

To conduct this study, the following instruments were used as tools for collecting data. To examine the impact of AI tools on learners' independence, skill development, and task efficiency in learning the English language, the authors decided to select the questionnaire to collect the data. The tool of the questionnaire is developed into four parts. The first part is relevant to student information such as age, gender, and year of study.

The second part explored the students 'opportunities to use AI-generative tools in learning the English language through a rating scale ('strongly disagree = 1', 'disagree = 2', 'not sure = 3', 'agree = 4', and 'strongly agree = 5') to investigate student opportunities of using AI-generative tools to learn the English language.

The next part is the key challenges of AI-generative tools in learning the English language via a rating scale as well ('strongly disagree = 1' 'disagree = 2' 'not sure = 3' 'agree = 4' 'strongly agree = 5'). Tools to mismeasure students' challenges highlight students' and teachers' concerns about privacy, security, cost, bias, ethical considerations, transparency, and fairness in their learning.

The last part is to survey the ethics of AI-generative tools in learning the English language in the future by rating scale answering ('strongly disagree = 1' 'disagree = 2' 'not sure = 3' 'agree = 4' 'strongly agree = 5'). To explore the ethics of using AI-generative tools in learning the English language in the future. Tools for investigating these categories are approved by the technique that outlines proposed processes and actions at different phases of AI development that try to incorporate six ethical values or principles: agency, privacy, fairness, well-being, openness, and responsibility.

3.5. Validity and reliability

3.5.1. Validity

Validity is an absolute requirement in quantitative research. Because an invalid test or instrument is useless, validity is critical to doing worthwhile analysis. The ability of an instrument to calculate is a quality construct (Swanborn, 1996). A key component of ensuring the study produces positive results is the validity and reliability of the scales utilized. As a result, it helps to know how the researchers accurately estimate validity and reliability (Borsboom et al., 2004).

The validity of the data collection tools in the current study is crucial for ensuring the reliability and credibility of its findings (Riege, 2003). To achieve this, the tools were carefully reviewed and confirmed by three experts in the field. This expert validation process significantly enhanced the content validity, ensuring that the tools were well-aligned with the study's objectives and capable of accurately capturing the intended data.

The experts meticulously evaluated the appropriateness, relevance, and clarity of the items, ensuring that they comprehensively covered the constructs being measured without including irrelevant or redundant content. They also provided feedback to address potential ambiguities, refine the language, and ensure cultural and contextual suitability for the study's participants.

Through this rigorous validation, the data collection tools were refined to minimize bias and maximize their effectiveness, establishing a robust foundation for the study. As a result, the tools are expected to generate accurate and meaningful data that support reliable analysis and contribute to the overall success of the research.

3.5.2. Reliability

According to Fink and Litwin (1995) and Yilmaz (2013), in research, research tool reliability means how consistently and steadily a measuring tool gives the same results over time in similar conditions. A good research tool makes sure that the data it collects is free of random errors, giving reliable data for drawing conclusions and making assumptions. The absence of reliability may jeopardize the credibility and reproducibility of study findings, and the authors also provided the following points into consideration.

Test-retest reliability is an important part of dependability because it measures how well a tool can produce consistent results when given to the same group at different times. In the absence of substantial alterations in the measured variable, the results should stay consistent. This form of reliability is essential for instruments intended to evaluate constructions anticipated to remain stable throughout time.

Internal consistency is a vital aspect of reliability, concentrating on whether all items inside a tool assess the same construct. In a questionnaire, items intended to evaluate a certain variable should produce consistent replies. Cronbach's alpha is a common way to check for internal consistency because it gives a statistical picture of how items on a scale are related to each other.

Inter-rater reliability assesses the consistency of outcomes when several individuals utilize or interpret the instrument. This kind of trustworthiness is especially important for qualitative

research or evaluations that need subjective evaluations. It makes sure that personal biases or points of view don't change the results.

There are also parallel-form reliability and split-half reliability. Parallel-forms reliability checks whether two versions of the same instrument give similar results. Split-half reliability looks at the consistency of each half of the instrument. These methods offer further means to validate the reliability of measurement equipment.

Ultimately, dependable research instruments are crucial for producing credible and reproducible findings. High dependability guarantees that a study's conclusions can be regularly replicated, enhancing the overall credibility and rigor of the research process.

Table 1. Reliability of the Indicators According to Cronbach's alpha's Analysis

Constructs	Number of Statements	Cronbach's alpha
Opportunities	10	0.87
Challenges	10	0.76
Ethics	10	0.90

The table presents the reliability analysis of various constructs as measured by Cronbach's alpha, detailing the number of statements associated with each construct and their corresponding alpha values, which indicate internal consistency. The construct of "Opportunities" includes 10 statements and has a Cronbach's alpha of 0.87, falling within the "Good" range ($0.9 > \alpha \geq 0.8$) and indicating a strong level of internal consistency among the items. The construct "Challenges" also consists of 10 statements, with an alpha value of 0.76, placing it in the "Acceptable" range ($0.8 > \alpha \geq 0.7$), suggesting a decent level of internal consistency but indicating room for improvement. Meanwhile, the "Ethics" construct, which also contains 10 statements, achieves a Cronbach's alpha of 0.90, categorizing it in the "Excellent" range ($\alpha \geq 0.9$) and demonstrating a very high level of internal consistency among its items. Overall, the alpha coefficients highlight that the constructs of opportunities and ethics are measured reliably, while the challenge construct is acceptable but could benefit from further refinement to enhance its internal consistency.

Table 2. Selection of the Alpha Coefficient

Cronbach's alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor

$0.5 > \alpha$	Unacceptable
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Source: Adapted from Siswaningsih et al. (2017, p. 7).

The table shows the ranges of Cronbach's alpha values and the accompanying internal consistency levels. An alpha of 0.9 or higher is regarded as exceptional, and values in the range of 0.8 to 0.9 are classified as good in the table. Alpha values that fall between 0.6 and 0.7 are deemed worrisome, whereas those that fall between 0.7 and 0.8 are deemed acceptable. Any Cronbach's alpha value between 0.5 and 0.6 is regarded as poor by the researcher, and any number below 0.5 is deemed unacceptable. This way of classifying things helps researchers check the accuracy of their measuring tools and makes sure they get a good picture of how consistent the items are with each other.

3.6. Data analysis

For the result of a questionnaire that was obtained from respondents, the researchers used SPSS Version 27 for data analysis of the descriptive statistics. This method generates the logic number, mean, score, percentage, Skewness, Kurtosis, and standard deviation. It focuses on providing a comprehensive and precise representation of the data collected, which can be valuable for generating hypotheses, exploring trends, and identifying patterns in the statistics.

4. Results and discussion

4.1. Demographic information of the samples

Table 3. Demographic information of the samples (n = 120)

Variables	Values	Number	Percentages
Sex	Male	38	68.3
	Female	82	31.7
Age	16-25	103	85.8
	26-30	14	11.7
	31-Over	03	2.5
Year	Year 2	40	33.3
	Year 3	47	39.2
	Year 4	33	27.5

The table shows the demographic information for the sample population of 120 respondents. In terms of gender, males make up 68.3% (38 persons), while females make up 31.7% (82 individuals). In terms of age distribution, 85.8% of respondents (103 in total) are between the ages of 16 and 25, showing a primarily young demographic. The elder age categories are underrepresented, with 11.7% (14 persons) aged 26 to 30 and only 2.5% (3 individuals) aged 31 and up. Furthermore, the year of research shows a diverse representation among

respondents: Year 3 participants are the largest group at 39.2% (47 persons), followed by Year 2 at 33.3% (40 individuals) and Year 4 at 27.5% (33 individuals). Overall, the sample consists primarily of young males, with a balanced distribution over the different years of research.

4.2. Opportunities of using AI tools for learning the English language

Table 5. Opportunities of using AI tools for learning the English language

Statements	N	Min	Max	M	SD
1. I become an independent learner.	120	1.00	5.00	3.7083	.94732
2. I can improve macro skills in English (reading, listening, writing, speaking).	120	1.00	5.00	3.9083	.92578
3. I complete tasks easily and quickly.	120	1.00	5.00	3.9667	.68518
4. My mind is opened to new ways of learning.	120	1.00	5.00	3.8000	.70532
5. I can cooperatively learn with AI tools.	120	1.00	5.00	4.1083	.88684
6. I can develop skills in using new technology.	120	1.00	5.00	4.0750	.80087
7. I get more experience in learning English.	120	1.00	5.00	3.9750	1.03276
8. I can use AI tools for 24/7 support.	120	1.00	5.00	3.8667	.78786
9. I can use AI tools to create slides and other content designs.	120	1.00	5.00	4.1417	.67731
10. I can run up to the new generation of technology.	120	1.00	5.00	3.5917	.88399

Note 1: N = Number, Min = Minimum, Max = Maximum, M = Mean, SD = Standard Deviation

Note 2: Mean score of 1.00-1.80 = Lowest, 1.81-2.60 = Low, 2.61-3.40 = Moderate, 3.41-4.20 = High, and 4.21-5.00 = Highest

The table summarizes the benefits of utilizing AI technologies to learn English, based on replies from 120 participants. Each characteristic is graded on a scale of 1 to 5, indicating different perspectives on AI's contribution to language learning. The statistics show that there is a generally optimistic perspective for the incorporation of AI into educational procedures. The statement addressing the usage of AI technologies to produce slides and other content designs

received the highest mean score ($M = 4.1417$), indicating that participants are very confident in this area. The ability to jointly learn with AI tools ($M = 4.1083$) and gain abilities in new technologies ($M = 4.0750$) closely follows, indicating a high belief in the supportive role of AI in enhancing learning experiences.

Participants also stated that they could develop their macro abilities in English ($M = 3.9083$) and complete tasks easily and fast ($M = 3.9667$), indicating a sense of efficacy in their learning processes. The mean score for becoming an independent learner was slightly lower ($M = 3.7083$), indicating possible difficulties in self-directed learning. In contrast, the lowest score was for transitioning to a new generation of technology ($M = 3.5917$), indicating some hesitancy or difficulties in this area.

The standard deviations for the responses varied, with the most agreement on the ease of task completion ($SD = 0.68518$) and the greatest variety in gaining experience studying English ($SD = 1.03276$). Overall, the table demonstrates both significant prospects and some potential limitations to employing AI techniques for English language acquisition, highlighting areas for further provision and growth.

4.3. Challenges of using AI-generative tools in learning the English language

Table 6. Challenges of using AI-generative tools in learning the English language

Statements	N	Min	Max	M	SD
1. I lack the of use technology to access AI-generative tools.	120	1.00	5.00	3.7750	0.91176
2. I am concerned about my account being hacked when connecting to AI tools	120	1.00	5.00	3.0833	1.00070
3. Paying the most cost to process AI tools.	120	1.00	5.00	3.0583	0.95527
4. AI provides bias and errors in information when generating tasks.	120	1.00	5.00	3.4667	0.94321
5. AI tools have limitations of using AI-generative tools (time, space, source...).	120	1.00	5.00	3.5167	1.05307
6. AI can reduce human critical thinking and self-practice.	120	1.00	5.00	2.9417	1.10230
7. I cut off interaction and engagement with the environment of learning.	120	1.00	5.00	3.1833	0.97862

8. I don't know how to connect with AI Tools.	120	1.00	5.00	3.1667	1.02353
9. I feel untrusted about using AI-generative tools.	120	1.00	5.00	3.6333	0.94321
10. I spend a lot of data to access it.	120	1.00	5.00	4.1250	1.03358

The table summarizes the challenges of utilizing AI-generative tools to learn English, based on feedback from 120 participants. Each challenge is graded on a scale of 1 to 5, showing different levels of concern and difficulty encountered by learners. The highest mean score ($M = 4.1250$) corresponds to anxiety about the quantity of internet usage required to access AI tools, demonstrating that participants are well aware of and may be frustrated by these technologies' resource demands.

Following this, the assumption that individuals cannot effectively use technology to access AI-generative tools obtained a mean score of 3.7750, indicating a strong technical skill barrier. Concerns about the possibility of hacking when connecting to AI technologies received an average grade of 3.0833, but concerns regarding the expenses of processing AI tools were slightly lower ($M = 3.0583$). These scores indicate a moderate level of concern about security and financial repercussions. Participants also noticed the possibility of bias and inaccuracies in AI-generated information ($M = 3.4667$) and acknowledged some limits in using AI tools, such as time and resource constraints ($M = 3.5167$).

Furthermore, there is a sense that AI may harm human critical thinking and self-practice, as seen by a lower mean score of 2.9417, showing that participants are concerned but not convinced about this issue. Concerns about reducing involvement and engagement with the learning environment ($M = 3.1833$) and ambiguity about how to connect with AI tools ($M = 3.1667$) demonstrate the challenge of incorporating AI in learning environments. Finally, participants reported a general lack of trust in AI-generating tools, with a mean score of 3.6333, indicating that while they perceive potential in AI, significant difficulties must be solved to foster broader adoption and effective application.

The standard deviations across these items show heterogeneity in replies, particularly for worries about cost and trust (SDs of 0.95527 and 0.94321, respectively), indicating different levels of perceived obstacles among participants. Overall, the table identifies numerous important barriers that learners encounter when using AI-generative tools for language acquisition, highlighting areas that demand attention and improvement to improve user experience and confidence.

4.4. Ethical of using AI-generative tools in learning the English language

Table 7. Ethical of using AI-generative tools in learning the English language

Statements	N	Min	Max	M	SD
1. AI tools should keep the privacy and security of users' personal account information.	120	1.00	5.00	3.8833	0.77982

2. AI tools should offer users with low price to generate information.	120	1.00	5.00	4.0667	0.71870
3. AI tools should set clear policies for using AI-generative tools.	120	1.00	5.00	4.2083	0.73216
4. AI tools should show up with clear information about the trust in using AI.	120	1.00	5.00	4.0167	0.88861
5. AI tools should have open-course training for people widely.	120	1.00	5.00	4.0417	0.83410
6. AI tools should use easy steps to connect.	120	1.00	5.00	3.8667	0.87863
7. AI tools should allow big space for use.	120	1.00	5.00	4.1667	0.77061
8. AI tools give true information to users.	120	1.00	5.00	3.8417	0.97011
9. AI tools should sign up for free.	120	1.00	5.00	4.2750	0.73293
10. AI tools should assign people with problems.	120	1.00	5.00	4.2750	0.73293

The table shows the ethical considerations related to using AI-generative tools to learn English, as indicated by 120 participants. The scores for each characteristic, calculated on a scale of 1 to 5, reveal users' attitudes and expectations about the ethical aspects of AI tool usage. The expectation that AI tools allow users to sign up for free receives the highest mean score in this table ($M = 4.2750$), underscoring the importance of accessibility and inclusion. This is closely followed by the expectation that AI technologies should assign support to users experiencing problems, which similarly received a mean score of 4.2750, showing a high desire for responsive customer support and assistance.

Participants believe that AI tools should have explicit policies guiding their use ($M = 4.2083$), indicating a need for transparency and ethical governance in how AI technologies are used. Furthermore, the assumption that AI tools will supply users with low-cost knowledge creation ($M = 4.0667$) emphasizes the importance of affordability in ethical use. Another important factor is trust, with participants agreeing that AI technologies should provide explicit information regarding their reliability ($M = 4.0167$).

This shows that people are concerned about the reliability of AI technologies and seek guarantees that the information generated is reliable. Furthermore, the provision of open-course training received a high grade ($M = 4.0417$), indicating that participants recognized the importance of AI tool instruction in empowering users effectively. The capability of AI techniques to preserve privacy and the security of users' account information obtained a

considerable mean score ($M = 3.8833$), emphasizing users' ethical concerns about data protection.

The expectation for AI tools to have simple connection steps ($M = 3.8667$) and enough capacity for use ($M = 4.1667$) demonstrates user-friendliness and practicality in the ethical deployment of technology. Finally, the necessity of AI tools giving correct information to consumers was recognized, but with a mean score of 3.8417, indicating concern about the integrity of the content supplied.

Overall, the low to moderate standard deviations of these responses show that participants agree with the ethical expectations they have for AI-generative tools in language acquisition. The data demonstrates a strong emphasis on accessibility, transparency, trust, and support, which are necessary for promoting ethical practices when using AI technologies.

5. Conclusion and future direction

In conclusion, the findings from this survey revealed that 42% of the participants used recruiting AI tools during the pandemic. For most participants, the use of AI-generative tools achieved more personalized support for individual students, as the students can ask questions and receive immediate feedback and answers to their individualized questions. Most are willing to access AI tutoring, which indicates the perceived usefulness of these generative AI tools for teaching. On the other hand, almost half of the participants said the tools cannot solve all the problems. This survey provides an initial exploration of the extent of the impact of AI tutoring tools in learning written English by a broad, diverse population. The next steps of this study will include adopting the tools, creating more anonymous surveys to diminish the language and AI tool issues, increasing their validity and reliability, and verifying the depth of their impact according to big data. The impact could be linguistic insights into how AI improves language learning and personalized support for one-on-one interaction with AI to allow individual spatiotemporal circumstances. The data modeling will begin by developing a methodology to comprehend users' behaviors related to AI-recruited tutoring. As the novelty of the results, and social and ethical questions outweigh the technical benefits of using AI for learning, future research must incorporate a variety of software features, training paradigms, multimedia, introductory policies, and device interactions to efficiently realize AI's maximum potential. With a new generation of technologically savvy learners coming and a workforce that continually adjusts to rapid changes due to AI, it will take collective responsibility to construct technology that increases these possibilities and makes them work.

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Declaration of AI usage

The authors used QuillBot to polish the language in some parts of the article. However, they declared that the content of the article is totally theirs.

Research approval

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