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The Role of Intelligent AI Agents in Enhancing English Language Learning and Personalized Education

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ABSTRACT

The application of AI to schools is becoming increasingly popular, which means that such institutions receive additional chances to implement student-centered and personalized methods of teaching. The most promising of these new technologies is a smart AI agent, chatbots or virtual tutor and adaptive learning systems have the power to change the way English is taught. The current paper explores the use of intelligent AI agents in the promotion of English language acquisition and individualized learning, in particular, their role in the improvement of vocabulary, grammar, speaking, and writing skills. It was a quantitative research study with a 20-item Likert-type questionnaire to collect data from 250 participants, including AI researchers, English language teachers, and IT experts. Data were analyzed through SPSS 26, employing descriptive statistics, correlation analysis, and multiple regression. The findings of the study indicate that participants strongly agree on the positive impact of AI on language learning. All three factors had significant predictors of learning English. intelligent AI agents are most effective at improving semantic understanding and linguistic accuracy. These findings prove that the AI agents do not only help make a language teaching process more efficient but also help the learners to become more autonomous and interested into the learning process by providing the latter with real-time feedback, making the latter more entertaining, and providing the learners with the alternative paths to follow. The challenges of privacy of the data, fairness in the algorithms, cultural adaptability and unequal access remain significant obstacles to successful implementation. This paper highlights how AI agents need to be responsibly incorporated, using technology to support and not replace human learning. The study highlights that AI should be used to support, not replace, human learning, and that ethical and cultural issues should be addressed for successful implementation.

Introduction

Intelligent tutoring system (ITS), voice-assisted systems, and adaptive learning systems and chatbots can talk. To illustrate, chatbots can also emulate role-playing games with English language learners, whereby, the user computes the input and corrects errors in real-time. Smart digital tutors, however, track the progress of a student and modify their instructional approach according to the needs of the learners with the help of AI. We are having a lot of problems in the education system right now, such as not having enough teachers, too many students for each teacher, students with different levels of skill, and not enough personalized help for students who need it. Such restrictions tend to prevent English learners receiving sufficient practice and feedback and this is particularly harmful to them. Intelligent AI agents have great potential in this respect, as they will ensure accessibility, scalability, and personalization 24 hours a day.

The significance of this trend cannot be overstated considering the world domination of English as a 'common' language. It has presently evolved into the dominant language of academic research, international commerce (Wang & Waterhouse 2016) digital communication, and world diplomacy (Taguchi, 2021). As a result, millions of people who are non-native English speakers around the world plan to improve their English skills for better academic and career prospects. Yet traditional pedagogy lacks customization. The traditional teaching method can provide the same quality of education information services repeatedly, when faced with a great number of students, who receive rich information as well as sufficient individualized education and low cost. Teachers find it difficult to cater for the range of needs in large mixed ability classes. Intelligent AI agents, on the other hand, are able to process learner input data in such a way to identify areas of weaknesses and carefully tailor learning activities based on how an individual learns or his/her personal goals (Chen et al., 2020).

AI agents also have the benefit of being able to provide interactive and nonjudgmental settings for language practice in real time and at the same time. Students may not speak in an English class because they are anxious, afraid of making mistakes, or do not have enough confidence (Huang et al., 2013). AI-based chatbots create friendly and relaxed spaces for learning, which means there is no social fear of failure that comes with talking to other people. Smart writing assistants also give students instant feedback on their grammar, vocabulary, and style choices so they can keep getting better and learn on their own. These affordances align with the components of personalized education that emphasize learner autonomy, differentiated instruction, and individualized feedback.

Although prospects of AI in education are high, the significant majority of the current research has been overly technical. As an example, it has prioritized the accuracy of NLP, better machine learning algorithms (MLA), and new training data, and it has frequently neglected the pedagogical and human-centered factors. The criteria of success should be the effectiveness of these systems on the interaction, motivation, and language development of a person, despite the significance of technical development. Unless these aspects are considered, AI is likely to turn into a technically impressive, yet not particularly helpful learning tool.

This research addresses this gap by explaining how smart AI agents can contribute to the process of learning the English language within the context of personalized education. This paper shows the possible advantages of AI, and a handful of concerns that can be raised towards its implementation into the educational environment, including ethical concerns, data security, and the necessity to be culturally inclusive. The article is supposed to provide significant synthesis to

teachers who consider learning about the means of effective implementation of technologies into classrooms, developers who are interested in creating fair artificial intelligence systems, as well as policymakers who are interested in providing fair implementation. The article introduces intelligent artificial intelligence (AI) users as a new technological and scholarly innovation, which requires maintaining the optimal balance of a technical skill, epistemological knowledge, and ethical behavior to have a transformative application in English language teaching.

Research Objectives

1. To examine the extent to which intelligent AI agents improve learners' accuracy in English language skills, including grammar, vocabulary, and communication.
2. To analyze how intelligent AI agents create personalized and adaptive learning pathways tailored to individual learner needs and proficiency levels.
3. To assess the inclusivity and adaptability of intelligent AI agents in supporting learners across diverse linguistic, cultural, and educational contexts.

Research Questions

1. How do intelligent AI agents enhance the accuracy of English language learning in areas such as grammar, vocabulary, and communication?
2. In what ways do intelligent AI agents provide personalized and adaptive learning experiences that meet the unique needs of individual learners?
3. To what extent are intelligent AI agents adaptable and inclusive across different linguistic, cultural, and resource-based educational settings?

Significance of the study

The value of this study consists in the fact that it gives empirical evidence of how intelligent AI agents will be useful when it comes to learning English and personalized learning. It highlights the fact that AI can improve grammar, vocabulary, fluency and reading comprehension with tangible benefits to learners. The two analyses will assist the educators and curriculum developers to apply the AI tools in the learning requirements, in the traditional classrooms as well as in online learning environments. Such areas as personalization and adaptability, which are mentioned in the study, should be developed by software developers and AI specialists. There are also policy implications and policymakers can use such discoveries to develop regulations on the manner AI should be used in just and ethical schools. In sum, the research study adds to our theory and practice knowledge, which helps us to decide on the ways to use AI in the English language learning settings worldwide.

Literature Review

Intelligent AI Agents in Education

The industry is predominant with talks of successful-AI-agents, ones that are groundbreaking and inspiring for education; not just normal "quiet-time-software". This involves students interacting directly using their own spoken language with cyber intelligent entities, employing computational intelligence (machine learning), natural language processing and talk recognition. Not like most programs where the lame is known. Such models are trained not only to understand the students'

input, but to react and behave as would a human in order to provide students with a more conversational and natural educational experience. Examples could include AI-powered chatbots that support competitive quizzes (e.g., on Duolingo), virtual tutors that automatically create interactive exercises and answer student questions using platforms like ChatGPT, or writing assistants like Grammarly that provide real-time feedback on grammar, spelling, and style.

However, the literature generally agrees that AI agents interact with learners by replicating conversational exchanges and offering students non-threatening practicing opportunities (Yin & Satar, 2020). This is even more important when it comes to language, for, students are generally shy in speaking and fear making mistakes thus hesitates a lot. Smart agents foster safe, caring, learner-centered environments conducive to exploration, confidence building, and risk taking by emulating human language use and offering ongoing feedback. So, not only does it add to traditional teaching, but it also makes up for the lack of teacher support in some areas.

Personalized Education Frameworks

Over the recent years, personalized learning has been on the increase as teachers are finding that it is not good to teach everyone the same way. Time is a problem with our traditional classes as our classes are big and not all the students have the same interest. This makes it difficult to teach in an all-inclusive manner. Smart AI agents can cover this gap since they depend on the data to create personalized experience and adapt to the visible. Such systems can use the weak points to base instruction and predict obstacles to learning by examining the input of students in real time.

An example would be adaptive systems where the student is monitored on their grammar or comprehension errors and then provided with exercises that are unique to them to repeat until they are correct. Such approach of personalizing allows students to work at their own speed and in such a way, things become easier to grasp as well as are not as frustrating. Pane et al. (2018) argue that AI-guided personalization can positively affect the results of education, particularly in underperforming students, or students with different levels of proficiency. The ability to offer timely advice, ordered support and self-adaptive evaluations that AI agents offer conforms to the basic concepts of learner-centered learning, thus again confirming their status as important contributors to individualized learning.

Applications in English Language Learning

The three main skills, reading, writing, and speaking have also been served by intelligent AI agents in ESL. Chatbots based on conversation and voice-activated agents can provide learners with real-time feedback on their pronunciation, and, thereby, make them more fluent or confident by repeating those sounds a lot (Liu et al., 2021). Writing language support applications such as Grammar and other tools that rely on artificial intelligence can assist individuals to write better by providing them real-time feedback on grammar, vocabulary, and coherence (O'Neill and Russell, 2019).

AI agents also assist users in learning vocabulary by use of adaptive flashcard systems whereby vocabulary lists automatically update as memory retention rates of learners vary, and that words remain on the table until they are internalized. Similarly, reading and listening comprehension web pages modify the difficulty level of the texts or speech to be read or listened to on the current capabilities of the learner with the level of difficulty increasing when understanding is shown to be interesting without being consciously intimidating. Collectively these applications demonstrate the comprehensive role AI agents could take that is exploiting many capabilities to create coherent

learning paths. Above all, these SBU systems will allow students to learn independently without the presence of a teacher outside the classroom setting.

Challenges in Implementation

However, the concept of intelligent AI agents with respect to ELIL is also associated with certain issues. The issue of data privacy is a major concern, particularly because such systems tend to require large volumes of student data to be gathered, kept, and processed in order to be functional. In the absence of strict ethical controls, such risks may lead to a situation where the data of the students is subject to abuse or theft. After this, there is the issue of algorithmic bias. Moreover, when AI agents are mostly trained on the data provided by a dominant language or cultural group, they could also not be as effective in the individual who belongs to the underrepresented group; further increasing existing disparities (Bender et al., 2021).

The adjustment to the culture is another issue. Nevertheless, idiomatic constructions, local dialects, or style of communicating that is culturally conditioned remain incomprehensible to a great number of AI agents. This may render them less helpful in other circumstances among the learners (Li et al., 2022). Moreover, digital divide generates disparities in access to the digital infrastructural, and may lead to the fact that the learners in deprived backgrounds will be excluded in the benefits of AI-mediated education, further polarizing the haves and have nots into the periphery. The problems show the importance of intelligent AI agents integration into the educational process in a manner that is responsible, ethical, and context-sensitive. The challenge is that, in the opinion of Kaplan, even software to aid the development of intelligent tools and courses may also serve as an obstacle. This makes it necessary that we need to make sure that the developers, educators and policy makers are working together so that the technology used is inclusive, fair as well as pedagogically suitable.

Research Methodology

Research Design

A quantitative method was considered useful as it allows researchers to collect objective and quantifiable data about learner experience, proficiency progress and perception of AI tools. The design was based on a standardized questionnaire, enabling the systematic accumulation of data over a large number of participants with homogeneity in terms of responding. Such an approach enabled the application of statistical analysis -descriptive analyses, correlation and regression- to validate the findings (Creswell & Creswell, 2018).

Population

The participants of this study were the AI researchers, language teachers of English language, and IT experts who had the experience to use or develop an AI-based learning tool. This population was chosen based on their technological and pedagogical expertise, which would allow them to further determine the effectiveness of intelligent AI agents for learning English as a new language. The participation of practitioners from universities, language institutes and technology companies also led to collected perspectives that are grounded on both an academic and industry scenarios of AI in education.

Sampling

The researchers selected purposive sampling as the most relevant methodology since it enabled the researcher to select the individuals who were interested in the area of AI application and language teaching with the aim of knowledge collection. We had 250 participants as our sample size, and that was sufficient to perform proper statistical inquiry, but could apply in a real-life survey. This size ensured diversity of perspectives and it was as well targeted at individuals with first hand experiences and professional involvement in the sector of AI-based education systems.

Research Tool

Data collection tool was a 20 item Likert-type questionnaire. The questionnaire consisted of three key dimensions, which were based on our research questions: (1) language learning (grammar, vocabulary, and communication) achievement, (2) customization and adaptive learning pathways, and (3) inclusiveness and cross-cultural generalizability. The items were all mentioned on a five-point scale between (1 = Strongly Disagree) and 5 = strongly agree) and participants were provided with the chance to respond to their level of agreement with every statement. To ascertain the instrument validity of the tool, specialists in AI and education reviewed it, and a pilot test was carried out with a smaller sample, before it was introduced.

Data Collection Technique

The data were collected with the help of a 20 item questionnaire of a Likert kind. Our research questions led us to come up with three main dimensions in the questionnaire; respondents (1) as far as the attainment of language learning (grammar, vocabulary and communication), (2) personalization/adaptive learning paths and (3) inclusiveness and generalizability across cultural contexts. The five points of the scale between 1 (Strongly Disagree) and 5 (Strongly Agree) allowed the participants to demonstrate the degree to which they agreed with every sentence. To ensure the validity of the instrument, it was reviewed by professionals in AI and curriculum development and a pilot test was carried out over a small sample before it was distributed.

Data Analysis

The 26th version of the Statistical Package of Social Sciences (SPSS) was used to analyze the data. It was a three step analysis. First, descriptive statistics, i.e., mean, standard deviation, frequency, and percentage were used to present an overview of the responses and to give a general picture of what people believe intelligent AI agents can help them to learn English. Second, we presented a correlation analysis (Pearson r), which confirms the strength and direction of the relationship between the variables of AI integration and accuracy, personalization and inclusivity in learning. Finally, the multiple regression technique was also implemented to establish the chance of the AI applications to help with the language learning and personalized learning. These methods provided the very superficial information and the full statistical data to provide a profound analysis of the study purposes.

Table 1: Descriptive Statistics of AI's Role in English Language Learning (N = 250)

Variable	Mean	SD
AI and Accuracy in Linguistic Learning	4.22	0.53
AI and Semantic/Contextual Understanding	4.36	0.49
AI and Multilingual/Adaptive Inclusivity	4.11	0.61

Note. Responses were measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Table 1 shows the descriptive statistics for the three main aspects of AI in English language learning: linguistic learning accuracy, semantic/contextual comprehension and multilingual and adaptive inclusivity. The scores on all three dimensions are above 4.0 (on a scale of 1 to 5), which means that the people who answered strongly agreed that AI has a positive effect in these situations. The mean score was highest for Street and Buster animations in semantic and contextual understanding (M = 4.36, SD = 0.49), indicating that participants perceive AI agents as highly effective in meaning representation, managing ambiguity, and context-based learning tasks. The next highest rating was for accuracy in language learning (M = 4.22, SD = 0.53), which means that people believed that AI could improve grammatical and lexical correctness and structural accuracy. The variable with the lowest mean (M = 4.11, SD = 0.61) is multilingual/adaptive inclusivity. This means that AI tools can help learners from different backgrounds, but it might still be hard to include everyone from different cultures and languages.

Table 2: Correlation Matrix of AI Applications and Learning Outcomes

Variable	1	2	3
1. Accuracy in Linguistic Learning	1	.72**	.68**
2. Semantic/Contextual Understanding	.72**	1	.74**
3. Multilingual/Adaptive Inclusivity	.68**	.74**	1

Note.p< .01. All correlations are significant.

Table 2, which indicate the strength of associations among the three factors of AI for language learning application. The findings suggest strong and significant positive relationships for all variables. The relationship between semantic/ contextual and multilingual inclusivity was the highest (r =. 74, p <. 01), highlighting that advances in AI's semantic processing also enhance transferring skills to different linguistic environments. A comparable positive relation was found between accuracy and semantic processing (r =. 72, p <. 01) indicating that improvements in model accuracy rely heavily on advances in context understanding. Association of accuracy and inclusiveness (r =. 68, p <. 01) was somewhat attenuated but still robust. Taken together, these results indicate that AI steps in English learning are correlated to each other and mutually reinforced.

Table 3: Regression Analysis Predicting English Language Learning from AI Applications

Predictor	β	t	p
Accuracy in Linguistic Learning	.40	6.15	.000
Semantic/Contextual Understanding	.39	5.94	.000
Multilingual/Adaptive Inclusivity	.29	4.75	.000

Model Summary: $R^2 = .64$, $F(3, 246) = 141.07$, $p < .001$

The results of the multiple regression analysis that examined the extent to which AI apps could assist people to learn English are indicated in Table 3. All the three predictors were found to be significant meaning that accuracy, semantic scene and multilingual content can be used to predict learning. The most predictive element was accuracy in linguistic learning (which had a value of =.40 and t = 6.15 with p value of =.001) which meant that AI made grammar, vocabulary, and structural accuracy significantly better. The importance of semantic and contextual knowledge was also revealed as a powerful predictor (5.94 -1 =.39, t =.39, p =. 001), which demonstrated the efficacy of AI in developing a more profound understanding and application of the English language in real-life situations. The effect of multilingual and/or adaptive inclusivity was also less strong but significant (2 =. 29, t = 4.75, p =. 001), which means that AI agents has a positive effect on creating inclusive and diverse learning environments, but not as much as accuracy and semantic understanding. The general R-squared of the model was R 2 =.64. It implies that, the applications moderately influenced (4% more) the intention of the students to learn English and accounted 64% of the variation in their learning achievements. Therefore, the application of AI has a significant influence on the teaching of English.

Table 4: Objective-Wise Analysis of Results (N = 250)

Research Objective	Mean (SD)	Correlation (r)	Regression Coefficient (β)	Significance (p)
To examine the relationship between AI agents and linguistic accuracy	4.22 (0.53)	.72**	.40	.000
To analyze how AI agents enhance semantic and contextual understanding	4.36 (0.49)	.74**	.39	.000
To assess the adaptability of AI agents in multilingual and inclusive contexts	4.11 (0.61)	.68**	.29	.000

Note.p< .01. All correlations are significant.

The results are summarized in table 4 that was formatted based on the three objectives of the research. The first hypothesis, which explored the effect of the AI agents on linguistic accuracy (H1), had a strong agreement with an average of 4.22 (SD = 0.53) and a correlation value of. 72 and the regression coefficient 8 =.40 further demonstrates that AI is quite effective in enhancing accuracy in learning the English language. The second aim that examined the input of AI in the process of semantic and contextual understanding provided the best mean value (M = 4.36, SD = 0rder me\th:47) and the largest coefficient of correlation (r =. 74, with 8 =.39). It shows that the greatest contributions that AI agents make to learning English are semantic and contextual enrichment. The third result that had more middle-range outcomes (M = 4.11, SD = 0.61) was the flexibility of AI in a wide range of multilingual and inclusive contexts, correlated with .68 and b = .29. Those could be assumed to be less developed areas of AI adoption, though still significant, namely flexibility and inclusion. In conclusion, the table indicates that AI agents prove most effective in enhancing semantic understanding, and it is closely followed by accuracy, but it needs to improve in regard to inclusivity and adaptability.

Findings

These findings justify the powerful claims that smart AI avatars have a substantial influence (positive or negative) on learning English as a second/foreign language for several plausible reasons. The overall mean and standard deviation of each introduction level are shown on Table II,

based on a 1-5 Likert scale (1: totally disagree; 5: completely agree). The numbers suggested agreement in the effectiveness of AI technologies, since most were rated beyond 4.0. It shows that the biggest help of top AI agent towards learning English is in improving the semantics and context. A third consequence associated with moderately high impacts (M = 4.11, SD = 0.61) was the portability of AI in different formats and multilingual scenarios (. 68 and b =. 29). Therefore, we prioritize flexibility and accessibility, which we think are indispensable albeit somewhat more preliminary ones. Ultimately, the table shows that AI agents are significantly improving in semantic understanding, a close second to accuracy, but there is room for improvement in inclusivity and adaptability.

These results were also supported by the correlation analysis, which indicated a strong and significant relationship between the three input factors (p<. 05). The multilingual inclusion relationship is the strongest (although modest (r =. 74, p <. 01), then AI's ability to learn meaning (e.g., words for other people) and context may even transcend cultural and linguistic barriers. The association between accuracy and semantic understanding was not significant (r =. 72, p <. 01), illustrating how accuracy to understand (language learning) is related to depth of communication. The correlation between accuracy and inclusivity was slightly less strong (r =. 68, p <. 01), but it was still there. This demonstrates that the AJ systems benefit all domains and often advancing in one domain is correlated to advances in other areas.

The regression analysis demonstrated that all three predictors (accuracy, semantic comprehension, and inclusivity) were significant in elucidating English language acquisition. Of these, linguistic learning accuracy was the strongest predictor (β =. 40, t = 6.15, p <. 001), showing that AI-guided tools like grammar checkers, writing assistants, and pronunciation evaluators can help students improve their language skills. Semantic and contextual interpretation ranked next (β =. 39, t = 5.94, p <. 001), further emphasizing AI's role in enhancing comprehension and interpretative skills, transcending mere superficial word processing. Multilingual and adaptive inclusivity also made a big difference (β =. 29, t = 4.75, p <. 001), but not as much. This could be because the AI is trying to be more inclusive overall, but getting equal performance in different cultural and language practices is much harder. The overall model was strong, with 64% of the variance accounted for (R^2 =. 64), which shows how much AI apps help people learn English.

From the perspective of research, the findings can present a systematic hierarchy of the roles of AI. In this study, the hypothesis of the first aim – AI and predicting linguistic accuracy – was well supported. It presented high mean values, and the variables had high correlations. The second aim – aim of meaning-based learning – can be noted as the most important improvement. The study showed that cognitive artificial agents truly provide meaningful and contextually rich feedback to the learners. Finally, regarding the inclusivity test of multilingual adaptation and inclusion, there were positive results, which were, however, reasons for somewhat depressive conclusions. On the one side, there is potential as to how AI tools can support the needs of learners of all languages and cultures. Yet, the given potential is only about potential: people from various countries and regions are still not ready to adapt these tools with equal opportunities. Summarizing, these research experiment outcomes once again show how intelligent AI agents change the process of English acquiring fundamentally. They promote people to read both correctly and fluently, understand things better, and provide responsive way of learning that would exactly relate to individual needs of a person. However, the inclusivity values are smaller, which shows that more is to be done before learners of socio-cultural and language difference will be able use AI systems.

Discussion

Its results suggest that intelligent AI agents would help people to learn English more effectively, which is consistent with the prior literature on how AI is transforming education. One such factor may be the language proficiency of AI systems like grammar checkers, writing assistants and pronunciation analyzers since they can correct/ give feedback easily within a quick span. This fact is consistent with the results of O'Neill and Russell The impact of software used by EFL writers on the quality and effectiveness of writing (2019) in that Grammarly has contributed to generating fluency in writing, and somehow grammar fluency at least, for providing immediate corrective feedback, via correcting mistakes or suggesting what might be considered a mistake. Liu et al. (2021) also have reproduced the latter finding and found that AICAs were more effective than others in boosting students' speaking confidence and accuracy, again confirming our hypothesis that AI intervention to strengthen language learning structural aspects was the most successful.

The most significant result of the research was the better understanding of semantics and context, gaining the maximum mark in all the analyses. This comes in view of the growing ability of AI to create meaning, understand speech, and become more context-based through complex natural language processing (NLP) approaches. However, this makes me doubt that AI systems are able to act in such directions. These instructions to some degree may be regarded as dependence or an addiction to natural language interpretation, not to mention that they are based on heuristic representations. Transformer-based systems, including BERT (Devlin et al., 2019) and GPT (Brown et al., 2020; OpenAI, 2023) have taken steps in the right direction by creating contextual embeddings, which are capable of allowing machines to learn language. The other discovery of Zhao et al. (2021) is that contextually aware AI agents can be used to give even more detailed feedback to learners compared to surface corrections. This paper reinforces the findings of other scholars by proposing that semantic understanding is the most beneficial adding value of AI to education in the perspectives of students.

The other important research finding is that multilingual adaptability and inclusiveness are positively related to one another in a weak manner. The inclusiveness association is positive, but the prediction of things by AI agents is not as effective as that of accuracy or semantic comprehension. This is in conformity with the objections raised in the literature on variations of AI performance on linguistic and cultural circumstances. Bender et al. (2021) cautioned on the dangers of the so-called random parrots, as the large language models can be actively resistant to bias and neglect the languages under-represented. On their part, Li et al. (2022) have also discovered that AI agents that had been trained on high-resource languages and English do not generalize well to the low-resource language context. These criticisms align with the conclusions of this study, meaning that even though AI is being advanced to be more inclusive, there remains much to accomplish to allow AI to assist learners with varied backgrounds.

In conclusion, from literature review and recent teacher education policy shifts, we have discussed potential roles of AI agents which may be applied with customized learning systems. It is also needless to mention AI powered personalization flexibility has simplified self-paced and personalized learning process that is presented by Pane et al. (2018). Consistent with this, is the situation when the learners genuinely have a crush on the AI agent employed in their adaptive and personalized learning. Here is does seem to imply that there is something beneficial with human teaching methods instead of a completely automated training, from which we can obtain highlights that it isn't easy to have in the large classroom. This view is consistent with that of Chen et al. (2020) who also focus on scaling AI for personalized education to diverse classrooms.

The results also suggested the warning and limit of AI deployment in education. There is also evidence that some A.I. tools used in training and educational activities can substantially boost accuracy and learning — but with a cautionary note about the risks of losing touch by relying too much on technology. Handling later models noised empirically unfitting answers under the carpet with small noise. In addition, the ethical data privacy and algorithmic fairness of such models are still major issues. Bender et al. (2021) argue that open design principles, if not implemented in AI for education, will create unintended inequality. We do hope that, with the appearance of cases where AI agents are reading from at least this commentary there will be some changes in how English is taught — more focused and discreetly on the one hand and clearer–and tailored on the other. The findings in these studies also pour oil on the need for mixed-methods, where learners must undoubtedly use AI agents as an augmentation in presence with a human agent so that they can get personalized support and adaptive guidance and such culture, honesty and criticism which teacher (but not AI till now) does provide.

Conclusion

The aim of the study was to investigate how intelligent AI agents can affect English learning and individual learning in general. A mixed-method empirical approach was taken on how the teachers, researchers and ICT professionals working in education in Finland predict that AI can impact linguistic accuracy and semantic or contextual understanding as well as multilingual learning systems. That's evidence enough that the applications of AI imagined in this article don't exist to a high standard, but it isn't proof. The results demonstrate that having intelligent AI agents as pedagogical surrogates is feasible, and implementing such teacher-like robot EGAs may change the way we teach English.

One interesting thing this research found is that the A.I. agent did in fact improve language accuracy a lot. Findings showed that tools such as grammar checkers, writing aids and pronunciation rating had beneficial role in improving drafting skills and reducing errors for targets (grammar, language), usage), communication). This fact answers directly to the first reference question, and demonstrates that inherent accuracy is one of the most prominent point concerning AI-based language learning.

Secondly, it was found that semantic and contextual knowledge were the two areas in which users showed the maximum improvement while communicating with AI agents. With better natural language processing and embedding, AI in education helps students to learn new words by meaning rather than memorization and absorption in a simplistic way. The finding in itself is a response to RQ2, but it also suggests that semantic meaning is the most revolutionary impact of AI on English teacher.

The study also shows that AI agents are making it easier for people to adapt to and include multiple languages, but their development is still not very advanced. Learners and experts acknowledge AI's potential to meet various linguistic requirements; however, our findings indicate difficulties in tackling low-resource language environments and maintaining cultural authenticity. This finding supports our third research goal and shows that modern AI systems are both strong and weak when it comes to inclusivity. However, more work is needed to make sure that everyone can use them fairly around the world.

In general, these results show that smart AI agents can help make personalized education a reality. AI can help reach educational goals that are hard to reach in traditional classrooms by giving each

student personalized content, instant feedback, and the ability to learn on their own. The study also stresses that AI can only be used successfully in education if the technology is very good. To make sure that everyone can benefit from AI technology, it must also be carefully designed to take into account fairness, ethics, explain ability, and cultural acceptability.

Recommendations

The current artificial intelligence (AI) half works in Lang transfer regarding grammar correction, contextuality enhancer and vocabulary editor. However, in culture rich language scenarios scarce resources make such approaches still challenging. "What they really need to do however is work a lot harder at teaching their AI agents about the culture, so it can start thinking not only how to talk differently but how different people from different places speaking and representing information. This complete training material make-over will also mean more inclusion and global recognition when it brings in some of the many underrepresented languages.

The research advocates the integration of smart AI agents in the utilization of blended learning as a complement but not a substitute to traditional class instruction. AI services can offer autonomous learning activities for students, feedback tailored to individual students as well as learning trajectories that develop across use. Teachers can also provide social, cultural and emotional dimensions to learning that A.I. cannot replicate. To get the most out of AI in the classroom, teachers should learn how to use it. This will make sure that its automated benefits are passed on and that teachers don't misuse it by relying on automated feedback or misunderstanding it.

Policymakers and schools are very important for making sure that AI is used in education in a fair and ethical way. To protect students' privacy, make algorithms more open, and reduce the chance of bias in AI-based educational tools, there needs to be clear rules. Policies should put accessibility first, especially in areas with few resources where a lack of technology can keep students from taking advantage of AI advances. To stop the digital divide from getting worse, we need to invest in digital infrastructure that is affordable and make sure that everyone has equal access to AI-based educational content.

It is also recommended that there should be a further expansion of the physiological study on the effect of AI to experimental and longitudinal study mode in order to examine the contribution made by AI towards second language acquisition. Better proof of the efficacy of AI would be controlled research showing sustained gains in grammar and fluency and comprehension. The study of cultural and linguistic relativity is also necessary to investigate the extent to which functions of such systems are inclusive. This investigation did not (only) provide teachers with quality open tools, but provided an infrastructure based on new exchange opportunities between AI and education in the sense of a sound way.

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