

Article

# New Possibilities of Artificial Intelligence-Assisted Language Learning (AIALL): Comparing Visions from the East and the West

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**Abstract:** Despite the benefits of artificial intelligence-assisted language learning (AIALL) for students and teachers, the scientific literature in this field remains relatively scarce, especially regarding the perceptions of language teachers. This paper aims to narrow this research gap by considering the potential cultural differences between in-service language teachers by comparing and contrasting the attitudes of language teachers located in different contexts (i.e., Eastern and Western countries) towards AIALL. Following a qualitative research approach and a descriptive, transversal, and correlational method, a six-question semi-structured interview was designed and administered to unveil the perceptions of six language teachers located both in Eastern (i.e., Vietnam, Iran, and Indonesia) and Western (i.e., Spain, Germany, and the United Kingdom) countries. The findings show that the participants were positive about the potential of AIALL for teaching and learning languages, although they all showed a certain anxiety regardless of their context. Moreover, and although there were shared concerns, differences were found between Eastern and Western participants, especially concerning equitable access, balance between language skills, and ethical aspects. This study reveals that teacher training is essential to introduce AIALL in the classroom, and that practitioners need to rethink assessment to avoid plagiarism and cheating, but also to take advantage of AIALL.

**Keywords:** artificial intelligence-assisted language learning; comparative study; culture-related perceptions; qualitative research; teachers' attitudes



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## 1. Introduction

Language learning has certainly acquired great importance in today's globalized and multicultural world. In this sense, being able to communicate in languages other than one's first tongue has become a social, professional, and educational requirement for many people [1] and, thus, an essential objective of education systems around the world [2], which today develop policies that differ significantly from traditional grammar-centered language teaching paradigms. Language education in the present is characterized by an emphasis on real-world communication, intercultural awareness, and pragmatics [3], which has translated into the development of new methods and proposals to enhance language learning and teaching that are constantly being explored and implemented in schools.

In addition, technological advances have proliferated during the last decades, influencing all spheres of human life and changing our daily lives as we know them. Technology has notably impacted education in general and language education in particular, and proof of this is the increasing number of approaches to language learning and teaching that encourage the integration of different types of technologies in the language classroom [4]. Among the existing technologies, artificial intelligence (AI) has recently grown in relevance in the global scene as a result of its increasing availability to everyone. Indeed, AI is revolutionizing people's daily lives, the labor market, businesses and, of course, education.

“Much of the Artificial Intelligence in Education (AIED) involves the application of AI techniques to mainstream learning approaches, and tends to reflect (or automate) existing educational assumptions and practices. (...) This approach, while potentially useful in contexts where teachers are few and far between, clearly undervalues teachers’ unique skills and experiences, as well as learners’ needs for social learning and guidance. However, instead of just automating the teaching of students sat at computers, conceivably AI might help open up teaching and learning possibilities that are otherwise difficult to achieve, that challenge existing pedagogies, or that help teachers to be more effective”.

[5] (pp. 621–622)

Although AI in education is nothing new [6], there has been an increasing interest in research in recent years. From a general perspective, scholars claim that the integration of AI in education will lead to a new model of educational development and promote better teaching and learning [7], mainly because it offers interesting benefits for personalization [8] and improved learning outcomes [9]. Nevertheless, AI also presents substantial risks, mainly related to data and privacy protection [10] and factual errors [11].

In the field of language education, some studies point to the origins of the introduction of AI with the development of intelligent tutoring systems in the 1980s [12]. Since then, new concepts have emerged in an attempt to specifically refer to the application of AI in language teaching and learning. Among the different options, this paper uses artificial intelligence-assisted language learning (AIALL). Although the scientific literature on AIALL remains relatively scarce, research has shown its potential to adapt the language learning experience to students’ interests and needs [13]. Moreover, AIALL offers possibilities for fast and effective feedback regarding grammar, writing, and translation [6], which may also have the positive effects of reducing learners’ frustration and increasing their motivation. AIALL might also be useful for teachers to analyze each student’s production in detail in large classes [14], and it also helps learners practice the target language anywhere and anytime [13]. In any case, language teachers need to be properly trained to integrate AI tools into their teaching by means of collaborative learning, mentorship, and support and guidance, among other options [15].

Despite the potential of AIALL elucidated in research, the literature in this field is still limited, especially with regard to the perceptions of language teachers. In this light, this paper aims to contribute to narrowing this research gap by considering the potential cultural differences between in-service language teachers by comparing and contrasting the attitudes of language teachers located in different contexts (i.e., Eastern and Western countries) towards AIALL.

## 2. Materials and Methods

The design of this study was developed under a qualitative research approach and a method that was descriptive, transversal, and correlational.

### 2.1. Objective and Research Questions

This research aims to explore and compare the attitudes towards AIALL held by language teachers located in different contexts (i.e., Eastern and Western countries) in order to shed light on its potential, as well as to identify the main similarities and differences regarding the practitioners’ workplaces. The guiding research questions (RQs) for this study were as follows:

- RQ1: What are the attitudes of in-service language teachers around the globe towards AIALL?
- RQ2: To what extent does the context impact the attitudes of in-service language teachers towards AIALL considering whether they work in an Eastern or a Western country?

## 2.2. Participants

A non-probabilistic sample based on convenience was used for the selection of the participants, as “[c]onvenience samples, like other kinds of nonprobability samples, are particularly useful for exploratory or ground breaking research on relatively unstudied topics or new areas” [16] (p. 1). Moreover, the researchers also used a purposive sampling process, considering its benefits in qualitative research: “What would be “bias” in statistical sampling, and therefore a weakness, becomes intended focus in qualitative sampling, and therefore a strength. Studying information-rich cases yields insights and in-depth understanding rather than empirical generalizations” [17] (p. 1).

Intentional eligibility criteria were based on volunteering and origin, aiming at having the same number of participants from Eastern and Western countries. Six participants were finally selected for this study, whose demographic information is shown in Table 1.

**Table 1.** Participants’ profiles.

ID	Gender	Working Country	Years of Experience
P01	Woman	Vietnam (East)	5 years teaching English as a foreign language
P02	Woman	Iran (East)	10 years teaching English as a foreign language + 4 years in education books publishing
P03	Man	Indonesia (East)	5 years teaching EFL
P04	Woman	Spain (West)	2 years teaching English and Spanish as foreign languages
P05	Woman	Germany (West)	13 years teaching English and Spanish as foreign languages
P06	Woman	United Kingdom (West)	30 years teaching French, German, and English as second/foreign languages

Source: own elaboration.

## 2.3. Data Collection and Analysis

The instrument used to gather the information was a semi-structured interview with six questions about (1) advantages of AIALL, (2) disadvantages of AIALL, (3) the potential of AI for language teaching, (4) drawbacks of using AIALL, (5) risks and possible solutions, and (6) the potential of AI for language lesson planning. The participants were informed about the objective of this research, and they gave their explicit informed consent. The interviews were conducted in English or in Spanish (and then translated into English), and all of them were recorded using the videoconferencing app Cisco Webex. All of the responses were anonymized prior to the data analysis.

Data analysis was performed by carrying out content analysis using Atlas.ti (v. 9 for macOS). First, both researchers agreed that the questions used to collect the data played the role of the frame to build up categories for their further independent analysis. Second, the researchers analyzed the data independently, applying the grounded theory [18], and identified the primary relationships as well as connecting strategies to form groups [19]. All of the data were analyzed by using a combination of inductive and deductive coding, with both concept-driven and data-driven categories. Then, the researchers compared their results and discussed the parts that were different to finalize the categories (i.e., groups of codes), codes, and their connections. Finally, in the interpretation phase, concept maps were created to visualize the main codes and the comparisons between groups (i.e., Eastern and Western participants), based on the agreement of the two researchers’ interpretations.

## 2.4. Positionality

Each author’s unique perspective allowed for rich and thorough data collection and analysis. Additionally, the two authors possess different intersecting identities that shaped how and in what ways they contributed to this research. During the analysis and writing processes, the authors were careful to account for their similarities and differences with the participants, as well as how their experiences might impact the data analysis and their interpretations of the participants’ experiences. Research discussions were used to mitigate

the authors' potential influence on the data analysis, and they were also careful to spend extended amounts of time "living with data" [20] for a more refined analysis.

### 3. Results

The findings can be understood from a triple perspective: (i) implications for learning, (ii) implications for teaching, and (iii) specific uses in the language classroom. In this section, we present the findings of these three main categories. For this purpose, first, Eastern views are displayed, then Western perceptions are shown and, finally, those ideas shared by teachers from the East and the West are highlighted. To facilitate the comparison, all of the similarities and differences found between the groups are visually summarized in graphs.

#### 3.1. Implications of Using AIALL for Learning Purposes

All of the Eastern participants considered that AIALL tools are of great help for subskills like vocabulary and grammar, as they may help learners to review their knowledge and check their mistakes. Similarly, they also highlighted the use of automatic translation for learning vocabulary and grammar.

"I can see that nowadays many students use AI as an assistant to improve their vocabulary and their grammar, and to check their grammar mistakes when they have to do any kind of essay for the teachers. Also, they [students] use it to help them with the translation of different texts".

P02

The idea that students can check their own mistakes is also related to enhancing "problem-solving in language learning" (P03). Nevertheless, this learning process is not necessarily individual, but it can also increase students' interactions: "Students do not pay attention all the time, but with the use of AI children can all work together with peers or in groups, they can find solutions for the problems they have together" (P03).

The Western participants, unlike their Eastern counterparts, considered that AIALL tools can especially bridge the gap between written and oral skills in the language classroom.

"I believe that AI can definitely contribute to balancing the weight of the different skills in the learning process of the target language. Written skills have always had a greater weight in foreign language teaching-learning processes than oral skills (...). I believe that the use of artificial intelligence can play a fundamental role in the enhancement of both oral expression and oral comprehension skills".

P05

This is especially relevant in the case of pronunciation, as AI tools may help learners not only to pronounce the words well, but also with "the rhythm and tone of speech so that it is understandable to a person who is not speaking to you in the context of the language classroom" (P05).

Moreover, the Western participants highlighted that AIALL for learning can trigger an increased awareness of the value of language learning, as well as providing immersive experiences so that learners can feel close to real communicative situations.

"In my experience teaching languages in the UK, one of the biggest challenges we have had is actually trying to get students to see the value of learning a language, and we have struggled to sustain students' interest, engagement, and motivation. To overcome this, I think that AI offers incredible potential and opportunities for students to learn a language in a very immersive way".

P06

Nevertheless, as the immersion is simulated, it can decrease students' anxiety and fear of communicating in the target language, so the students' self-image is not at risk:

“[AI] can help students overcome fear. I have noticed that especially in students of a certain age they know the theory, but have a lot of fear of making a mistake or saying something wrong. With AI, the student, knowing that they are not speaking in the real world with another real speaker but with a machine, can overcome that rejection, that initial difficulty, in daring to use the language they are learning, without damaging their self-image”.

P05

Finally, P06 also mentioned that “AI allows students to work in groups. I think both collaboratively but also using cooperative learning strategies. This way they can work more independently, and at their own pace”.

Despite the differences in the voices from the East and the West, the participants shared their views about a series of advantages and benefits of AIALL. The most recurrent advantage was “instant feedback”, which all of the participants mentioned. Moreover, participants from both contexts highlighted the possibility of autonomous revision of consolidation of the language learning process, which is directly related to personalized/individualized learning, as well as to the potential of AIALL for developing language skills anywhere and anytime (i.e., ubiquitous learning). All of this, as the participants agreed, can increase learners’ engagement and motivation.

“I think it [AI] also can increase students’ engagement in the classroom or in the learning process [...]. I think integrating AI in language learning can let the students and also the teacher set their own goals, and then they can also learn not only in the classroom but also they can stay in any place and any time and follow some customized syllabus to learn language”.

P03

Figure 1 below summarizes the similarities and differences between the voices from the East and the West regarding the advantages and benefits of AIALL for learning.

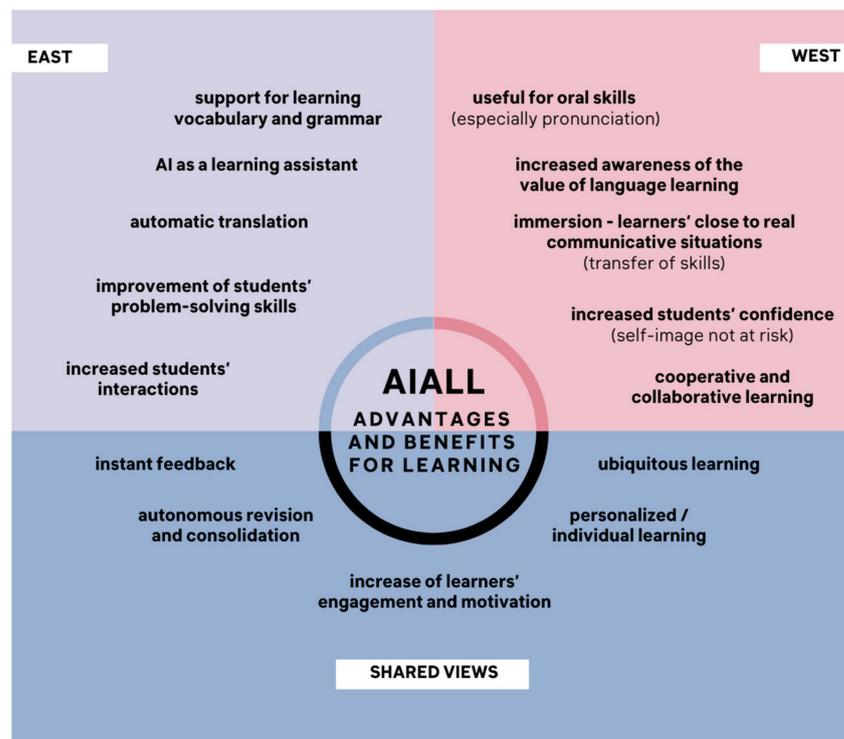


Figure 1. Comparison of the participants’ views on AIALL’s advantages and benefits for learning. Source: own elaboration.

As well as having the aforementioned benefits, the participants also identified a number of challenges related to the integration of AIALL tools in language learning. Eastern participants highlighted that AI can “decrease students’ creativity” and “critical thinking” processes (P02). This is also connected to lack of attention, as using digital devices in general, and AI in particular, may lead to “distractions” (P01). The final key concern highlighted by Eastern language teachers was limited access to AIALL tools, especially in the case of students from a low SES:

“[A disadvantage of AI] is about familiarity with some applications or programs of AI for the students, especially in the schools or in the classroom where the students coming from low-status or low-income families. I think they are not familiar with these—I experienced it myself in my teaching when I showed them an iPad and it was the first time they saw an iPad”.

P03

Regarding the Western participants, it was highlighted that AI can make learners feel “alienated” (P06) as they are not having a real communicative interaction:

“Another element that I think can be counterproductive is that we consider that what the machines [AI] help us with is the real world. But this is like Matrix, it is not real. You have to be like Neo and see beyond the Matrix, and differentiate between real reality and machine reality. That is, a learner learns a foreign language and loses their fear using the machine, but the learner is still in a bubble, and has to face the use of the language in real life conditions”.

P05

This artificial communication may face other obstacles, as language learning is not only about grammar or vocabulary; “pragmatics” is also essential (P05 and P06), including the cultural structures and conventions of the target language. This is necessarily related to potential “cultural and linguistic nuances, as well as potential linguistic errors” (P06). Moreover, as generative AI tools are trained with texts from numerous different sources, there can be “potential linguistic errors” (P04 and P06). The last concern explicitly mentioned by the Western participants was related to the ethical concerns regarding the use of AIALL tools, and they emphasized that specific guidelines on how to integrate them in education need to be developed.

Furthermore, a shared concern of all of the participants from the East and the West was the dependence that AI tools can create, such that learners may even disconnect from the learning process, completely trusting what these apps can provide: “For students who are too dependent on technologies, I just feel like sometimes AI make them become very lazy and they cannot learn anything” (P01). This is directly related to cheating and plagiarism, as P04 also mentioned.

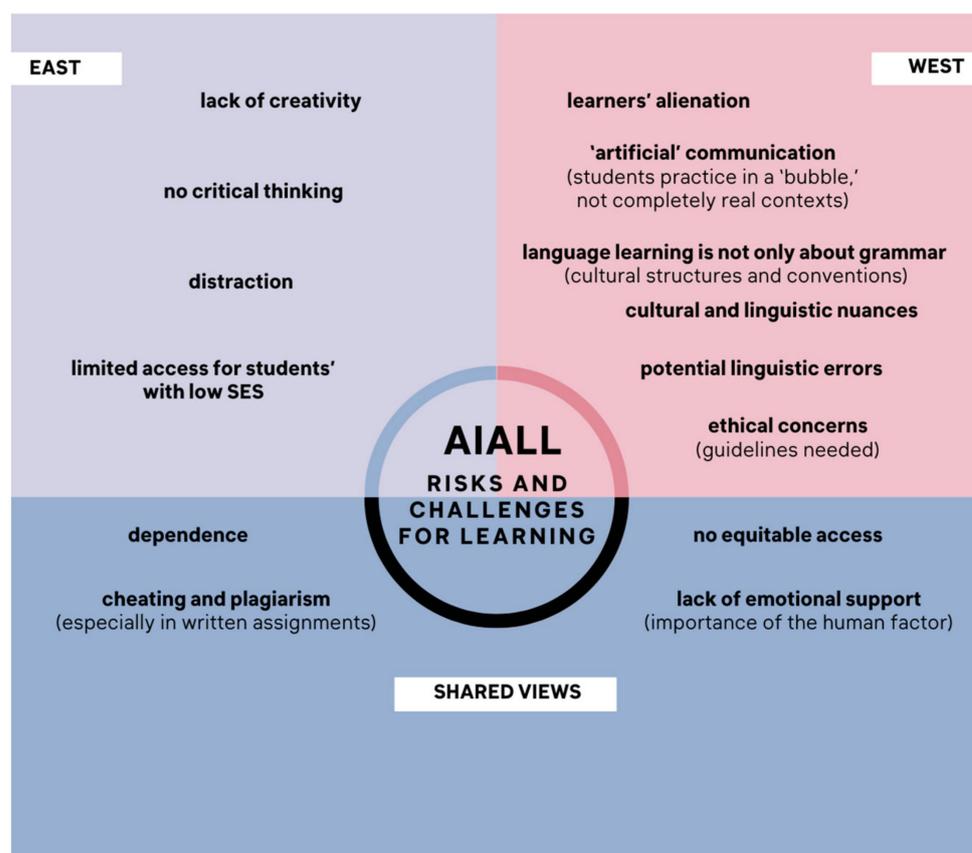
Despite the Eastern participants specifically mentioning low SES and the Western participants emphasizing that ethical concerns should be addressed with clear guidelines, all of the participants shared the idea that the lack of equitable access to AI tools is a big issue that can increase the gaps in education:

“Actually, in Iran we do not have much access to AI tools. . . It is not easy, but when you have access (e.g., ChatGPT) the way you can use it can be stressful from the side of the students, because they compete in unbalanced ways, so it increases inequality among learners”.

P02

Finally, all of the participants agreed on the importance of the “human factor” in the language learning process, as the “long process of learning a language” (P05) requires “emotional support”, which AI tools lack (P01, P03, P05, and P06).

Figure 2 below summarizes the similarities and differences between the voices from the East and the West regarding the risks and challenges of AIALL for learning.



**Figure 2.** Comparison of the participants' views on AIALL's risks and challenges for learning. Source: own elaboration.

### 3.2. Implications of Using AIALL for Teaching Purposes

Focusing now on teaching, the Eastern participants defended the use of AI to create "objective" tests for the students, which can also save teachers time (P01).

"I use some apps in order to create tests (...). I just put the reading there and then AI can create the questions and also the answers and explanation. I think that they [the questions] are even better than the teacher's, because sometimes you can have some opinions and it is very difficult to validate the test yourself".

P01

As with language learning, P02 mentioned that AI tools can also work as "assistants" for teachers, helping them to improve their knowledge and skills. Moreover, P03 stated that AI tools promote student-centered approaches in language teaching, as they allow them to "automatically analyze students' needs" (P02). Furthermore, AIALL tools can create more creative tasks and activities for students, which language teachers may have not used before in their teaching (P01).

A clear potential pinpointed by all of the Western participants is the possibility of balancing the different language skills, bridging the gap between productive and receptive skills. This is also related to increased communication opportunities, even with chatbots, which align with the principles of learning by doing (P05), personalizing the teaching process (P04) with guided and supervised activities (P04 and P06).

"I also believe that AI helps us individualize language teaching. If I want to do an oral activity, it is very difficult to carry it out in a classroom with so many students at the same time. But each student can now do it individually with AI".

P04

P06 also mentioned that AI can be very useful for migrants and refugees thanks to the automatic translation and adaptation that these tools can provide: “Schools are using AI tools and resources to support multilingual learners in terms of sort of translation tools particularly when we have new arrivals that come into UK schools and they have little or no English”.

Moreover, and due to the continuous changes that some countries like Spain have undergone in their educational laws, P04 stated that AI can help teachers when planning lessons and affirmed that “In Spain we always have a lot of problems because the laws change a lot, and it is very confusing. AI can help a lot: you do not have to spend so much time studying the law”.

Regarding the shared visions from the East and the West, all of the participants said that AIALL tools can create and/or adapt personalized materials, which also entails greater adaptability and flexibility in the process of planning the lessons. Furthermore, a shared advantage is the possibility of receiving instant feedback, “even in large groups” (P06).

“...it can provide instant feedback. I think among the AI language learning apps we can find lots of learning applications on language and I think it can also evaluate the essays and also automatically give some feedback about the grammar and also suggest some corrections in terms of the vocabulary use, coherence and cohesion”.

P03

Figure 3 below summarizes the similarities and differences between the voices from the East and the West regarding the advantages and benefits of AIALL for teaching.

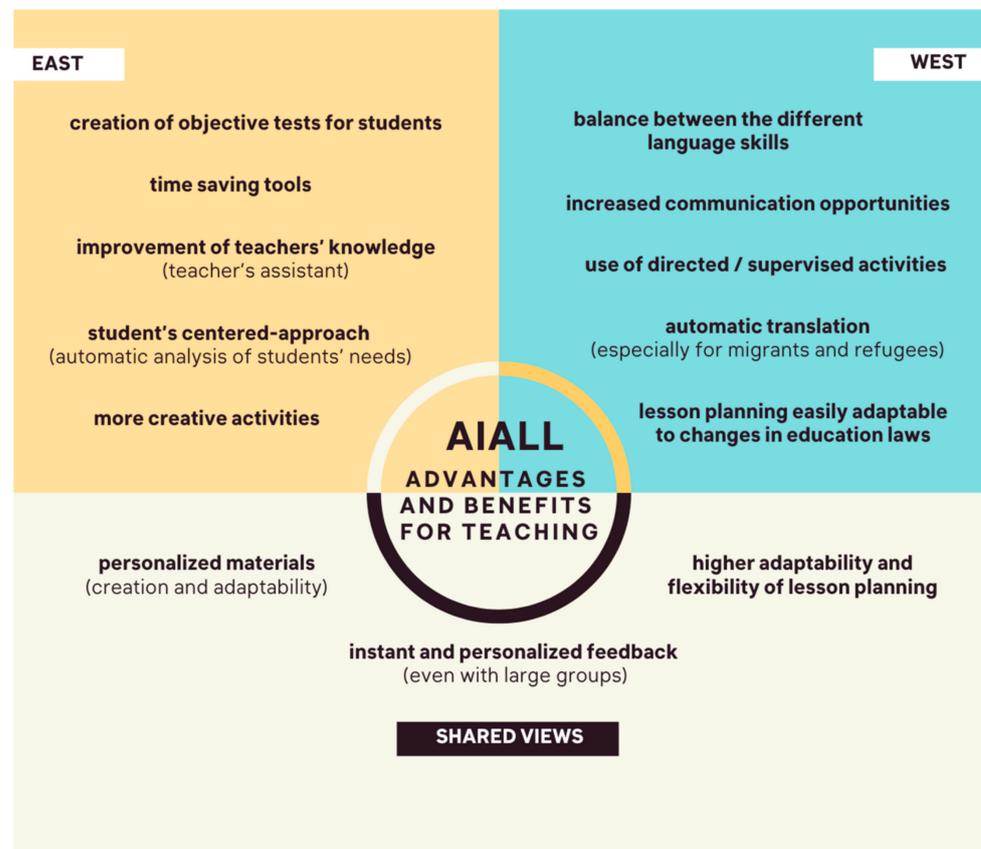


Figure 3. Comparison of the participants’ views on AIALL’s advantages and benefits for teaching. Source: own elaboration.

Regarding the challenges that AI may pose for language teachers, P03 considered that teachers have to be able to filter the applications considering students’ level, age, and

cognitive stage; if not, “it is going to be challenging, because learners may not be able to use the AI”. Similarly, teachers must be aware of the lack of emotional support that AI tools may have (P01).

The Eastern participants were also worried regarding teachers’ professional development, as they considered that AI tools may reduce teachers’ creativity (P02) but also lead to no self-improvement: “when you prepare [a lesson] and you have AI, you become lazier. And when you do not master the content, it is not good for the students. And also the lesson becomes loose, it is not coherent” (P01). Finally, the Eastern participants shared their concerns regarding older, more traditional teachers, whose attitudes towards AI are not positive and who tend to refuse the integration of technology in their teaching.

On the other hand, all of the Western participants affirmed the need for experienced or trained teachers to implement AIALL tools, so that they can guide other teachers as well as learners. This is directly connected with their previous concerns related to learning: the limitations that AI has with pragmatics (P05) and the necessity for clear guidelines to integrate AI in education (P06). P06 also highlighted the role of teachers “for safeguarding students’ safety, especially in the case of younger learners”. Moreover, teachers’ lack of originality is another challenge that was mentioned by the Western teachers: “we have to be very careful especially because I think AI can limit the originality of the teachers: you do not have to think too much because AI can give you almost everything you need” (P04).

Although with different shades and approaches, two key concerns were shared by the Eastern and Western participants: the disquietude derived from the bad use of AI tools, and the necessity for teacher training. Regarding the first axis, all of the participants, regardless of their background, mentioned the “fear” and “anxiety” that AI generates, as well as the increasing “dependence” that it may trigger, leading to “ethical and moral concerns”, including “lack of teaching preparation of their lessons”. All of this is related to the second axis, the necessity for teacher training, as language teachers feel unable to face some of these challenges, the question being “Who can distinguish what a student has done and what has been done with AI?” (P02).

“I just feel like sometimes students could easily cheat and teachers even do not know how students cheat. In my university we always apply some restrictions for students to do the exams. So even when we try to avoid that they cheat, they still find some other ways to cheat. At the time I am not specialized in technology, in AI, so I do not know even they are cheating”.

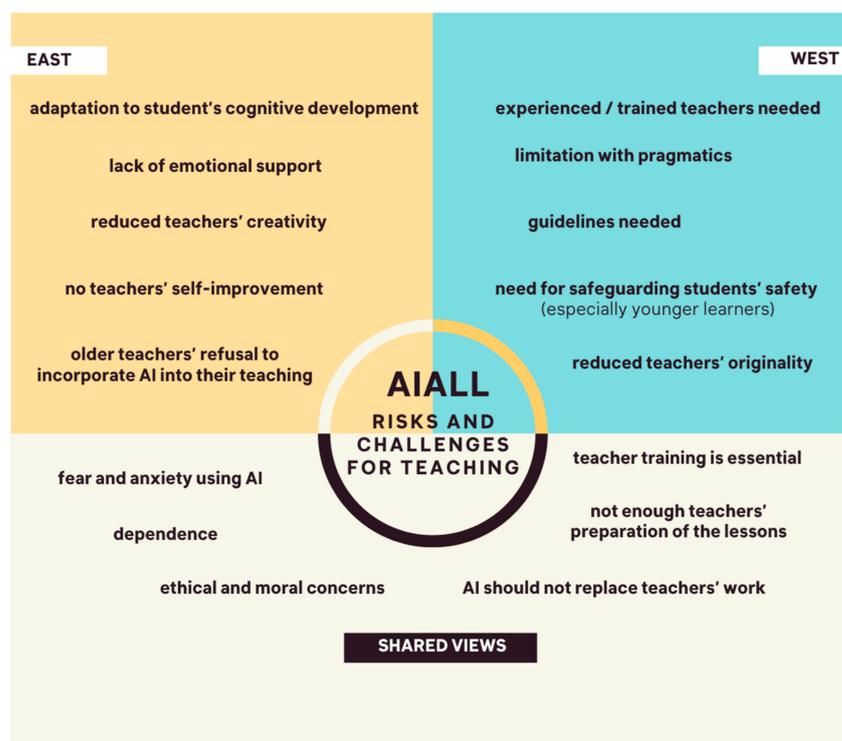
P01

Finally, Eastern and Western participants stated that AI should not replace teachers’ work, as they are the ones who know the students, can identify the students’ needs, and can provide emotional support in the language learning and teaching process.

“... when you let AI do everything, it is very dangerous for the class (...). You need to observe students. They are humans and they also need encouragement, not only the points that you give them with technologies, but also with your speech, your loving speech, especially when they feel disappointed”.

P01

Figure 4 below summarizes the similarities and differences between the voices from the East and the West regarding the risks and challenges of AIALL for teaching.



**Figure 4.** Comparison of the participants' views on AIALL's risks and challenges for teaching. Source: own elaboration.

### 3.3. Apps and Specific Uses of AIALL

The most commonly known AI tool, mentioned by all of the participants, is ChatGPT, a generative language app that is able to hold a conversation with the end user. Nevertheless, other uses of AIALL tools were also mentioned by the participants. For instance, P01 mentioned the usefulness of audiovisual translation in the language classroom.

"...in my university we use movie dubbing (it is like you play some actors and you read the script, you need to speak in the [appropriate] way to show the situation, and in a way to imitate the accent, the voice). So I feel like AI can increase students' pronunciation and also fluency in speaking".

P01

It is also relevant to mention that not only specific AIALL tools can be used to develop skills in the target language:

"A very simple example is: open Google Maps, search for the map of Berlin and try to tell it that you want to go to the Schlossbrücke [ʃlɔs'brʏkə]. It is not the same to say "brücke" as 'brʏkə, 'brik or 'brukə, because maybe it does not understand you. So, when you realize that the machine is not understanding you, then you think "Ah, I'm just not pronouncing it right. I'll try again". This interaction with AI can help you a lot to improve pronunciation as if you were in an immersive situation".

P05

## 4. Discussion, Conclusions, and Practical Implications

This paper has attempted to explore and compare the attitudes of language teachers located in Eastern and Western countries towards AIALL, so as to shed light on its potential and identify the main similarities and differences regarding the considered contexts. In this light, it has been shown that AI may be beneficial for language teaching and learning for a series of reasons, including the fact that it can support the learning of vocabulary and

grammar, improve students' skills such as problem-solving and collaboration, provide real communicative situations, save time for teachers, and offer personalization, adaptability, and flexibility, among others. These ideas are in line with previous research [5]. Nevertheless, some differences were found between the Eastern and Western participants, and some potential risks of AIALL were also raised, such as academic integrity issues and the lack of equitable access to such tools [21].

At this point, it seems relevant to answer the research questions that guided this study. Concerning RQ1 (What are the attitudes of in-service language teachers around the globe towards AIALL?), the participants were generally positive in this regard, although they all showed a certain anxiety regardless of their context. The teachers agreed that instant feedback, ubiquitous learning, personalized and individual learning, increased learners' engagement and motivation, and greater adaptability and flexibility in lesson planning are the main advantages offered by AIALL, coinciding with the views of Holmes et al. [5], who noted that AI helps "teachers/tutors to be better able to support their students" (p. 624), provides "instructional activities, monitor[ing] the student's progress, remind[ing] them when a task needs to be completed, and offer[ing] targeted feedback and guidance" (p. 629), and assists teachers "by automating time-consuming activities such as the marking of classroom or homework assignments" (p. 630), as well as with Huang et al.'s [13] and Chen et al.'s [6] ideas of the potential of AI for ubiquitous language learning and fast and effective feedback.

Nevertheless, the participants also revealed fear, anxiety, and certain concerns, some of which have already been identified by research, such as over-reliance and dependence on AI, along with issues related to cheating and plagiarism [21]. All of the participants also agreed with teacher training being essential in this sense, as teacher training should "inform current and future language teachers about latest AI-powered educational tools, and provide them with the knowledge and skills needed for effective integration of these AI tools into their classes" [14] (p. 144).

As for RQ2 (To what extent does the context impact the attitudes of in-service language teachers towards AIALL considering whether they work in an Eastern or a Western country?), although there were shared concerns between the two contexts regarding the advantages and challenges of AI for language education, there were also differences. In relation to AIALL's advantages, Western teachers believed that it can help bridge the gap between written and oral skills in the language classroom, increase learners' awareness of the value of language learning, or offer real-life-like communicative situations, whereas their Eastern counterparts referred to its potential for increasing students' interactions and creating objective tests for students. With regards to the risks of AIALL, Eastern participants specifically mentioned that the fact that students with low SES may have limited access to AI may hinder equitable access to these tools, while those from Western countries seemed worried about the imbalance between the different language skills, as well as with the ethical concerns.

However, these findings should be interpreted considering certain limitations. On the one hand, a reduced number of respondents were considered for this study due to the exploratory nature of the research, which may mean that the results are not representative of all Eastern and Western countries—not even for the six considered countries. On the other hand, this study was solely qualitative, which may have affected the information provided by the participants, its analysis, and the conclusions drawn. Future studies should consider more respondents from a wider variety of contexts and use additional information sources and methods to obtain data that could complement the findings reported here.

Nevertheless, and considering the opportunities and challenges of AIALL revealed from this study, the following practical pedagogical recommendations could be borne in mind:

- Teacher training is essential to introduce AIALL in the language classroom. In this context, teachers should know and test the AI tools before using them in their lessons, so as to filter what is most appropriate considering their target groups of students.

- Practitioners need to rethink assessment to avoid plagiarism and cheating, but also to take advantage of AIALL in the learning–teaching processes.
- Students’ digital literacy should be improved, as their lack of this competence, connected to the development of AI, may even risk their personal data and privacy.
- Education stakeholders (i.e., teachers, students, headmasters, families) need to have some guidelines regarding the use of AIALL.
- The human factor cannot be removed from education, as not only can teachers identify students’ needs, they can also provide learners with emotional support during the long process of learning a language.

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