

Perceptions of Technology Integration in EFL Context: Spotting Users' Distraction Ratio

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Received: October 11, 2024

Accepted: December 18, 2024

Online Published: March 17, 2025

doi:10.5430/wjel.v15n4p276

URL: <https://doi.org/10.5430/wjel.v15n4p276>

Abstract

This study attempts to explore perceptions toward the impact of technology integration in English as a foreign language setting through adopting mixed methodologies. The two instruments used to collect in-depth details were fifteen online-questionnaires and three face-to-face semi structured interview. The primary hypothesis related to measuring users' perceptions toward usefulness PU and ease of use EofU to reveal willingness scale toward technology-driven tools and technology acceptance model TAM required pre-understanding of the distraction ratio to conclude with authentic, reliable identifications. This study proposed several stages processing collaboratively: distraction ratio, pre-TAM, during operation, post-TAM, assessment, and evaluation. This study concluded with highlighting the importance of properly measuring distraction ratio of language users to authentically and reliably measuring their positive perceptions toward technology integration. Language users' positive attitudes, behaviors, and perceptions toward technology integration would not necessarily improve language proficiency, alternatively consulting technology-driven tools such as ChatGpt and Silatus motivate language users to solely generating their language assignments.

Keywords: Artificial Intelligence, EFL, Language Proficiency, TAM, Technology Integration

1. Introduction

The pedagogical attention has been redirected recently to monitor the effectiveness of technology and Artificial Intelligence (AI) in the field of second (L2) and foreign language (FL) learning and teaching, particularly, processing English as a second (ESL) and foreign language (EFL). Teaching ESL or EFL have received a tremendous support in the world developed and developing countries. There is no doubt that ministries of education attempted advanced level of educational research to improve the ESL and EFL processes due to economic, political, scientific etc. reasons. Despite the former fact, Arabic learners of English are still required to improve their English skills and their English assessments due to frequently described with below expectations language proficiency (Al-Khresheh et al., 2022; Alshammari, 2023). It has been reported the Arab test-takers have accumulatively received low language proficiency, based on ETS educational company that operates TOEFL iBT (Alshammari, 2022, 2023; Khan et al., 2018). Alshammari (2023) stated that most of the linguistic deficiency of English learners in Arab world were mostly due to the inaccurate assessment practices, outdated teaching methods, unauthentic language materials, expanded gap among decision-makers, experts, and language teachers beside other implicit pedagogical reasons. However, recently, there is an increased number of studies proposed AI integration and AI-driven tools in learners' language development through providing systematic reviews of literature and models applicability such as Technology Acceptance Model (TAM) prior technology integration in the realm (Al-Marroof et al., 2020).

However, relying on existed body of literature, expected the possible reasons of the current learning outcomes which reflect insufficient language proficiency and expectations of Arab English performance, and through looking at the first feature, inaccurate assessment practices, it is simply noted that English language learners exposed to English materials during the class sessions, and they were directly asked to memorize the previously given content for merely the examinations. Such assessment practices are not and never used in the international standardized language proficiency tests such as TOEFL iBT nor IELTS or any alternative sort of standardized examinations of language proficiency. To describe the language process in some of the Arab world, following the previous example, someone can simply observe that this is not a language learning rather a memory-recall exercise (Alkhaleefah, 2017; Younes & Albalawi, 2016). Alternatively, in the standardized language testing, test takers are required to activate the higher order skills of criticize, analyze, etc. not only memory nor merely understanding the surface meaning of the given academic and non-academic materials. And for this, this study attempts to understand professors' perceptions toward AI integrations in language learning development and to what level they reveal the EFL learners' acceptance to it. Basically, knowing the language users' perceptions, thoughts, behavioral intention, and ease of use, toward technology integration or AI-driven or AI-powered tools, in general could validate our overall understanding of the controllable independent factors or language learners toward the possible expected influence of such implementation (Al-Khresheh et al., 2022; Alshammari, 2023; Chen et al., 2022; Dignum, 2018).

However, the world has been recently proposed different language learning tools and new invented technological instruments (Al-Khresheh et al., 2022; Chen et al., 2022; Dignum, 2018). It has been claimed that AI technology can be beneficial in the field of language teaching and learning (Chen et al., 2022; Cheng & Lai, 2020). AI technology can be defined as: systematic and technological supports that empower computers to act humanly-like or even outperform human processing performance in processing language tasks, comprehension, and interaction, generating advanced levels of problems-solving features, video generating, and much more. IT would be taken into the account that unfortunately, EFL Learners, to some extent, consider AI integration in language learning as an alternative method to meeting class requirements and assignments specially in writing which ends up generating flourished language tasks effortlessly, however, without true linguistic recognition nor advanced understanding of what it academically takes.

AI technology found providing invaluable assistance in improving competency of language learners and activate their learning mentality and minimize time and cross spatial constrains in preparing language complicated tasks (Alshammari, 2022; Chen et al., 2022). AI technology also can reflect real-life contexts and assists in constructing similar linguistic forms or identical daily life authentic scenarios (Hopcan et al., 2023; Kessler, 2018). For example, the conversational agents such as Chat-GPT can actively interact with language learners, provide authentic assessment, automated and controllable language level adjustments, provide feedback too (Castillo et al., 2021). Despite the former positive points for the implementation of AI-powered tools in language learning and teaching, instructors are required to receive sufficient AI training to properly and efficiently using it (Al-Khresheh et al., 2022). Using AI-powered tools can even motivate language learners which help expediting the learning process (Choi & Yi, 2016).

However, through looking at the TAM' users' perceptions and ease of use among other TAM features, we found that that the user's distraction has received a little or even no attention even this current study sought the distraction ratio can either facilitate or prevent the TAM at initial stage. To illustrate this claim, if technology users are distracted with alternative technology driven tools, they were less likely to receive correct measurements of the TAM model consciously and authentically. Previous studies might include behavioral intention and implicitly and partially highlighted language users' distraction ratio which either expanded the intra-related distance among TAM factors or misuse the identity of the users' behavioral intention. This current study attempts to explore the prior TAM measurement through categorizing the users' distraction ratio at initial stage of technology acceptance model attempting to respond to the following research questions: What are the perceptions of Saudi faculty members toward technology integration in developing English language practices in Saudi Arabia? What recommendations can be retrieved from Saudi faculty members toward using AI-powered tools in EFL context? And What improvements can be highlighted toward efficiently implementing AI-powered tools in EFL context?

This users' distraction ratio could perform as a transparent and conscious subsequent channel to pass through reliably and authentically into implementation of TAM. Furthermore, the users' distraction ratio cannot solely be explored without considering the target language subskills: productive or receptive ones. This study proposes and delineates several interrelated hypotheses:

H1: The highest language users' familiarity with AI, the highest distraction ratio or pre-TAM.

H2: The highest language users' pre-TAM distraction ratio, the positive perceptions toward AI integration in EFL context.

H3: The highest level of positive language users' perceptions toward AI integration in language development, the limited language improvement on productive language skills.

H4: The highest level of positive language users' perceptions toward AI integration in language development, the highest language improvement on productive language skills.

H5: The highest level of positive language users' perceptions toward AI integration in language development, the limited language improvement on receptive language skills.

H6: The highest level of positive language users' perceptions toward AI integration in language development, the highest language improvement on receptive language skills.

H7: The medium level of language users' familiarity with AI, the limited distraction ratio of pre-TAM.

H8: The limited distraction ratio of language users of pre-TAM, the medium perceptions toward AI integration in EFL context.

H9: The medium level of language users' perceptions toward AI integration in language development, the positive language improvement on productive language skills.

H10: The medium level of language users' perceptions toward AI integration in language development, the limited/ negative impact on language improvement on productive language skills.

H11: The medium level of language users' perceptions toward AI integration in language development, the positive language improvement on receptive language skills.

H12: The medium level of language users' perceptions toward AI integration in language development, the limited/ negative impact on language improvement on receptive language skills.

2. Literature Review

This section scrutinizes the most recent published studies navigating the implementation of AI in the field of language education and highlights the possible influence and argumentation of their outcomes. The first section of this chapter covers two primary systematic

review studies, each of which added a distribution in reviewing studied that investigated AI effectiveness on the realm of language learning during a period of ten years retrieved from different research databases.

2.1 Systematic Review of AI Integration in Language Learning

Although there were many available studies, we selected two primary ones due to space limitations. Firstly, there is a study of Ayotunde et al. (2023). They reviewed studies investigated AI integration in language learning through a systematic review of research during a period of ten years 2011-2021. They concluded highlighting the importance and urgent demand of AI integration in foreign language learning, especially English. They claimed that AI integration in the field of foreign language learning can help improving all four language skills and develop learners' linguistic proficiency.

This study Alshumaimeri & Alshememry (2024), aimed at summarizing the available literature review of the AI implementation on the field language education through looking at the positive integration points, challenges, and difficulties. They carefully analyzed eighty studies through a systematic review, retrieved from; IEEE, Scopus, and Web of Science databases. Alshumaimeri & Alshememry (2024) concluded their study with pointing out to a list of primary questions that need to be addressed:

- 1) How far along is AI for EFL currently, and how knowledgeable are educators of its developments?
- 2) What AI technologies are teachers most likely to incorporate into language education?
- 3) What is the perception of AI among EFL students, and why might they want to employ AI technologies to study English?
- 4) What is the reason behind language teachers incorporating AI technologies into their regular teaching practices, and how do they view AI?
- 5) What essential abilities do language teachers require in the modern, AI-enhanced classroom?
- 6) How exactly should teacher training programs account for AI advancements? (p. 659).

They revealed from the eighty carefully selected studies from 2007 to 2022, that the area of argumentative writing has received the most of the AI attention of integration in the field of language education with a limited focus on the remaining language skills.

2.2 AI Effectiveness in Language Pedagogical Strategies

The role of AI integration in improving oral language skills, was investigated by Red (2024). This recently released study aimed at monitoring the impact of AI applications such as *Speeko*, on second language speaking proficiency through employing a mixed method approach. Red adopted three instruments: 1) a speaking test, 2) a questionnaire, and 3) a semi-structured interview. Interestingly, this study founded that there is AI had a highly positive impact on improving second language speaking skills and concluded with recommending AI integration in the field of second language learning and teaching.

Also, there is a study by Yuan (2023) aimed at examining the effectiveness of using AI-powered tools i.e. chatbots, in improving Chinese learners of English at elementary school. Yuan recruited seventy four EFL learners and divided them into two exposure groups; experimental and control for a period of three months. Based on SPSS analysis data of pre-and post-test scores, and analyzed qualitative data through NVivo, the finding showed that AI had a significant impact on both learners' willingness to communicate (WTC) and developing the overall English performance. This study also, highlighted the positive impact of AI integration in language learning and teaching.

It also has been suggested that even AI can help develop learners' cultural literacy. Zang et al. (2023) aimed at proposing an AI-based method to construct authentic language contexts for learners that help developing their cultural familiarity. This study proposed AI integration in language learning to help constructing more engaging and effective learning experience.

Hockly (2023) studied the impact of AI in language learning and teaching. Hockly reported there are opportunities as well as challenges in AI integration in the field for learners, teachers, and institutions and insurred several ethical issues. This study focused on AI-driven chatbot as a language learning tool.

2.3 Technology Acceptance Model (TAM)

TAM is highly beneficial model in determining and expecting the intention of language learners toward technology or alternative AI-driven tools integration in language learning (Al-Marouf et al., 2020; Granic & Marangunic, 2019). The TAM relies on reasoning action theory that provides sight into language learners' attitudes and behavioral intentions toward the use of technology which predicts challenges or readiness of their overall success (Ajzen & Fishbein, 1975)

The TAM proposed two primary elements; perceived usefulness (PU) and perceived ease of use (PEoU), where the first identifies to what extent someone's believes the use of technology can help in his/her language development, while the other (PEoU) indicates to what extent someone's believes toward the easiness or effort-free of using technology (Granic & Marangunic, 2019; Davis, 1989). The PU and PEoU are the two variables predict language learner's attitude toward willingly accepting a particular technology (Almaiah et al., 2020).

It is highly important that the beneficial TAM can help in predicting the success level of language users in using technology through prior predicting their attitudes toward using it (Sprenger & Schwaninger, 2021). There is an increased number of studies support the importance of TAM applicability in predicting the language user's attitudes approaching their success across a range of technologies and user groups (Granic & Marangunic, 2019). Also, the TAM is significantly adopted in language learning and several educational technologies such as pandemic era through open online courses and e-learning (Bailey et al., 2022; Almusharraf & Bailey, 2023)

3. Methodology

3.1 Method

This study follows a mixed method approach through adopting a fifteen-items closed-ended questionnaire and a three-dimensional semi-structured interview. This current study included interview as a qualitative instrument for its' rich collected details as it is suggested that qualitative method usually adopted to examine technology integration in language classrooms for its' collection of deep and in-depth details (Palvia et al., 2003). This current study implemented a three-dimensional semi-structured interview to qualitatively collects its' data about professors' attitudes, thoughts, and perceptions toward AI integration in language development. It is argued that examining AI integration using only quantitative method was not able to perfectly help providing a comprehensive and sufficient understanding (Tondeur et al., 2013). Thus, following qualitative method can help provide in- depth information about AI integration inside classroom and examine the interrelated information (Tondeur et al., 2013). Despite the former, this study attempts to fill any unexpected gaps through relying on both methods, qualitative and quantitative through adopting two instruments: questionnaire, and interview.

3.2 Research Questions

There are three research questions; one is a primary and the rest two were secondary research questions as illustrated below:

PRQ: What are the perceptions of Saudi faculty members toward technology integration in developing English language practices in Saudi Arabia?

SRQ1: What recommendations can be retrieved from Saudi faculty members toward using AI-powered tools in EFL context?

SRQ2: What improvements can be highlighted toward efficiently implementing AI-powered tools in EFL context?

3.3 Participants

This research recruited fifty n=45 faculty members teaching and researching in several Saudi universities: twenty-two n=22, female and twenty-three n=23, male faculty members. The participants were identified and categorized based on their years of expertise in the field of teaching English in EFL context in Saudi Arabia. All participants were PhD holders in the field of Applied Linguistics, Linguistics, Language Teaching, or a relatively similar area, and graduated from either the US n=15, UK n=12, Australia n=8, and ten n=10 from local universities in Saudi Arabia. This demographic distribution was necessary, as the researcher claimed, for the purpose of maintain high level of validity and reliability of the findings. The mean age of the participants was 43 years old. Finally, there were five n=5 interviewees randomly have been invited to participant in a three-dimensional face-to-face interview: M. n=3 & F. n=2.

Table 1. Description of participants

Category 1	Country of Graduation	Total No.	Average Years of Experience	Gender		Field of Study		
				M	F	Applied Linguistics	Linguistics	TESOL
a)	US	15	13	9	6	11	2	2
b)	UK	12	11	9	3	9	1	2
c)	AUS	8	8	2	6	5	0	3
d)	SA	10	6	3	7	7	2	1
Total/ Aver.	NA	45	9.50	23	22	32	5	8
				45		45		
Category 2	Country of Graduation	Total No.	Average Years of Experience	Gender		Field of Study		
Interview				M	F	Applied Linguistics	Linguistics	TESOL
a)	US	2	14	1	1	2	0	0
b)	UK	1	12	1	0	1	0	0
c)	AUS	1	8	1	0	1	0	0
d)	SA	1	7	1	0	1	0	0
Total/ Aver.	NA	5	10.25	4	1	5	0	0

3.4 Instrument

There are two primary instruments used in this mixed method study: 1) forty-five n= 45, online questionnaires, and five face-to-face semi structured interviews.

3.4.1 Questionnaire

The used questionnaire in this study consists of fifteen close-ended items followed by the five Likert-scale; strongly agree- agree- no decided- disagree- and strongly disagree. The fifteen items are retrieved from the highlighted components of the existed body of literature to maintain validity and reliability as well as concluding with justified and beneficial findings. The main themes of these fifteen items can be illustrated as follow: a) pre-process-related features n=5 items, b) during process-related features n=5 items, and c) post-process-related features n=5. See appendix 1. The first section of the questionnaire describes the required knowledge and available necessary services before implementing the AI-powered tools in language teaching such as availability of logistics and required

infrastructure. The during process refers to the required operations and active learning interaction in a suitable and properly controllable settings. The third section, the post process, concentrated on investigating the outcomes proficiency, assessment practices, improvements, and learning evaluation.

3.4.2 Interview

The second instrument used to collect data in this study was a semi-structured interview. It consisted of three primary questions: 1) sufficiency knowledge of the new AI-powered tools, 2) understanding the proper use of AI-powered tools in language learning, and 3) overall positive or negative attitude toward implementing AI-powered tools in language teaching and justification, (simply, why? or why not?). See appendix 2.

3.4.3 Summary of the Instruments

The instrument is constructed based on relevant literature and previous studies such as Venkatesh et al. (2008) and Zheng et al. (2018). It collects primary themes of what relative literature highlighted that relatively predicting learner's attitudes toward technology integration in language development and the ease of use and learners' perceptions, behavioral intention, cultural and social influence. Both scales UTAUT scale and OLM were consulted to construct the two instruments of this current study: questionnaire and the interview. The appendix 1, shows each item listed in the questionnaire and aids in interview design. The validity of the two instruments were revised by two university professors in the field of educational technology and three university professors in the field of applied linguistics. To maintain high level of items' clarity, the two instrument, were revised by fifteen college students as well to know to what extent they understand the component of each item in the given instruments. The questionnaire consisted of fifteen items, closed ended statements, followed by the five Likert-scale "strongly agree, agree, no decided, disagree, and strongly disagree" and the interview had six closed ended items with availability for extending responses when required more in-depth information or unexpected answers, See appendix 2.

3.5 Settings

To be differ from previous studies and increase the validity level and demographic distribution, his study collected its' participation sample as university professors from different study backgrounds: US, UK, AUS, SA, and different years of experience as well as different minor specialized area. This demographic distribution can affect the willingness and individuals' attitudes toward AI integration in language learning and teaching. Developing Universities vs Developed Universities would affect university professors' attitude toward AI integration, and for this reason this study includes participants from both university classes. For clarification, developing universities in Saudi Arabia, can be defined as governmental public universities that chartered about ten years ago or newly started ones i.e. Jouf University (JU), North Border University (NBU), while the developed ones were chartered far beyond ten years and received local and international academic accreditations such as King Saud University (KSU) and King Khalid University (KKU). It is necessary to include participants from different universities to consider potential views of different university levels. It is expected those universities with limited chartered years would have low access to technology implementation as described below the national average (Zhou et al., 2023).

3.6 Procedures

The research designed and received external referees' approval for the two implemented instruments in this study. After receiving the former approval of the instruments validity, the researcher has submitted a formal form to the Vice Rectorate for Graduate Studies and Scientific Research, to receive approval of Institutional Review Board (IRB) since this study involved human subjects. The IRB approval has been obtained. Then, the research has contacted the respondents via official affiliated scientific departments. As a friendly contact, the researcher has contacted heads of English department in several universities and distributed a participating consent form for the faculty members in the department, and then, immediately the questionnaires were sent to those who provided their willingness to participate. At the end of the questionnaire, there is a gentle note, can serve as an invitation to participate in the follow-up interview. The research seeks a limited number of participants for the interview, for this, there is another indication that we gently will contact the first five submitted approvals for the interview participation. The researcher confirmed for the high level of confidentiality of anonymity as reflected by the form of IRB and use of pseudonym to insure respondents' privacy.

3.7 Data Collection and Analysis

To avoid bias and ensuring the collected data interrater reliability, this study consulted a second external referee to monitor the collected data, particularly those from the interview (Miles & Huberman, 1994). This study analyzed the collected questionnaire data implementing both a statistical software SPSS to display the significance value for the retrieved responses to the five-Likert scale items, and well as identifying the multiple within groups comparisons through t-test and revealing the p value. A simplified interpretation was also have been provided for different categories, gender etc. Before finalizing and started analyzing the interview qualitative responses, there were transcribed and approved the proper transcription with outer referee and sent to the participants to confirm the accuracy of their responses (Morse et al., 2008).

4. Results

This section displays the collected responses to the questionnaires and the semi-structured interview. The first section shows responses to the fifteen items in the questionnaire and the second part portrays the collected qualitative responses to the interview. The abbreviations located in the left column in each of the following fifteen tables are identified here: Male (M*) Female (F*), Average (Aver.), Standard deviation (STD), Educational Background (ED-B) which refer to countries that the participants were received their PhDs from, organized

from the left United States, United Kingdom, Australia, and Saudi Arabia, Specialized Area (Sp.Area), organized from the left: Linguistics, Applied Linguistics, and TESOL.

4.1 Responses to the Online Questionnaire

Table 2. Responses to questionnaire item 1

Item No. 1	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	14	22	3	0	1	0	4	0	1	0
Aver.	18		1.5		0.5		2		0.5	
STD	5.656		2.121		0.707		2.8		0.70	
ED-B	14.9.7.6		6.2.0.0		0.1.0.0		0.0.0.4		0.0.1.0	
Aver.	9		0.75		0.25		1		0.3333	
STD	3.559		0.957		0.5		2		0.57735	
Sp.Area	3.29.4		1.1.1		0.1.0		0.1.3		1.0.0	
Aver.	18		1.5		0.5		2		0.5	
STD	16.9901		1		0.5773		1.8257		0.577	

Table 3. Responses to questionnaire item 2

Item No. 2	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	18	20	1	1	2	1	1	0	1	0
Aver.	19		1.5		0.5		0.5		0.5	
STD	1.414		2.121		0.707		2.8		0.70	
ED-B	15.12.8.3		0.0.0.2		0.0.0.3		0.0.0.1		0.0.0.1	
Aver.	9		0.75		0.25		1		0.3333	
STD	3.559		0.957		0.5		2		0.57735	
Sp.Area	4.29.5.		1.1.0.		0.2.1.		0.0.1.		0.0.1.	
Aver.	18		1.5		0.5		2		0.5	
STD	16.9901		1		0.5773		1.8257		0.577	

Table 4. Responses to questionnaire item 3

Item No. 3	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	22	17	1	2	0	1	0	2	0	0
Aver.	19.5		1.5		0.5		1		0	
STD	3.535		0.707		0.707		1.414		0	
ED-B	14.10.8.7.		1.1.0.1.		0.1.0.0.		0.0.0.2.		0.0.0.0.	
Aver.	9.75		0.75		0.25		0.25		0	
STD	3.095		0.5		0.5		0.5		0	
Sp.Area	3.28.8.		1.2.0.		1.0.0.		0.2.0.		0.0.0.	
Aver.	13		1		0.333		0.666		0	
STD	13.228		1		0.577		1.1547		0	

Table 5. Responses to questionnaire item 4

Item No. 4	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	21	13	1	5	1	3	0	1	0	0
Aver.	17		3		2		0.5		0	
STD	5.656		2.828		1.414		0.707		0	
ED-B	14.11.4.5.		1.1.1.3.		0.0.2.2.		0.0.1.0.		0.0.0.0.	
Aver.	8.5		1.5		1		0.25		0	
STD	4.7958		1		1.154		0.5		0	
Sp.Area	2.26.6.		3.3.0.		0.2.2.		0.1.0.		0.0.0.	
Aver.	11.333		2		1.3333		0.333		0	
STD	12.85		1.7320		1.154		0.5773		0	

Table 6. Responses to questionnaire item 5

Item No. 5	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	7	4	3	1	10	16	2	1	1	0
Aver.	5.5		2		13		1.5		0.5	
STD	2.1213		1.4142		4.2426		0.707		0.707	
ED-B	5.4.1.1.		1.2.0.1.		9.6.5.6.		0.0.1.2.		0.0.1.0.	
Aver.	2.75		1		6.5		0.75		0.25	
STD	2.0615		0.8164		1.732		0.957		0.5	
Sp.Area	3.7.1.		1.3.0.		0.22.4.		0.0.3.		1.0.0.	
Aver.	3.6666		1.333		8.666		1		0.333	
STD	3.0550		1.5275		11.718		1.7320		0.5773	

Table 7. Responses to questionnaire item 6

Item No. 6	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	14	16	2	1	6	4	1	0	0	1
Aver.	15		1.5		5		0.5		0.5	
STD	1.4142		0.707		1.4142		0.7071		0.7071	
ED-B	11.9.5.5.		1.1.1.0.		3.2.2.3.		0.0.0.1.		0.0.0.1.	
Aver.	7.5		0.75		2.5		0.25		0.25	
STD	3		0.5		0.5773		0.5		0.5	
Sp.Area	3.22.5.		1.2.0.		0.7.3.		1.0.0.		0.1.0.	
Aver.	10		1		3.3333		0.3333		0.333	
STD	10.440		1		3.5118		0.5773		0.577	

Table 8. Responses to questionnaire item 7

Item No. 7	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	10	12	5	4	3	3	2	1	3	2
Aver.	11		4.5		3		1.5		2.5	
STD	1.414		0.707		0		0.707		0.7071	
ED-B	8.9.3.2.		2.1.3.3.		2.2.2.0.		3.0.0.0.		0.0.0.5.	
Aver.	5.5		2.25		1.5		0.75		1.25	
STD	3.511		0.957		1		1.5		2.5	
Sp.Area	5.12.5.		0.8.1.		0.5.1.		0.3.0.		0.4.1.	
Aver.	7.3333		3		2		1		1.6666	
STD	4.0414		4.3588		2.645		1.732		2.0816	

Table 9. Responses to questionnaire item 8

Item No. 8	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	9	13	2	5	9	2	1	0	2	2
Aver.	11		3.5		5.5		0.5		2	
STD	2.828		2.1213		4.949		0.7071		0	
ED-B	11.7.3.1.		4.2.1.0.		0.3.4.4.		0.0.0.1.		0.0.0.4.	
Aver.	5.5		1.75		2.75		0.25		1	
STD	4.4347		1.707		1.892		0.5		2	
Sp.Area	3.16.3.		1.5.1.		1.10.0.		0.1.0.		0.0.4.	
Aver.	7.3333		2.333		3.666		0.333		1.333	
STD	7.505		2.3094		5.5075		0.5773		2.309	

Table 10. Responses to questionnaire item 9

Item No. 9	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	11	5	3	3	5	7	3	3	1	4
Aver.	8		3		6		3		2.5	
STD	4.2426		0		1.414		0		2.121	
ED-B	7.7.2.0.		3.1.2.0.		3.3.3.3.		1.1.1.3.		1.0.0.4.	
Aver.	4		1.5		3		1.5		1.25	
STD	3.5590		1.290		0		1		1.892	
Sp.Area	2.9.5.		2.3.1.		1.11.0.		0.4.2.		0.5.0.	
Aver.	5.333		2		4		2		1.666	
STD	3.511		1		6.082		2		2.886	

Table 11. Responses to questionnaire item 10

Item No. 10	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	9	4	3	5	7	6	3	3	1	4
Aver.	6.5		4		6.5		3		2.5	
STD	3.5355		1.4142		0.707		0		2.1213	
ED-B	5.4.1.3.		3.4.1.0.		2.2.5.4.		1.1.1.3.		4.1.0.0.	
Aver.	3.25		2		3.25		1.5		1.25	
STD	1.707		1.8257		1.5		1		1.8929	
Sp.Area	1.11.1.		1.4.3.		2.10.1.		1.5.0.		0.2.3.	
Aver.	4.333		2.666		4.333		2		1.666	
STD	5.773		1.527		4.932		2.645		1.527	

Table 12. Responses to questionnaire item 11

Item No. 11	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	18	17	2	2	0	1	2	1	1	1
Aver.	17.5		2		0.5		1.5		1	
STD	0.707		0		0.707		0.7071		0	
ED-B	13.9.6.7.		1.2.0.1.		1.0.0.0.		0.1.1.1.		0.0.1.1.	
Aver.	8.75		1		0.25		0.75		0.5	
STD	3.095		0.816		0.5		0.5		0.577	
Sp.Area	4.26.5.		1.3.0.		0.1.0.		0.2.1.		0.0.2.	
Aver.	11.66		1.333		0.333		1		0.666	
STD	12.423		1.5275		0.577		1		1.154	

Table 13. Responses to questionnaire item 12

Item No. 12	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	8	4	9	5	4	3	3	5	0	5
Aver.	6		7		3.5		4		2.5	
STD	2.828		2.828		0.707		1.414		3.535	
ED-B	2.2.3.5.		8.5.1.0.		5.1.1.0.		0.1.1.5.		0.3.2.0.	
Aver.	3		3.5		1.75		1.75		1.25	
STD	1.414		3.696		2.217		2.217		1.5	
Sp.Area	2.9.1.		1.9.4.		1.4.2.		1.5.1.		0.5.0.	
Aver.	4		4.666		2.333		2.333		1.666	
STD	4.358		4.041		1.527		2.309		2.8867	

Table 14. Responses to questionnaire item 13

Item No. 13	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	17	13	2	2	2	1	2	3	0	3
Aver.	15		2		1.5		2.5		1.5	
STD	2.8284		0		0.7071		0.707		2.1213	
ED-B	10.7.6.7.		1.2.1.0.		2.1.0.0.		1.2.0.2.		1.0.1.1.	
Aver.	7.5		1		0.75		1.25		0.75	
STD	1.7320		0.81649658		0.9574		0.957		0.5	
Sp.Area	2.27.1.		1.2.1.		0.3.0.		1.0.4.		1.0.2.	
Aver.	10		1.333		1		1.6666		1	
STD	14.7309		0.577		1.732		2.081		1	

Table 15. Responses to questionnaire item 14

Item No. 14	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	21	20	1	2	1	0	0	0	0	0
Aver.	20.5		1.5		0.5		0		0	
STD	0.707		0.707		0.707		0		0	
ED-B	14.9.7.7.		1.2.0.0.		0.1.1.3.		0.0.0.0.		0.0.0.0.	
Aver.	9.25		0.75		1.25		0		0	
STD	3.304		0.957		1.258		0		0	
Sp.Area	4.30.7.		1.1.1.		0.1.0.		0.0.0.		0.0.0.	
Aver.	13.666		1		0.333		0		0	
STD	14.224		0		0.577		0		0	

Table 16. Responses to questionnaire item 15:

Item No. 15	Strongly Agree		Agree		No Decided		Disagree		Strongly Disagree	
M*F*	6	9	2	4	8	6	5	2	2	1
Aver.	7.5		3		7		3.5		1.5	
STD	2.121		1.414		1.414		2.121		0.707	
ED-B	5.4.1.5.		2.2.1.1.		7.3.2.2.		3.2.1.1.		2.0.1.0.	
Aver.	3.75		1.5		3.5		1.75		0.75	
STD	1.892		0.577		2.380		0.957		0.957	
Sp.Area	2.12.1.		1.4.1.		2.11.1.		0.4.3.		2.1.0.	
Aver.	5		2		4.666		2.333		1	
STD	6.082		1.732		5.507		2.081		1	

4.2 Responses to the Interview

a) Do you think English language instructors have enough information about the new AI-powered tools? Why or why not, explain and give examples please?

All the collected responses indicated that language instructors have the minimum technology level that could help them properly navigate

the AI integration in language development. P1 reported “absolutely yes” reflecting that English language instructors know more about the use of modern technology, and P3 said “as far as I know, all English instructors can simply use AI-driven tools”, but he highlighted the importance of actively using AI in language teaching is the dilemma. P5 insured that all instructors know how to use modern AI but their need more training to use AI more beneficially and actively in language classrooms, she reported “having a car is something and ability of driving it is something else” indicating that having a car doesn’t necessary being able to drive it reflecting that even English language instructors have the AI necessary knowledge does not mean that they are able to use it effectively in classrooms.

b) Do you think Saudi English learners have enough information about the new AI-powered tools? Why or why not, explain and give examples please?

Almost responses to this question reflect similar or partially similar of the above one Item no.1. the collected responses claimed that language learners have sufficient knowledge about new AI technology and driven tools, but the problem is whether they able to use it properly to develop their language performance. It is reported P5, language users intend to use their AI knowledge in setting their selves free from classrooms’ assignments with no or limited effort and weak understanding. P2 highlighted how properly using AI in language developing and proving language users’ a sort of valuable assistance and insisted that language users perceived AI technology as a smart alternative way to generate their language tasks and classrooms’ assignments.

c) Do you think English language instructors can creatively and efficiently use the new AI-powered tools to teach English in Saudi context? Why or why not, explain and give examples please?

All participants responded to this item positively indicating that the language instructors can use AI creatively and efficiently in improving their English teaching methods. However, again to the very beginning responses to the previous items, proper AI training is required prior its’ integration.

d) Do you think English language learners can creatively and efficiently use the new AI-powered tools to learn English in Saudi context? Why or why not, explain and give examples please?

Again, there were a pretty much positive attitude and perception toward using AI integration in developing language learning, but the issue is not the feeling the positive impact of AI in language development rather it is the proper method of its practical implementation in classrooms.

e) Do you think English language instructors have an overall positive attitude toward using the new AI-powered tools in teaching English in Saudi context? Why or why not, explain and give examples please?

Yes, English language professors believe that English instructors have a positive attitude toward AI integration but like the previous response, is how and to what extend we can implement AI in language context and what is the proper audience etc.

f) Do you think English language learners have an overall positive attitude toward using the new AI-powered tools in learning English in Saudi context? Why or why not, explain and give examples please?

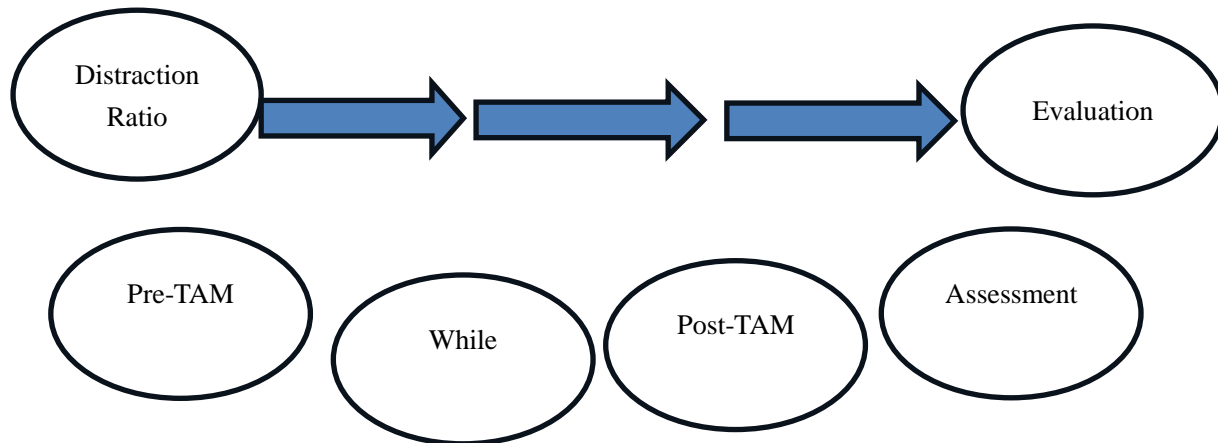
Absolutely yes that there is positive attitude toward using AI in language development. Again, the issue is not the positive attitude nor the ease of use but the proper applicability where we can authentically and reliably assess and evaluate the AI overall impact of language users. When language users’ have a frequent access to AI technology and high level of familiarity, they may consider directing their attention to certain AI practices with academic constraints could make their feel boring or uninterested in learning. P2 said “minimizing the use of AI learners’ knowledge” cause learners to “hardly and barely controlling their forward progressing” while they know more but they asked to use a small portion of what they knew about AI.

5. Discussion and Conclusion

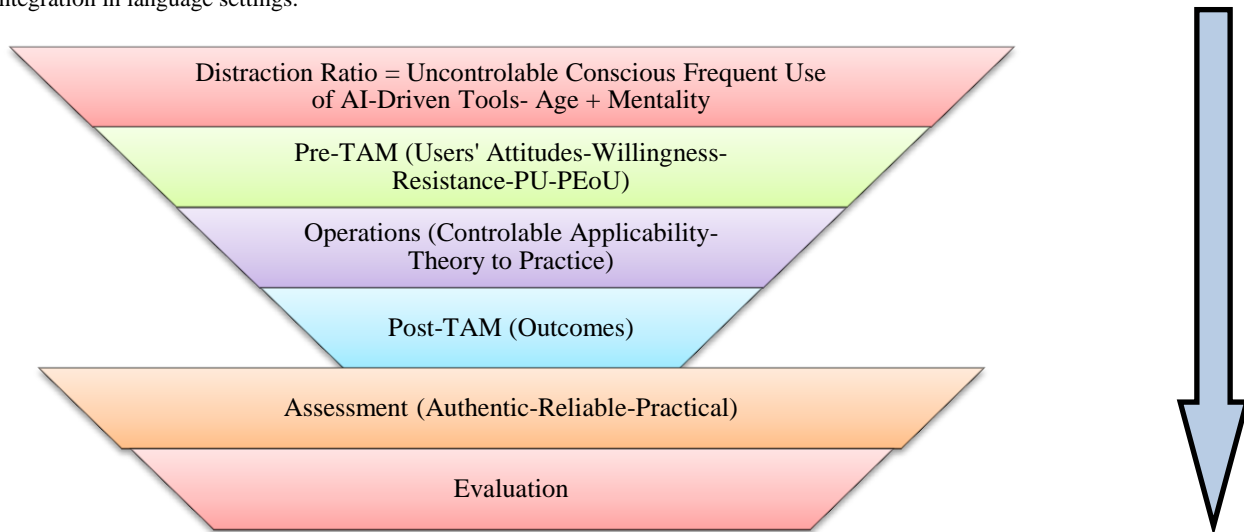
This section discusses the collected results narratively and highlights the interrelated features of AI integration in language learning, and how the responses could formulate a view toward the practical benefits of AI beyond the TAM perceptions of either usefulness PU or ease of use PEoU. As it is proposed stages: prior or before AI integration, while or during the actual use and integration and after or post the use. The collected themes indicated the overall positive attitude toward using AI in language development and filling the gap of learners with low or poor language performance and provide invaluable assistance through crossing time and spatial constraints (Chen et al., 2022). The issue, as it is revealed form both instruments, is not regarding the positive attitude or behavior (Hopcan et al., 2023; Kessler, 2018)of AI or technology acceptance which is theoretically conceptualized efficiently (Castillo et al., 2021)but the primary concern is about the actual implementation and moving from theory toward practice.

The TAM model attempts to predict language users’ willingness and attitudes to use technology or AI-driven tools(Chen et al., 2022; Hopcan et al., 2023). However, the positive outcomes or the highest approval rate of willingness refer to individuals’ intention of being able to use AI in language learning without any sort of resistance. This free resistance of AI integration in language learning doesn’t necessarily indicate positive language development nor proper consultation of the AI. As it is seen from the collected responses in both instruments, the positive attitude of language users was clear, but the issue is the authentic and actual reliable benefits of this modern technology integration. Knowing the acceptable intention to use AI in language learning indicates nothing but being able with personal approval of using the AI in language learning and no single hint toward the language real improvement and development in both receptive and productive skills. It is highlighted that language users like using AI for the purpose of generating language tasks and assignments and with limited or no practical

conceptualization about the ability of generating it.



Starting a process from understanding distraction ratio reaching out to evaluation process passing through pre-TAM, While, Post-TAM, assessment could help provide a sort of internal construction toward technology integration and its' assistance in language education and learning. Understanding the distraction ratio highlights the overall view of accepting this new learning tool, as it refers to the actual use and the practical perceptions of language users in general. Sometimes, positively perceiving a new integration doesn't necessarily indicate the actual benefits of it, as the users exceeded the limit of manipulating with this new technology. Thus, even they look at it positively, they practically perceiving it as lowering and minimizing their actual ability, which ends up with uninteresting feeling and decrease their self-motivation. As a result, knowing the actual distraction ratio can help control and positively conceptualize the actual technology integration in language settings.



It is required to offer a professional AI training for language instructors not to only know how to use the AI in language teaching since they were expected to have enough knowledge about this, but to use the AI professionally and actively in language classrooms. The distraction ratio has an important impact on the actual potential development of AI integration, the more learners use the AI consciously but uncontrollably the more distraction ratio expanded, which ends up preventing language users from getting the potential benefits of this integration.

This study explores the impact of AI integration in EFL contexts in Saudi Arabia through attempting to understand what factors can influence the authentic and reliable language achievement. Basically, it suggests exploring the existed TAM to include users' distraction level which works oppositely with users' ability to easily navigate the AI-driven tools spending a conservative effort. Perceptions usefulness and perceptions toward ease of use could efficiently reflect the users' theoretical willingness to adopt technology in language settings, however, it requires reconsidering the AI and technology integration through well-trained instructors and assessing outcomes authentically and reliably.

Acknowledgments

Not applicable

Authors' contributions

Not applicable

Funding

This research is funded by the Deanship of Graduate Studies and Scientific Research at Jouf University through the Fast-Track Research Funding Program.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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Appendix 1

Internal Construction of the Distributed Questionnaire

Themes: PU-PEoU		Item no.	Items	Likert-scale				
				Strongly disagree	Disagree	No decided	Agree	Strongly Agree
Inter-sections	Intra-sections							
a) Pre-process-related factors n=5	Attitudes of faculty members toward their readiness for AI implementation.	1.	I understand the minimum knowledge of modern AI-powered tools such as the chatbot GPT.					
	Attitudes of faculty members toward their readiness for AI implementation.	2.	I think it is beneficial to consult AI-powered tools in language teaching.					
	Attitudes of faculty members toward learners' readiness for AI exposure.	3.	I believe language learners have a conscious tendency to use AI negatively in an only generating language tasks.					
	Attitudes of faculty members toward learners' readiness for AI exposure.	4.	I think AI- powered tools can help improving English performance of Saudi EFL learners.					
	Attitudes of faculty members toward educational administrators' views for AI exposure.	5.	Generally, I can say that decision makers in the Saudi ministry of education have a positive attitude toward using AI-powered tools in language teaching.					
b) During process-related factors n=5	Attitudes of faculty members toward using AI-powered tools in teaching English skills	6.	I can efficiently teach English productive skills; speaking and writing through using AI-powered tools.					
	Attitudes of faculty members toward using AI-powered tools in teaching English skills	7.	I can efficiently teach English receptive skills listening and reading through using AI-powered tools.					
	Attitudes of faculty members toward using AI-powered tools in teaching English skills	8.	I recognize that AI integration in language development is free of effort.					
	Attitudes of faculty members toward using AI-powered tools in teaching English skills	9.	I think it is difficult to direct learners' attention to some AI assistance while they knew more and intend to exceed the proposed instructions and limitations.					
	Attitudes of faculty members toward using AI-powered tools in teaching English skills	10.	I can efficiently teach English vocabulary and grammar skills through using AI-powered tools.					
c) Post-process-related factors n=5	Attitudes of faculty members toward using AI-powered tools in improving language assessment.	11.	I think using AI-powered tools in teaching English can help validating and improving the practices of language assessment.					
	Attitudes of faculty members	12.	I assume AI-powered tools can help					

	toward using AI-powered tools in improving learners' motivation.		increasing the self-learning-dependency of Saudi English learners.					
	Attitudes of faculty members toward using AI-powered tools in improving learners' motivation.	13.	I ensure that teaching English through AI-powered tools can help increasing the motivation level of language learners.					
	Attitudes of faculty members toward required training of language instructors for efficiently using AI-powered tools.	14.	I insist that language instructors lack the required the training of AI-powered tools to properly use it in language teaching.					
	Attitudes of faculty members toward required reevaluation of using AI-powered tools in language teaching.	15.	Decision-makers can constantly reevaluate and improve AI-powered tools in the field of teaching English as a foreign language in Saudi context.					

Appendix 2

Interview items

Themes: PU-PEoU	Items no.	Items	
1) Sufficiency of knowledge of the new AI-powered tools,	1-2	a) Do you think English language instructors have enough information about the new AI-powered tools? Why or why not, explain and give examples please?	b) Do you think Saudi English learners have enough information about the new AI-powered tools? Why or why not, explain and give examples please?
2) Understanding the proper use of AI-powered tools in language teaching and learning,	3-4	a) Do you think English language instructors can creatively and efficiently use the new AI-powered tools to teach English in Saudi context? Why or why not, explain and give examples please?	b) Do you think English language learners can creatively and efficiently use the new AI-powered tools to learn English in Saudi context? Why or why not, explain and give examples please?
3) Overall positive or negative attitude toward implementing AI-powered tools in language teaching and justification, (simply, why? or why not?).	5-6	a) Do you think English language instructors have an overall positive attitude toward using the new AI-powered tools in teaching English in Saudi context? Why or why not, explain and give examples please?	b) Do you think English language learners have an overall positive attitude toward using the new AI-powered tools in learning English in Saudi context? Why or why not, explain and give examples please?

Responses based on gender.

Item		Male	Female
1			
	Strongly agree	14	12
	Agree	3	0
	No decided	1	0
	Disagree	4	0
	Strongly disagree	1	0
2			
	Strongly agree	18	20
	Agree	1	1
	No decided	2	1
	Disagree	1	0
	Strongly disagree	1	0
3			
	Strongly agree	22	17
	Agree	1	2
	No decided	0	1
	Disagree	0	2
	Strongly disagree	0	0
4			
	Strongly agree	21	13
	Agree	1	5
	No decided	1	3
	Disagree	0	1
	Strongly disagree	0	0
5			
	Strongly agree	7	4
	Agree	3	1
	No decided	10	16
	Disagree	2	1
	Strongly disagree	1	0
6			
	Strongly agree	16	14
	Agree	2	1
	No decided	6	4
	Disagree	1	0
	Strongly disagree	0	1
7			
	Strongly agree	10	12
	Agree	5	4
	No decided	3	3
	Disagree	2	1
	Strongly disagree	3	2
8			
	Strongly agree	9	13
	Agree	2	5
	No decided	9	2
	Disagree	1	0
	Strongly disagree	2	2
9			
	Strongly agree	11	5
	Agree	3	3

	No decided	5	7
	Disagree	3	3
	Strongly disagree	1	4
10			
	Strongly agree	9	4
	Agree	3	5
	No decided	7	6
	Disagree	3	3
	Strongly disagree	1	4
11			
	Strongly agree	18	17
	Agree	2	2
	No decided	0	1
	Disagree	2	1
	Strongly disagree	1	1
12			
	Strongly agree	8	4
	Agree	9	5
	No decided	4	3
	Disagree	3	5
	Strongly disagree	0	5
13			
	Strongly agree	17	13
	Agree	2	2
	No decided	2	1
	Disagree	2	3
	Strongly disagree	0	3
14			
	Strongly agree	21	20
	Agree	1	2
	No decided	1	0
	Disagree	0	0
	Strongly disagree	0	0
15			
	Strongly agree	6	9
	Agree	2	4
	No decided	8	6
	Disagree	5	2
	Strongly disagree	2	1