

INCORPORATING ARTIFICIAL INTELLIGENCE (AI) TOOLS IN EFL CLASSES AT KING KHALID UNIVERSITY (KKU)

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Abstract

The purpose of this study was to examine EFL faculty members' perceptions, competencies, current practice, and preparation in Incorporating Artificial Intelligence (AI) Tools in their teaching and learning activities in relation to various variables (gender, age, teaching experience, academic level differences, training), as well as obstacles that hinder them from making effective use of AI tools. A total of 71 members of the Faculty of Languages and Translations at King Khalid University (FLT, KKU) participated in this research. They filled out a five-point Likert scale questionnaire, which was then evaluated quantitatively. Following that, 12 participants were contacted for follow-up interviews. Although FLT staff members had positive views of the utility of AI resources in language teaching and learning, and they were familiar with AI usage mainly in their personal lives and, to a lesser extent, in teaching activities, they were less likely to incorporate them into their language teaching. Continuous professional development, according to the results, should be regarded as a primary solution for helping staff members in improving their AI skills and motivating them to remain updated with recent developments in ELT.

Index Terms: Foreign Language Learning and Teaching, Artificial Intelligence, Incorporating, Artificial Intelligence tools.

Introduction

As the introduction of computers brought modern technologies to a wide variety of language learners, technology and language teaching and learning has been the focus of much debate and study in the last forty years. With the exponential increase in computing power and speed, CALL programs have gradually advanced to the point that multimedia applications, speech recognition, and the convergence of artificial intelligence and machine learning have all had a significant effect on language education.

Artificial Intelligence in language teaching and learning

Artificial intelligence (AI) has permeated our everyday lives through smart technology, financial technologies, e-commerce, marketing, manufacturing, and the automotive industries. The word was first used in 1956 by John McCarthy, who organized a workshop at Dartmouth College and described the workshop's objectives as follows in his proposal: "The research (on artificial intelligence) will be focused on the premise that any element of learning or some other function of intelligence can be defined so precisely that a computer can simulate it.

It will be attempted to figure out how to get machines to communicate, shape abstractions and definitions, solve problems that are currently reserved for humans, and develop themselves." (Russel & Norvig, 2020, p. 17).

As science progressed, scientists turned their attention to creating "models based on human reasoning, with the end goal of replicating complex human thought." (Marr, 2018).

Both regular changes in what AI means and the interdisciplinary nature of its analysis contribute to the difficulty in developing a coherent definition of AI (AI has been examined not only by computer science, but also by philosophy, anthropology, biology, pedagogy, psychology, linguistics, cognitive science, neuroscience, mathematics, and analytic philosophy). (Luckin et al., 2018)

Machines, machines, or computer systems that mimic cognitive functions usually associated with the human mind, such as learning and problem solving, are referred to as AI in some meanings. (Russell & Norvig, 2020).

Another set of definitions considers AI to be a particular set of computer skills, describing it as "computers that perform cognitive functions, such as learning and problem-solving that are traditionally associated with human minds." According to the Encyclopedia Britannica, AI is "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings," where intelligence is described as "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings." e. g. Baker and Smith (2019, p. 10)

"Artificial intelligence (AI) is a science and a set of computational technologies that are inspired by—but usually work somewhat differently from—the ways humans use their nervous systems and bodies to feel, understand, reason, and take action," according to another set of definitions. (Stone et al., 2018).

In this paper, we use Luckin et al (2018, p.14) concept of AI, which describes AI as "computer systems designed to communicate with the world through capabilities (for example, visual perception and speech recognition) and intelligent behaviors" (for example, assessing the available information and then taking the most sensible action to achieve a stated goal) that we would consider to be inherently human."

AI-powered tools in language learning and teaching (AILLT)

AI is fascinating to linguists and language teachers from a range of viewpoints. AI and NLP (natural language processing) are being used to help build more accurate representations of natural languages, better-processed, and a better understanding of mental processes occurring in human brains when verbally interacting, among other things. AI-powered tools are also used in computer linguistics, such as the development of computer languages, machine translations, and enhancing human-machine communication through speech recognition and speech synthesis, among other things. Similarly, AI-powered tools are one of the newest areas of educational technology, and many scholars believe they can have major benefits for language learners. AIL (AI-powered learning) "offers the possibility of more personalized, customizable, inclusive, and engaging learning." It can give language learners the resources they need to adapt not just to what they're learning, but also to how they're learning it and how they're feeling. It can assist students in acquiring the knowledge and skills that employers seek and teachers in developing more sophisticated learning environments that would otherwise be feasible. For example, AIL may promote collective

learning, which is a challenging task for a single teacher to complete alone, by ensuring that the appropriate group is formed for the task at hand, or by offering personalized support at the appropriate time” (Luckin et al., 2018, p. 11).

Baker and Smith (2019) classify artificial intelligence (AI) tools in education into three categories: learner-facing, teacher-facing, and system-facing.

- 1- Learner-facing AI resources are programs that help learners learn a subject.
- 2- Teacher-facing systems are used by teachers with the purpose to reduce their workload and make their output more effective in specific automating tasks, such as administration, assessment, and plagiarism detection.
- 3- System-facing AI tools they provide information to administrators and managers, such as turnover rates through faculties or schools. The recent research is limited to the first two groups.

Language learners and teachers can choose from a range of AI-powered resources to support them with their studies. AI in foreign language learning provides learners with immediate and highly personalized assistance, a key component of personalized learning as one of the modern pedagogy's ideal criteria. Teachers simply cannot continuously analyze each and every learner's outputs, diagnose their individual learning needs, adjust the learning material appropriately, and provide learners with well-grounded input in the span of many seconds –and this in a class of twelve or more students. On the other hand, AI-powered tools will gather vast quantities of data on a learner's progress and use it to model their personal learning curves and adjust learning material accordingly. As a result, teachers can use these programs and software as very useful supporting resources because they can relieve teachers of exhausting, energy-and time-consuming tasks like grammar or pronunciation drills. Baker and Smith (2019)

AI In Foreign Language Learning

In all areas of language learning content, the meaning of AI-powered language learning has been increasingly growing; however, this study focuses solely on the application of AI to foreign language learning. Today's AI has major applications for language studies in general, and for foreign language learning in particular, thanks to recent advances in natural language processing, advancement in deep and networked learning, and the growth in technical capacity to handle massive data. The transition from CALL to ICALL (Intelligent CALL) was unavoidable, and it resulted in a significant improvement in the level of student-computer interaction. (Kannan & Munday, 2018).

The anticipated benefits of ICALL stem from the fact that AI has the ability to fully personalize digital language learning for each learner. It may reduce time, cost, and learner dissatisfaction when completing tasks that do not provide immediate feedback. All of this is possible thanks to big data analysis and machine learning algorithms that respond to learner behavior in real-time, measuring each learner's strengths and weaknesses and producing an entirely personalized collection of study materials for each session (which brings new ethical implications). Furthermore, and perhaps most critically, the algorithm learns from both individual and group learner behavior, enhancing its predictive power (Campbell-Howes, 2019).

Other predicted ICALL benefits include learner-controlled progress, immediate feedback as a powerful motivator; individualized repetition of topics and highlighting tasks where a learner has performed poorly; fast and realistic evaluation of a learner's progress; and a clearer understanding of the learner's learning preferences and strategies.

Incorporating IA into foreign language learning and teaching

(a) Creating materials that are tailored to the learner's needs:

According to the learners' responses made while learning, some AI-powered tools can personalize learning materials for a particular learner, course, or school, resulting in customized textbooks. Personalized learning materials are an alternative to conventional textbooks and materials, which reflect the so-called "one-size-fits-all" approach to education, in which teachers offer the same form of learning materials to all learners in each class or course.

(b) Making use of machine translation software:

Using computer software to translate a text (written or spoken) from one natural language to another is known as machine translation (MT). The use of MT resources for language learning has been restricted for a long time due to the dubious nature of their outputs. Artificial intelligence innovations such as neural machine translation have significantly enhanced the quality of machine translation, and free-access web-based MT services have resulted in millions of users using Google Translator, Translator Online, Foreign Word, and Web Trance on a daily basis for work or research. (Lee, 2019)

Several reports have focused on stopping MT programs from being used in the classroom. Prohibiting the use of MT facilities in the classroom, on the other hand, is largely ineffective (White & Henrich, 2019). Instead, they suggest that language teachers should concentrate on assisting learners in effectively using MT resources. As a result, foreign language teachers should be conscious of the possibilities and limitations of MT to provide sufficient instruction to their students (Williams, 2016).

Despite the increasing popularity of machine translation software among language learners, there has been little research into their use in foreign language classes. Briggs (2018) investigated students' attitudes and beliefs about using web-based MT tools to learn English. According to his findings, despite their lack of confidence in the accuracy of their outputs, most learners use MT resources to help their language studies. Lee (2019) investigated the role of machine translation in EFL writing in English as a foreign language. Garcia and Pena (2021) investigated the impact of using the MT on novice language learners.

(c) Using AI-assisted writing assistants

AI writing assistants (based on natural language processing and machine learning) support users at different stages of the writing process (augmented writing). The correct grammatical errors in written texts (via a continuous error-analysis), make suggestions for future improvements, and provide additional tools for further research using AI systems. These systems help learners go through the writing process individually, correct themselves, and reflect on the process itself in foreign language classrooms.

Learners' self-regulation and autonomy are improved when AI is used in this way. Grammarly, ProWriting Aid, Textio, AI Writer, Textly AI, and Essaybot are examples of AI writing assistants.

(d) Having a conversation with a chatbot

Chatbots (short for "chatting robots") are a set of computer programs designed to mimic intelligent human language interaction. A human consumer and a computer (robot) converse informally using natural language (in written or spoken form).

Chatbots are most commonly used in marketing communications, but they can also be useful in foreign language classrooms (Dargan, 2019).

Learners can gain knowledge by interacting directly with a robot. Chatbots can also respond to learners' messages with personalized responses, rate their results, and provide suggestions on improving. According to the findings, learners were comfortable with the methodology and thought it might help them learn a language. Daily conversations with chatbots also increased students' language trust, improved their listening capacity, and enhanced their interest in language learning. It is important to remember, however, that chatbots cannot be effective for novice speakers. The issue is that most chatbots only respond to simple keywords and cannot determine whether the language input is grammatically or pragmatically right. Chatbots continue to operate in well-defined scenarios with predictable dialogues and error sources. But less serious pronunciation errors, as well as grammar and spelling errors, have so far eluded chatbots. They are ideal as learning aids to help native or highly skilled speakers improve their conversational skills. However, as Lotze (2018) points out, AI dialogic systems must still meet a number of main requirements (including spontaneity, imagination, and mutual knowledge) before they can fully replace a human language instructor. Rosetta Stone (25 languages), Andy, Mondly, Memrise, and other AI chatbots are just a few examples.

(e) Used artificial intelligence-assisted language learning tools (Platforms and apps)

Online platforms are gradually becoming the standard when it comes to language learning. The most common learning aids are cloud-based online platforms with NLP, crowdsourcing, gamification elements, automatic speech recognition, automatic speech generation, and AI writing assistant applications. Duolingo, Busuu, Memrise, Magiclingua, and many others are only a few examples.

Lotze(2018) distinguishes two specific technical concepts for language learning software: the traditional graphical user interfaces with speech recognition and the language interface with dialogue feature. Language learners go through a series of multimedia exercises in the standard graphical user interface, much as they do in traditional textbooks (filling gaps, substitution exercises, matching exercises, etc.).

The issue here is that learners work with pre-defined language (closed tasks), and many apps are based on outdated concepts (grammar-translation process, audio-lingual, and pattern drills) because they are simple to model. There is no space for learners to express their imagination or spontaneity. The language interface was

created with a dialogue feature to mimic natural verbal contact with a virtual teacher. These conversational systems work on the same principles as a simple chatbot. Learners may make either written or oral comments, which are analyzed by the technology for the existence of predefined keywords.

(f) Using intelligent tutoring programs as a source of knowledge (ITS)

ITS stands for individual tutoring systems, which are computer-based learning systems that mimic one-on-one tutoring. The domain model, the student model, the tutoring model, and the interface model are the four basic components. "They will make decisions about an individual student's learning path based on learner models, algorithms, and neural networks. ITS have tremendous potential, particularly in large-scale distance learning institutions that run programs with hundreds of learners and cannot provide one-on-one human tutoring". Another AI-powered teaching tool is adaptive and intelligent systems for collaborative learning support (AICLS systems). Learners build a common understanding of an issue through reciprocal participation in collaborative learning, which incorporates social and creative elements of the learning process. (Zawacki-Richter et al., 2018, p. 5).

(g) Intelligent virtual reality (IVR)

Intelligent virtual reality is a complicated device that combines conversational AI software, spatial context-aware technologies, gesture and facial landmark recognition systems, voice recognition and natural language understanding technologies, and speech recognition and natural language understanding technologies. Learners can practice speaking with AI-powered avatars that mimic real-life interactions with native speakers, allowing them to improve their fluency and trust through highly personalized practice. Virtual reality and game-based learning environments are created using IVR. Avatars (virtual agents) may serve as instructors, facilitators, or students' peers. When used in foreign language learning, IVR systems face the same issues as chatbots and online platforms/apps. "The contact with the agent would only function smoothly if learners input the questions and answers that the device developers were able to anticipate." (Lotze: 2018).

ICALL and a different role of foreign language learners and teachers

Despite the fact that human teachers and social experiences outside of the digital world are still essential for mastering a foreign language, the use of CALL in foreign language learning, which includes AI elements, contributes to new roles for teachers and learners (Lam & Lawrence, 2012).

Language learners benefit from AI-based programs because they can choose their direction and speed of learning, and they have more control over their learning. Learners' decision-making skills improve as a result of AI-powered systems, and they gain learning autonomy. Students may use IA-powered conversational resources (e.g., chatbots) to communicate with native speakers worldwide to supplement their learning without the intervention of an instructor. Language learners have more chances to be active participants in the learning process instead of being passive information recipients. Since learners are supposed to be able to make their own decisions and take more responsibility for their work, teaching becomes more learner-centered. On the

other hand, the teacher relinquishes his or her previous position as the sole authority and decision-maker to facilitate and support students (Bancheri, 2016).

Training foreign language learners and teachers in AI and ICALL applications

Since the field of using AI-powered tools in foreign language learning is relatively new, there has been a general lack of research studies on the subject to date. To the author's knowledge, no empirical research on the pedagogical effects of using AI-powered tools in foreign language classrooms, on learners' reactions to the use of AI tools, on teachers' attitudes toward using AI-powered tools, or on their training for using AI-powered tools in their classes has been done. On the other hand, the subject does not need to be studied in isolation from the beginning. Many journals and academic papers have discussed preparing learners and teachers for ICALL as a subset of CALL teacher preparation. Teachers who have received adequate AI training and have had good AI-related experience are more likely to incorporate ICALL in their classrooms. Helping them feel well trained and ready to function in AI-enhanced environments is a critical condition for success.

Several previous studies (Abdelhalim, 2016, Sabzian, & Gilakjani, 2019) found that while most foreign language teachers endorse CALL and accept modern technologies in their classrooms, some (and possibly the majority) are hesitant to use AI extensively. In addition to external influences (lack of material equipment, insufficient technical support, inflexible curriculum, time stress). "Even when respondents incorporate ICT in their teaching, incorporation is restricted to low-range applications such as email services or having knowledge from the Internet," according to Abdelhalim (2016).

Context of the problem:

Teachers' pedagogy and the use of artificial intelligence (AI) as teaching tools are important factors in assisting faculty and universities in meeting the challenge of educating students with the requisite skills for success in the twenty-first century. King Khalid University, which regulates many colleges, represents the changing educational environment. As a result, several colleges have started a continuous effort to apply information technology to the teaching and learning process to be more versatile and offer more opportunities to all students. Consequently, there is a unit called the artificial intelligence unit in the university. Staff members are expected to incorporate AI into their teaching and learning activities due to these developments. They must strengthen their teaching abilities by improving their attitudes and visions to properly direct and equip their students with the necessary skills to succeed in a rapidly changing, technology-driven society. However, there is still a lack of evidence of successful AI incorporation in EFL teaching practice at King Khalid University, Faculty of languages and translations as a representative sample in this study. It's also suspicious how EFL teachers embrace and integrate AI tools while mastering a range of teaching techniques and strategies.

Statement of the problem:

This study aimed to resolve the problem of a lack of knowledge about AI integration in the context of EFL teaching and learning at Faculty of languages and translation, King Khalid University, as well as the fact that the pedagogical potential of AI integration in

ELT is largely untapped by EFL teachers. As a result, the focus of this research was on the following key question:

How effectively can Faculty of languages and translation, King Khalid University EFL faculty members incorporate AI tools into their teaching and learning activities?

These six questions were derived from the previous main question:

- 1- What are the opinions of the EFL faculty members on the value of incorporating AI resources into ELT?
- 2- What are the EFL staff members' current AI tool activities in ELT?
- 3- Is there a connection between EFL teachers' perceptions of AI tools' utility and their use of them in their current teaching practices?
- 4- Are there statistically significant differences in current practice of AI tools incorporation in ELT among EFL staff members in relation to a number of relevant variables, such as gender, age, and teaching experience?
- 5- What are the difficulties in integrating AI tools into ELT at Faculty of languages and translation, King Khalid University?
- 6- What are some potential methods for EFL staff members at Faculty of languages and translation, King Khalid University to effectively address the challenges of incorporating AI tools into ELT?

Objectives of the Study:

The study's four goals are as follows:

- 1- Investigating the experiences of EFL faculty members, Faculty of languages and translation, King Khalid University on incorporating AI into EFL teaching and learning.
- 2- Identifying the connection between staff members' perceptions of the utility of AI resources and their use of them in their current teaching practices.
- 3- Investigating whether there are statistically significant differences in the current practice of AI tools integration in ELT among EFL staff members in relation to a number of relevant variables, such as gender, age, and teaching experience.
- 4- Examining the factors that can affect EFL staff members' use of AI in ELT, and potential strategies for successfully overcoming them.

Significance of the study:

- 1- Encouraging EFL instructors to use AI in their classrooms to improve their learners' English language fluency that goes beyond conventional TEFL classes.
- 2- Directing the development of AI and pedagogy professional development for EFL faculty staff.

- 3- Providing a list of AI tools that can be successfully integrated in EFL teaching and learning to policymakers, educators, curriculum designers, and other researchers in the EFL educational system.
- 4- Providing a list of AI tools to EFL instructors and students to use AI in their teaching and learning activities.
- 5- Examining some potential solutions for overcoming the difficulties that EFL instructors at Faculty of languages and translation, King Khalid University face when incorporating AI resources into language classrooms.
- 6- Using AI tools in the teaching and learning sense, calling for a paradigm shift in university education that emphasizes quest and exploration, emphasizes innovation and initiative, and values engagement and collaboration.

Delimitations of the study:

- 1- A sample of involved EFL faculty members; Faculty of languages and translation, King Khalid University. A total of (71) EFL members from male and female sections were present.
- 2- A list of AI tools that could be used in EFL teaching and learning. The chosen AI tools were chosen from Jane Hart's (2019) "top 100 AI tools list" based on votes from learning professionals worldwide from the review of the literature.

The study's assumption

- In this study, a questionnaire was used. As a result, it has been presumed that the participants' responses are delivered honestly and not in an effort to deceive.

Methodology

Participants

- The questionnaire was completed by 71 EFL staff members (30 females and 41males) Faculty of languages and translation, King Khalid University.
- The majority of respondents came from males (41). Table (1) shows the sample distribution according to these variables: age, academic degree, and teaching experience.

Table (1) shows the sample distribution by age, academic degree, and teaching experience.

Variables	Category	Number of respondents	Percentage
Age	Less than 30	6	9%
	30: 40	26	37%
	41: 50	19	27%
	51-60	14	20%
	More than 60	6	9%
	Total	71	100%
Academic Degree	Demonstrator	6	9%
	Assistant lecturer	22	31%
	Lecturer (Ph.D)	9	13%
	Assistant professor	23	24%
	Professor	11	15%
	Total	71	100%
Teaching experience	Less than five years	7	10%
	5 – 10	15	21%
	11-16	16	23%
	17 – 22	19	27%
	More than 22	14	20%
	Total	71	100%

Participants' ages were significant to the present study in that this data would add to the analysis of this study. As shown in table (1) Majority of the respondents' age fall in the category (30: 40) with total number 26(37 %) who were digital natives, followed by the category (41-50) with total number 19 (27%). Also, 14 respondents aged 51- 60 and 6 participants aged more than 60 who would be considered digital immigrants. Table (1) also shows that the majority of the respondents (31 % of participants) were Assistant Lecturers (MA holders). Moreover, 27% of the participants had teaching experience that ranges from 17-22 years plus 14 % with teaching experience of more than 22 years.

Table (2) presents participants' answers to the first three questions of the questionnaire (level and frequency of access to computers and internet services, and how they gained their knowledge and skills) to reveal their relation to computers and internet services.

Category	Level	Frequency of use	Never	Rarely	Sometimes	Often	Always
Experience	I can use computer and internet services with sufficient experience.	Number	0	3	23	18	27
		Percentage	0%	4%	32%	25%	38%
	I can use computer and internet services with the help of others (with limited experience)	Number	7	23	25	10	6
		Percentage	10%	32%	35%	15%	8%
	I use computer and internet services.	Number	1	3	17	10	40
		Percentage	1.5%	4%	24%	15%	56%
Source of professional development	My professional development in using computer and internet services is Self-training.	Number	0	3	28	24	15
		Percentage	0%	4%	39%	34%	21%
	My professional development in using computer and internet services is Professional training.	Number	6	14	26	13	11
		Percentage	8%	20%	36%	18%	15%
	My professional development in using computer	Number	3	11	38	13	6
		Percentage	4%	15%	54%	18%	8%

	and internet services is Family and friends.						
	My professional development in using computer and internet services is Private tuition.	Number	26	13	18	7	7
		Percentage	36 %	18%	25%	10%	10%

Table (2) shows that:

- 1- The responses given to the question related to the computer experience showed that majority of participants were experienced in their use of computer and internet services while only 3 participants (4%) reported that they had partial experience.
- 2- Participants' answers to the question about the frequency of use, varied; 40 % participants reported using computers always. Only a small number of participants reported using them rarely (3%) or never (1.5 %).
- 3- Most of the participants gained their skills through self-training (52%). While only (15%) received professional training.

Design of the study

The present study is a descriptive one. Consequently, a survey method design was used to achieve the objectives. Thus during the Second Semester of the academic year 2021– 2022. An invitation email was sent to 200 staff members. A total of 71 members, accepted to share in the study and the same number of instructors were emailed the questionnaire link. All the participants were approached via e-mails, Facebook, text messages and phone calls. The objective of the study was clarified to them and they were knowledgeable that their participation was voluntary.

Tools for Research

The current study made use of two primary tools: A multi-section questionnaire comprising closed and open-ended questions on a five-point Likert scale was used, as well as a semi-structured interview with a team of 12 EFL professionals.

The AI incorporation in ELT Questionnaire

The questionnaire was created using the research questions and review of present literature previously done in this field. The items for the questionnaire were obtained from prior research' instruments (Galanouli, Murphy) & Gardner, 2014; and Torres, 2016) that were carried out in areas related to this study. The questionnaire was available in two forms (e-version developed on the survey planet website. **The link is: <https://s.surveyplanet.com/Zgw3iMcuo>** and paper-version). In its final form, the questionnaire was divided into four sections:

Section one (eight items) dealt with biographical information such as gender, age, academic degree, and teaching experience.

Section two: (ten items), the participants replied to statements on a 5-point Likert-type scale about their opinions of the usefulness of AI tools incorporation into language teaching and learning process.

Section three: (15point Likert-type items) dealt with statements relating to the participants' practices of AI incorporation in ELT activities or as a planned student learning activity. Participants were asked to choose the frequency of using each AI tool on a list of AI tools selected from Jane Hart's (2019).

Section four: participants were asked to select the barriers that prevent them from integrating AI tools in their teaching and learning practices from a list. Secondly, they were asked to answers to an open question concerning their suggestions for disabling these barriers.

The questionnaire was distributed to nine members of a specialist jury. They were asked to provide their thoughts on how well the questionnaire met their needs and its application and determining if certain elements needed to be removed, changed, or added. Their recommendations such as rephrasing some items for clarity and defining a few expressions were used to improve the survey. As for the tool reliability, the Cronbach's alpha index (Cronbach, 1951) was calculated to determine the internal reliability of the different items in the survey; that is, how closely related the set of items were in the survey. The reliability coefficients show that the survey has good internal constancy within each section at .78, .72, .80 and .87.

The interview

Twelve participants responded to five open-ended semi-structured interview questions through either face-to-face sessions or telephone calls (see appendix B). The interview data were then transcribed and extracted to triangulate with the other data.

Results and Discussion

The study used a successive mixed-method design and collected two sets of data. The findings are offered in the same logic, starting with the quantitative and then the qualitative. The results from both data analyses are triangulated and produced.

Quantitative analysis

Results are offered by research questions.

The first question: What are the perceptions of university EFL staff members regarding the usefulness of incorporating AI tools in ELT?

The second part of the survey included ten five-point Likert-type items related to this question; the results are presented in Table (3).

Table (3) Percentages of the given perception items

Section three: Awareness of the effectiveness of AI tools incorporation into language teaching and learning development.	Stron gly agree	Agre e	Can't say	Dis- agree	Strongly disagree
I believe that incorporating AI into the classroom encourages learners to take an active role in their learning.	55%	28%	9%	4%	4%
I agree that the use of AI is a major source of inspiration for students.	50%	34%	6%	6%	3%
I believe that incorporating AI into the classroom enriches the material.	59%	29%	9%	1%	3%
I assume that integrating AI into the classroom increases the standard of teaching.	59%	30%	7%	1%	3%
I assume that the use of AI offers a range of real-world opportunities for fluency in English.	59%	21%	9%	2%	4%
I believe that AI can be used to assess students' language skills in a variety of ways.	59%	27%	5%	4%	3%
I believe that using AI to lecture large groups overwhelms the disadvantages of lecturing.	46%	22%	22%	4%	2%
AI, in my opinion, aids students' self-directed learning.	57%	32%	4%	3%	2%
Students believe I am behind other staff members unless I use AI.	30%	29%	29%	7%	4%
The incorporation and use of AI tools in English language teaching and learning is fundamental.	51%	30%	11%	6%	1%

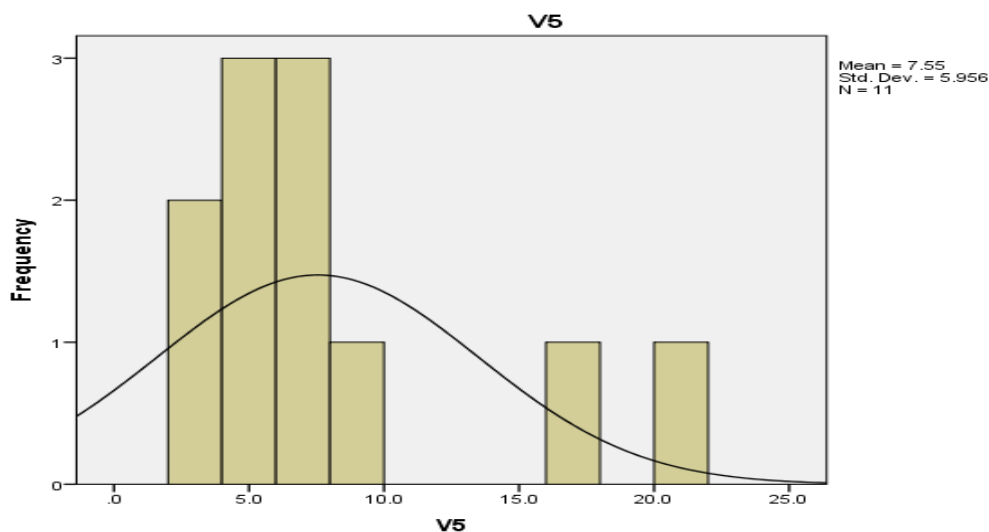


Table (3) showed that participants of EFL members had generally positive attitudes towards AI incorporation in English language teaching and learning with an overall mean of 7.55 and a standard deviation of 5.95. The results additionally highlighted that EFL staff members were well conscious of the importance of incorporating AI in EFL teaching especially in enhancing students' motivation and student-centered learning; improving the content of teaching and enriching students' learning of the English language communication skills through providing various and actual chances for communication; and interaction as stated in previous studies findings (Liaw, Huang & Chen, 2017). Yet it is obvious from the answers, as highlighted in table [3] that they feel doubtful concerning the practicality of AI in overwhelming the barriers of lecturing large classes.

The second question:

What are the current practices of AI tools by university EFL staff members in ELT? The third part of the questionnaire related to the existing practice of AI tools in ELT. The results are obtainable in Table (4).

Section four : Current practices of AI incorporation in ELT activities	Never	Rarely	Sometimes	Often	Always
I guide students to appropriate links on the internet.	4%	20%	42%	22%	8%
To assist students in learning, I developed my teaching website, which they can easily reach.	35%	22%	24%	11%	6%
As independent learners, I motivate learners to use language learning websites	1.4%	24%	27%	26%	21%

(e.g., BBC, VOA, British Council, etc.).					
I help students how to search for knowledge using search engines.	0%	27%	23	21%	21%
To plan my courses, lectures and presentations, I use AI tools.	6	27%	26	19%	7
I import teaching materials from specialized websites on the internet.	6%	21	26	20%	6
In order to promote students' self-directed learning, I often use teaching software (e.g., eBooks, automated feedback software).	11%	43%	21%	20%	7%
I use social networking sites to link students and native speakers because they allow for real-time discussions.	19%	48%	14%	14%	5%
I encourage students to share their work on social networking sites.	21%	45%	15%	11%	6%
Briefings are often used in my classrooms because the visual input they offer aids students' learning.	11%	41%	22%	20%	6%
During class, I encourage students to blog.	22%	36%	18%	15%	5%
I always use internet forums in my classroom because they allow for open discussions.	20%	40%	20%	16%	7%
I always use YouTube to plan lectures because it features videos from real-life scenarios.	19%	41%	20%	11%	7%
I always use email in my classroom because it helps me to keep track of anything I send and receive.	12%	17%	39%	16%	16%

According to these results, although participants are willing to familiarize themselves with AI usage, they appear to be rather unwilling concerning the incorporation of AI into their teaching. Results also show that, even when participants incorporate AI in their

teaching, incorporation is limited to low-range applications such as email services or getting material from the internet. This result goes with the findings of other related researches (Arnold, 2017; and Galanouli, Murphy & Gardner, 2014).

The answers of the participants on section two of the survey concerning the frequency of using each AI tool in the five given categories came as follows:

Category one: Educational planning and training tools 100% of the participants never use any of the course management, course platforms, and authoring tools. As for the EFL teaching websites, 55% of the participants stated that they often use the British council websites in their teaching. While breaking news websites got 40%, Randall cyber got 35% a few numbers of participants reported that they sometimes use BBC and VOA (21%). As for Quizzers and survey tools, only 20% of the participants stated that they sometimes use survey monkey.

Category two: Presentation and material design tools 44% of the participants stated that they often use PowerPoint in their teaching. 22% often use YouTube. While only 10% use Google slides. 100% of the participants never or rarely use photo and audio tools.

Category three: communication tools 100% of the respondents never use Webinars and web meetings in their teaching. As for Networking and collaboration tools: 43 % of the participants stated that they often or sometimes use Facebook in their teaching practices. Only 20% of the participants stated that they use Google sites.

Category four: mobile devices and synchronization 100% of the participants stated that they never use Mobile devices. As for Cloud storage, 26 % of the participants stated they often use Google drive 14% sometimes use drive Dropbox.

Category five: productivity tools 79% of the participants stated they often use Google search, 54% sometimes use Google scholar, 22% sometimes use Wikipedia.

It is obvious from the findings shown above that EFL staff members incorporate AI into their instruction practices at a minimal level as their answers indicate a low rate of frequency with using AI tools such as **intelligent tutoring programs**, course platforms forums, wikis, weblog and authoring tools to improve tutoring for their students. Concerning the type of functionalities used, findings showed that only one AI applications, namely sending students to specific Web sites were used to a significantly larger degree than other practices of interactive functionalities (forums, wikis), and especially synchronous ones (discussion boards, creation of audio files, Weblogs, creation of Web site, video conferencing), which were utilized to a lesser extent. These findings are in agreement with previous research (Arnold, 2017; and Shyamlee & Phill, 2021).

The Third Question: Is there a correlation between EFL teachers' perceptions of AI tools' utility and their use in their current teaching practices?

Table 5 Correlation between **teachers' perceptions** and use of AI

Paired Items	N	Correlation	Sig
The usefulness of AI versus its use for language teaching	71	-.187	not significant

Table 5 shows that there is no correlation between participants' perceptions of the benefits of AI incorporation in ELT and using it for language teaching. That is, while the percentages of their responses of the benefits of AI integration in ELT are high, the percentages of the functionalities they use to incorporate AI in their teaching are low.

Furthermore, when it came to the existing practice of certain AI tools, the percentages were reduced except in the use of Language Teaching websites, YouTube, Google search engine and PPT, which were the four most frequently adopted AIs in language teaching and learning detected in this study. It can be noticed that staff members have positive attitudes toward AI incorporation, but they are reluctant to use it in language teaching. This result is consistent with other studies (e.g. Kern (2016); and Shyamlee, 2021).

The Fourth Question: Are there statistically significant differences in the current practice of AI tools integration in ELT among EFL staff members in relation to a number of relevant variables, such as gender, age, and teaching experience? Independent samples t-test was carried out to answer this question. Table (6) and (7) show the results.

Table (6) the difference between the participants' replies regarding their current practice of AI in relation to gender(N= 71)

Gender	N	M	SD	T	DF	Sig.
Male	29	3.66	0.59	-4.553	280	.000
Female	42	3.22	.64			

According to Table (6) the difference between the male and female participants' current practice of AI in EFL teaching and learning is statistically significant ($p < .05$, Cohen's d : .7148). The male participants' stated a higher level (Mean= 3.66) compared to the level of female participants (Mean= 3.22). This result goes with the literature on gender differences in general and many other research studies inspecting gender and technology use or self-efficacy (Kern, 2016; Liaw & chin, 2017).

Table (7) One-way analysis of variance (ANOVA) for participants' current practice of AI incorporation according to age and teaching experience

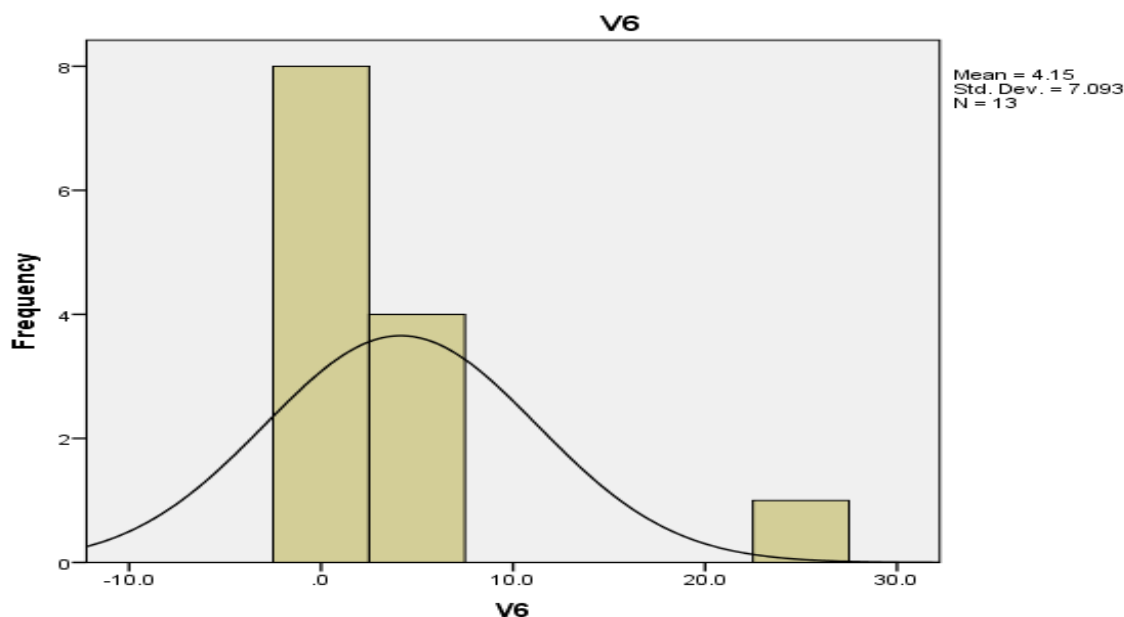
variables	Source of variation	Sum of squares	DF	Mean square	F	Sig
Age	Between groups	115.7	3	34.65	4.63	.005
	Within groups	1223.5	68	7.47		
Teaching experience	Between groups	180.0	3	46.66	4.58	.005
	Within groups	1847.8	68	12.59		

table (7) shows a statistical significance difference was found between the current practice of AI incorporation of EFL staff member and their age level ($p < .05$) and teaching experience ($p < .05$). Additional analysis was done to better understand within group this significance was found. Findings show that: a high level of AI incorporation practices was recorded at participants under 30, followed by participants at 30-40 age category. Staff members between 41- 50 and above 60 age categories fell below their colleagues of ages under 30 and between 30-40 years. This sharp decline is indeed a cause for concern. This result is reliable with Prensky's (2021) speculation that people born before the 1970s have had less experience with new technologies than those born after the 1970s and have been acquainted with technology. Participants with teaching experience less than 5, varieties from 5 to 10 and from 11 to 20 years categories incorporate AI their teaching and learning activities more than their colleagues whose teaching experience is from 15 to 20 years and those who are more than 20 years teaching experience. This result is reliable with other findings conducted by Drent & Meelissen (2017). Also, Lam's study (2020) showed that experienced teachers generally decide to use technology involuntarily in response to external forces, while teachers with little experience are more likely to use it on their own will.

The Fifth Question: What are the difficulties in incorporating AI tools into ELT at the Faculty of languages and translation, King Khalid University?

Findings concerning this question are shown in table (8).

Section five : Barriers preventing AI tools from incorporating in teaching and learning practices	Strongly agree	Agree	Can't say	Dis- agree	Strongly disagr ee
There is a shortage of administrative help for using and implementing AI.	2%	20%	23%	50%	5%
There is a scarcity of tools, such as computers and teaching software.	7%	63%	10%	20%	3%
There is a scarcity of technical support.	6%	34%	10%	45%	10%
There is a shortage of AI tool training.	14%	65%	12%	9%	0%
In ELT, there is a shortage of awareness about AI incorporation.	18%	70%	10%	5%	2%
There is a lack of computer skills, expertise, or confidence.	10%	60%	16%	12%	2%
The curriculum is overburdened, and the workday is highly hectic.	11%	60%	13%	12%	2%
The incorporation of AI tools in ELT has resulted in increased workload.	7%	27%	16%	47%	2%
There is a scarcity of time for planning, implementing, and evaluating.	7%	70%	14%	9%	2%
There is a large number of students in my class.	12%	60%	4%	20%	4%
There is a lack of awareness or enthusiasm among students when it comes to AI.	10%	40%	%16	%36	3%
AI tools do not help me teach, and I do not believe that technology is needed for a language teacher.	2%	6%	7%	%45	%40



According to table (8) all participants (71) attributed AI barriers to 'Lack of relative AI tools training,' 'Lack of knowledge about AI incorporation in ELT' and 'Lack of resources or access to the internet and related teaching software.' 60% of participants see that the significant barrier might be "Large classes". **47% of** participants chose 'increased workload related to AI tools incorporation in ELT.' **70%** of participants chose 'lack of time for preparation, application, and assessment.' **60%** chose 'overcrowded curriculum and extremely busy workday'. **20%** participants referred to 'the Lack of university administrative support'. **34%** participants chose "Lack of technical assistance". **60%** participants chose "lack of experience with or confidence in computer skills". These findings are consistent with those of Lam, 2020; and Pelgrum, 2021.

The Sixth Question: What are some potential methods for EFL staff members at Faculty of languages and translation, King Khalid University, to effectively address the challenges of incorporating AI tools into ELT?

The participants gave suggestions for overcoming the challenges that prevent them from incorporating AI tools in their teaching and learning practices:

- 1- Continuing professional development must be offered for EFL staff members to model the new pedagogies and AIs for learning with the aim to enhance the teaching and learning process.
- 2- Providing EFL staff members with academic mentors as advisors concerning the application of AI incorporation in ELT.
- 3- Working on a new strategy that supports AI philosophy and consider AI incorporation in university teaching and learning as a responsibility on all staff members.
- 4- Allocating learners in big classes into small ones.
- 5- Providing lecture rooms and classes with internet access points.

Qualitative analysis:(Findings of the interview)

Three major issues that appeared from the interview data were as follows:

First, teachers' responses to AI's potentials:

Most of the interviewees agreed that AI incorporation in English language teaching and learning context is essential in 21st century teaching development. However, they are not sure about the degree and nature of AI use in teaching. They are also doubtful concerning the efficiency of policy makers' policy of applying AI incorporation into university learning and teaching in terms of insufficient professional training. It was clear that most of the participants do not feel sufficiently trained. These findings go with the results of the above- mentioned quantitative study and is in agreement with relative literature review (Afshari, etal. 2019).

Second, teachers' use of AI in the teaching and learning activities.

Though many of the interviewees are aware of the AI tools (English language teaching websites, Google sites, YouTube, Skype, Google forms, , Facebook, wikis, blogs, Dropbox .. etc.), they state that they do not use most of them in their teaching. Very few integrate interaction-oriented AI tools in their language teaching and learning practices (Facebook, Skype, whatsApp, Hangout).

Third, obstacles in incorporating AI tools in ELT at KKU

Some of the interviewees stressed that the university's lack of facilities and technical malfunction and their self-acknowledged deficient practice in AIs are the two biggest obstacles for staff members in their efforts to incorporate AI in teaching and learning. They also stated that obligatory loaded courses do not offer them the time needed and flexibility to test in AI enterprises. Most of the interviewees reported another obstacle that is "their classes are large". Some of the interviewees stated, "we have a big number of students in each class, and there are few chances to help them each time they met technical problems." Other interviewees stated that 'lack of appropriate technical skills regarding effectively using AIs as an instructional tool in EFL classes' is a main difficulty to AIs incorporation in teaching and learning English. Some other problems were stated: the need for a change in the learning and teaching style, lack of time for getting appropriate materials.

CONCLUSION:

Learning and teaching gain a new land high level of quality by incorporating AI into the classroom setting. AI-assisted technologies aid in the formation of a sound educational system where learning can be more personalized and teaching can be more adaptable and comprehensive. They will support students in acquiring the knowledge and skills that today's technology-enhanced society pursues and demands. This study's findings revealed complementary results about EFL professionals' views of AI tools and using them to support language learning and teaching. The qualitative section highlighted the why question that arose from the quantitative analysis. For example, concerning the quantitative findings, the mean for staff professionals' potential to use AI tools in language teaching and learning was lower than that of their views about its effectiveness, suggesting EFL professionals were less likely to use AI to support

language learning and teaching. The reasons participants gave during the interviews when triangulated with the quantitative findings complemented each other. Hence, the obstacles staff members met was related to lack of professional training, students' size, and training time. The results further show that universities offer support for incorporating AI into teaching and learning.

Moreover, the quantitative findings showed that male participants reported higher levels when compared to the level of female participants. However, it should be stated that other recent researches (Kayaa & Alpaslan, 2020, 4373) has identified greater gender equivalence in use and skills levels. Therefore, as recommended by Shyamlee and Phil (2021) more research should be done on gender differences before definite conclusions may be drawn.

To conclude, it is the teachers' role to develop new skills to help learners while also avoiding unnecessary workload and repetitive activities such as through writing aides and correction methods to integrate AI into their daily teaching processes (Dodigovic, 2019; Chodorow, Gamon, & Tetreault, 2020).

Recommendations:

These results have important suggestions for effectively incorporating AIs in ELT at Saudi Universities.

1-Training and Providing EFL staff members with a training manual supported with practical models and activities of incorporating certain AI tools in teaching and learning English.

2-Recognizing and identifying a list of the AI skills necessary for EFL professionals to effectively incorporating AI in ELT.

3-Preparing well-trained specialized AI mentors for EFL professionals to help them in designing their AI based activities.

Results of this study also imply areas for future research:

1-Designing and preparing professional training programs for developing university staff members' skills necessary for incorporating AI tools in ELT.

2- Conducting future research that examines the influence of different methods and models which may help EFL staff members incorporate AI in their teaching, such as the Flipped model of instruction.

3- AI resources that language teachers most often want to incorporate into their teaching.

4- The incentives for language teachers to incorporate AI resources into their daily teaching practice,

5- The vital skills that language teachers would need in the new AI-assisted teaching situation.

6- How can artificial intelligence developments be expressed in English language teachers' and learners' curriculums?

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