EFL Faculty Members' and Students' Perceptions of the Use of Artificial Intelligence Applications in Teaching English Language in University

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ABSTRACT

The current research aimed to explore EFL Faculty Members' and Students' Perceptions of the Use of Artificial Intelligence Applications in Teaching English Language in University. EFL Faculty members and university students need to use AI applications in ways that are aligned with instructional goals and support student learning. A quantitative approach was used, and data was gathered from a survey of (20) EFL instructors and (150) university students at Sadat Academy for Management Sciences . The results showed that EFL Faculty Members strongly relied on AI applications to provide grammar, vocabulary, and pronunciation feedback, freeing up instructor time. Additionally, they positively regarded the advantages that AI apps offer for enhancing the educational process in their classes. This is most likely a result of EFL students being used to technology in the classroom. The results also showed that the students' perceptions were high. They believe AI solutions are user-friendly and efficient in improving both their language learning experiences and their level of language proficiency. Due to their benefits in English language instruction, the research suggests incorporating AI applications into the EFL teaching and learning process.

Keywords: EFL Faculty Members, Students' Perceptions , Artificial Intelligence Applications .

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Introduction

The advent of emerging technologies in the digital age, such as artificial intelligence and big data processing, has had an unparalleled impact on educational processes and pedagogy, encompassing foreign language teaching and learning methodologies and approaches. Members of Generation Z, who comprise today's graduates, are renowned for their technological know-how, digital literacy, and upbringing with digital tools.

Artificial Intelligence (AI) has generated a lot of attention in the education and training sector lately because of its potential to completely transform the learning process. Artificial Intelligence (AI) is a crucial term in the discipline since it enables personalized learning, dynamic evaluations, and meaningful interactions in online, mobile, or blended learning settings (Zhang & Aslan, 2021). Recently introduced AI-powered tools such as Chat GPT have garnered significant attention in the field of English language learning and teaching. Numerous studies have examined the use of AI-powered tools in English language learning (Alhalangy & AbdAlgane, 2023; Alharbi, 2023; Alsadoon, 2021). Understanding learners' opinions and experiences surrounding the use of AI tools is crucial for the successful integration of these tools into language learning, in addition to teachers and technological improvements. Nevertheless, little is known about the experiences, opinions, and

worries of English majors when it comes to incorporating these resources into their study of the language as a second language.

Furthermore, students use more AI-powered technologies than ever before. Numerous studies have demonstrated the positive effects of incorporating AI technologies into foreign language learning on learners' engagement, motivation, and academic achievement (Moybeka et al., 2023; Ouyang, Zheng, & Jiao, 2022; Khan, Ahmad, Jabeur, & Mahdi, 2021; Kim, Kim, & Cha, 2021). In particular, Quillbot and other AI-powered writing tools have shown incredible benefits in terms of offering immediate feedback and suggestions for corrections pertaining to grammar, punctuation, and expression. They also assist in the optimization of sentence structures, word choices, and tones. All these tools contribute to improve the overall quality of written content (Farhi et al., 2023; Xuyen, 2023)

It has also been suggested that integrating AI tools into English language instruction will help students become more proficient readers, speakers, and listeners (Adilbayeva, Mussanova, Mombekova, & Suttibayev, 2022; Ma, 2021). However, a number of scholars have voiced their worries about the detrimental effects of AI tools on language acquisition, which they attribute to an over reliance on these tools, a lack of human connection, and a lack of critical thinking abilities (Huang, Zou, Cheng, Chen, & Xie, 2023; Thái, 2023).

The absence of AI adoption in higher education institutions could have several negative effects. First, without AI, academic institutions could find it difficult to keep up with the quickly evolving technology environment and might not be able to adequately train students for the workforce of the future (OECD, 2019). Second, AI can improve communication skills, individualized learning, and e-learning systems while considerably increasing student engagement, enrollment, and funding (Dhawan & Batra, 2020). Universities might find it difficult to offer individualized learning programs that are tailored to each student's

particular requirements and skills without AI, which could exacerbate already-existing disparities.

It is generally accepted that the primary factor influencing how technology is used in EFL classrooms is the teachers' perceptions. Given the significance of teachers' opinions and their potential to influence their usage or lack thereof of technology tools in the classroom, this research aimed to investigate EFL Faculty Members' and Students' Perceptions of the Use of Artificial Intelligence Applications in Teaching English Language in University.

Problem of the Research

Previous studies have examined the impacts of AI technologies in language learning and teaching from teachers' viewpoints, faculty members, and specialists. It is crucial to investigate how English majors in Egypt view and interact with AI technologies in their English language learning process given the distinctive features of Egypt's postsecondary education system, cultural considerations, and language learning preferences. Examining their opinions can yield important information about the applicability and possible effects of AI tools on higher education in Egypt for English language learners.

Therefore, the current research tries to recognize EFL faculty members' and students' perceptions of the use of artificial intelligence applications in teaching English language in university

Questions of the Research:

The current research seeks to answer the main question:

- What are the professors and students' perceptions towards learning English using artificial intelligence applications?

The main question included the following sub-questions:

- What are the faculty members' perceptions towards learning English using artificial intelligence applications?
- What are the students' perceptions towards learning English using artificial intelligence applications?

Objectives of the Research:

The current research aims to:

- Identify the perceptions of faculty members towards learning English using artificial intelligence applications.
- Identify the perceptions of students towards learning English using artificial intelligence applications.

Significance of the Research

- The research's conclusions have important ramifications for Egyptian policymakers, curriculum designers, and English language instructors.
- Educational institutions can decide how best to include AI tools into language learning curriculum and ensure that they meet the requirements and expectations of their students by knowing how EFL faculty members and students see the use of these tools.
- Promoting more efficient and interesting language learning opportunities for English majors, the current research seeks to advance English language learning techniques and pedagogies in Egypt's higher education context**.**

Delimitations of the Research

The present research was delimited to:

1- A group of EFL Faculty Members(N=20) and students (N=150) from Sadat Academy for Management Sciences University, Egypt .
2- the Use of Artificial Intelligence Applications in Teaching English Language in University.
3- Faculty of Management Sciences, Faculty of Languages & Translation Sadat Academy for Management Sciences University.
4- The first semester of the academic year 2023-2024.

Definition of Artificial Intelligence

According to Aldosari (2020:145), artificial intelligence (AI) is the creation of systems that would require highly developed human intelligence to do activities requiring a high degree of

"inference, deduction, and perception." It speaks of artificial intelligence, not human intellect. One important distinction between AI and humans or animals is that AI is not aware of feelings or consciousness, whereas human or animal intelligence does (August et al., 2021). AI, according to Luckin (2017), is the ability of computer systems to behave in ways that humans would find acceptable. According to August and Tsaima (2021), artificial intelligence (AI) is the study of how to make computers perform tasks that seem to require intellect when carried out by humans.

Both machine learning and deep learning are included in this broad definition of artificial intelligence. As a subfield of artificial intelligence, machine learning involves the application of algorithms that can identify patterns in data, learn from those patterns, get better over time, and draw conclusions when given additional information (Ramlakhan et al., 2022). In summary, machine learning is a method that uses algorithms to help computers learn from data.

According to Jordan & Mitchell (2015), machine learning algorithms can be reinforcement-based, supervised, or unsupervised, depending on the kind of learning task. Supervised learning is the process of training a model using a labelled dataset in which each input's intended outcome is known. Unsupervised learning is finding patterns and structures in unlabeled data, whereas reinforcement learning involves learning by trial and error while receiving input from the environment. A subset of machine learning is called deep learning. Artificial neural networks are used in deep learning, a kind of machine learning (Janiesch et al., 2021).

LeCun et al. (2015) state that deep learning has proven to be especially effective for jobs requiring processing large amounts of unstructured input, like audio, photos, and natural language, as well as those requiring hierarchical models for the data. AI comes in two flavors: universal (strong) AI and narrow (weak) AI. The most prevalent kind of AI now in use is narrow AI, also known as weak AI, which is utilized to carry out a single, specialized activity

(Bartneck et al., 2020). However, machines that can employ cognitive thinking and think like humans are created using general artificial intelligence, often known as strong AI (Bartneck et al., 2020). The goal of AI research is to get to the latter.

In the current research, artificial intelligence (AI) will be operationally defined as the development of systems in the education sector that operate like humans and demand a high degree of human intellect. Put differently, artificial intelligence (AI) will be characterized as a paradigm for research wherein the goal is to imitate human intelligence and imbue it into a machine. Thus, our goal is to imitate human thought processes and decision-making in the machine.

The origin of Artificial Intelligence in Education

Artificial intelligence (AI) is becoming more and more common in the education sector, both in terms of teaching and learning as well as general campus management. It was previously well-liked in the corporate sector (Dhawan & Batra, 2021). AI's beginnings can be linked to a 1956 workshop that John McCarthy organised at Dartmouth College in the United States. When he explained that a machine might be designed to duplicate every aspect of learning, he coined the term artificial intelligence for the first time (Pedró, 2020).

However, Luckin et al. (2016) contend that artificial intelligence (AI) has been employed in education since 1970, with a primary focus on developing computer programmes that enable customised learning as well as automated assessment and feedback. This demonstrates that artificial intelligence is nothing new and has existed for a very long time; the term has only recently gained popularity and promotion.

Furthermore, in order to help policymakers better understand the potential and consequences of artificial intelligence (AI) for teaching and learning and develop policies for their institution, Miao et al. (2021) have already produced a UNESCO Artificial Intelligence and Education Guidance for Policy-makers. This document was also created to make sure that implementing AI in

educational settings truly helps to fulfil SDG 4: guarantee inclusive and equitable high-quality education and encourage opportunities for lifelong learning for everyone.

Artificial Intelligence in Higher Education

Artificial intelligence (AI) systems and technology have the ability to fundamentally alter how higher education institutions operate today (Dhawan & Batra, 2021). Dhawan and Batra (2021) further mentioned that the US Education industry Report indicates that the US is likely to see a 48% increase in AI adoption in the education industry between 2018 and 2022.

Three approaches to addressing AI technology were identified by Baker and Smith (2019) in a report: "learner-facing, teacher-facing, and system-facing AIEd" (p. 11). System-facing refers to technologies that provide administrators and managers with institutional-level information; learner-facing refers to software that students use to study a particular subject; and teacher-facing refers to automating functions like administration, evaluation, feedback, and plagiarism detection to assist teachers and minimize their effort and help them learn about the student's learning progress (Zawacki-Richter & Gouverneur, 2019).

AI has the potential to improve student learning, lower dropout rates, and provide a more individualized learning environment for students in higher education (Pedro, 2020). Higher education institutions can create a comprehensive digital transformation plan with the help of the Microsoft Education Transformation Framework (ETF) for Higher Education, which provides practical advice (Papaspyridis, 2020).

The EFT includes four key pillars—student success, teaching and learning, a safe and connected campus, and academic research—where AI may be successfully incorporated to guarantee efficient and effective outcomes for the institution. This part will cover the three pillars of student success—a secure and connected campus, academic research, and teaching and learning—in brief.

Since teaching and learning are the focus of the research, they will be covered in greater detail in the section that follows.

According to Papaspyridis (2020), establishing lasting connections with students and recruiting and retaining them are key components of student success. Pedró (2020) claims that artificial intelligence (AI) can offer projection tools for scenarios involving dropout and admission decisions. In order to intervene and offer solutions, Tsai et al. (2020) were able to identify students who were at a high risk of dropping out as well as the reasons for their departure.

Another illustration is the FLEXA tool, which Microsoft and the MIP Politecnico di Milano Graduate School of Business developed to help students evaluate the skill gaps between their current situation and their desired career path (Papaspyridis, 2020). According to Papaspyridis (2020), a secure and connected campus is one that offers a smart and safe living environment for students as well as efficient and effective management of the campus resources. Because AI will automate the management and supervision of campus buildings, human resources, and finance chores, campus life will be made easier and the campus will become smarter (Dhawan & Batra, 2021). "Faster, personalized, cost-effective, and efficient solutions at the admin desk" can be provided by chatbots and virtual assistants (Dhawan & Batra, 2021, p 14).

Finance and human resources activities can also be made easier with AI. Stellic, for instance, can be used by administrators for financial planning and forecasting. They can assess the demand for each given course with the aid of this instrument. Shared resources, like the cloud and other technologies, can contribute to cost savings. The goal of academic research is to enable researchers to work with researchers worldwide and finish their work with an efficient computing environment (Papaspyridis, 2020). Artificial Intelligence (AI) facilitates the processing of data. By developing and evaluating surveys, conducting interviews, and spotting fake data, it can assist researchers in carrying out their investigations (Dhawan & Batra, 2021).

The Applications of Artificial Intelligence in Teaching and Learning According to Papaspyridis (2020), teaching and learning in AI refers to developing AI solutions that enable educators and students to realize their full potential through collaborative learning, learning management, and learning spaces. The creation and uptake of new technologies in education have increased within the past 30 years (Popenici & Kerr, 2017). Although initial initiatives to incorporate AI into education looked at utilizing the technology to replace instructors, institutions are now moving towards employing AI in teaching and learning to support teachers rather than to replace them (JISC, 2021). AI will never take the role of educators.

AI is unlikely to entirely replace teachers and instructors since teaching is a very complex and all-encompassing activity that calls for the development of social and emotional skills in addition to the presentation of knowledge (Kolchenko, 2018). Furthermore, despite some participants' beliefs that AI would eventually replace teachers, Chan and Tsi (2023) concur and state that in their study on the "future role of educators in the face of advancing AI technologies," they concluded that the majority of participants contend that human instructors are irreplaceable because they have special abilities like critical thinking, creativity, and emotions. The research highlights the importance of social and emotional competencies that are learned through interpersonal encounters and that AI systems are currently unable to replicate (Chan & Tsi, 2023).

The current research indicates that teachers can successfully integrate AI to enhance teaching and learning without viewing it as a replacement. To do this, teachers need to develop their AI literacy, understand how AI can work with teachers and students in an efficient manner while avoiding potential pitfalls, and deal with pertinent issues like data protection, ethics, and privacy (Chan & Tsi, 2023). Chatbots and digital assistants, feedback, automated grading, personalised and adaptable learning, and emotional AI—all of which will be covered in more detail below—are a few examples

of how artificial intelligence is being used in education. Digital assistants and chatbots are closely similar technologies that are frequently used interchangeably (JISC, 2021). Chatbots and digital assistants, as their names suggest, are automated teaching assistants that can respond to questions from students without the need for human assistance (Popenici & Kerr, 2017). According to Southgate (2020), chatbots can provide knowledge, simulate learning, mentor, support, encourage, scaffold, and evaluate students.

Intelligent Tutoring Systems (ITS), also known as adaptive learning, are online learning environments that modify instructional strategies and available materials based on the needs and ability levels of specific students (Luckin et al., 2016). Several contemporary ITS use machine learning techniques, self-training algorithms based on large data sets, and neural networks to enable the system to make appropriate decisions about what learning content to deliver to the student (Luckin et al., 2016). These techniques allow the system to adjust the rate, order, or amount of learning based on the student (JISC, 2021).

Automated Grading and Feedback AI is being utilized to automatically grade students. August and Tsaima (2021) observed how student work is evaluated using an auto grader program without the need for human intervention. This programme scores multiple-choice exams and evaluates and grades written work. The results of auto-graders in a study can vary from generalized input to binary (correct/incorrect) (August & Tsaima, 2021). In their study, Haddawy et al. (2010) showed how an artificial intelligence and virtual reality system were employed for automated grading. They explained how the system uses a haptic device and video monitor to assess dental students' ability based on their motions. It then computes their ratings based on these motions and categorizes them as specialists or novices(Haddawy et al, 2010)

AI and English language learning

The ability of a computer or other digital device to carry out operations typically performed by intelligent humans is known as artificial intelligence, or AI. Artificial Intelligence (AI)

encompasses various domains, including voice, machine learning, big data, computer vision, and natural language processing. Because each area has unique complexities and subtleties, they are essential parts of the larger field of artificial intelligence (Chiu, Xia, Zhou, Chai, & Cheng, 2023). Artificial intelligence (AI) has drawn a lot of interest in education and offers a number of chances to enhance student learning. The application of AI tools in various educational situations, including language acquisition, has been thoroughly investigated by researchers. This pattern has presented a viable way to improve language learning effectiveness.

Vall and Araya (2023) claim that artificial intelligence (AI) language learning tools include a variety of tools and methods that mimic human intelligence in order to help language learners acquire and advance their language abilities. These technologies are commonly categorized as AI Chatting Robots, Intelligent Tutoring Systems (ITSs), Neural Machine Translation technologies (NMT), Automatic Evaluation Systems (AESs), and Intelligent Virtual Environments (Jiang, 2022).

According to Jiang (2022), big data and natural language processing technologies, like automatic voice recognition and word sense disambiguation, are major components of automated evaluation systems (AESs), which enable AESs to analyze incoming data and produce automatic feedback. These resources have been demonstrated to improve the oral fluency and pronunciation of EFL learners and are mainly utilized in writing and speaking contexts (Ahn & Lee, 2016). According to EFL teachers, despite their availability, AESs are not regarded as trustworthy substitutes for human raters in EFL writing instruction because of their relatively lower accuracy, a lack of high-quality comments, frustrating recognition levels, and lack of convenience (Algaraady & Mahyoob, 2023; Alharbi, 2023).

NMT (Neural Machine Translation) tools have been shown to improve self-directed learning (Godwin-Jones, 2022), improve vocabulary and grammar mastery (Bahdanau, Cho, & Bengio,

2015), foster the development of writing, reading, and listening skills (Alhaisoni & Alhaysony, 2017), and lessen language anxiety (Bahri & Mahadi, 2016). These benefits to EFL learners' learning have been demonstrated. Learner models, neural networks, and algorithms are used by Intelligent Tutoring Systems, or ITSs, to deliver individualized tutoring and support learning. Numerous ITS applications have been successfully applied in the context of EFL to enhance speaking, reading comprehension, and grammar acquisition. This is accomplished by tailoring educational materials and offering prompt, pertinent feedback (Xu, Wijekumar, Ramirez, Hu, & Irey, 2019).

Chatbots are computer programs that employ artificial intelligence (AI) to enable intelligent communication in spoken or written form. By learning from past exchanges, chatbots can improve user experience (Jiang, 2022). Chatbots have been shown through numerous studies to be beneficial in raising the motivation, self-confidence, and interest in learning of EFL learners (Ali, Shamsan, Hezam, & Mohammed, 2023); improving their language knowledge, including vocabulary and grammar (Alsadoon, 2021; Xuyen, 2023); and improving their English language application skills (Algaraady & Mahyoob, 2023; Hang, 2023).But according to some research, AI chatbots can negatively affect EFL learners' capacity for critical thought and problem-solving (Thái, 2023), and these tools are ineffective for pupils at the novice level.

According to Luck and Aylett (2000), an intelligent virtual environment consists of intelligent procedures and tools that power autonomous creatures and agents, as well as good graphical representation and interaction tools. Virtual reality tools have found widespread use in the teaching of foreign languages, especially in the areas of vocabulary learning and retention (Tai, Chen, & Todd, 2022), English speaking and communication skills (Chen, Thomas, York, & Mayall, 2020), motivation and anxiety reduction for EFL learners (Chien, Hwang, & Jong, 2020; Ma, 2021).

In summary, a number of earlier research have demonstrated the advantages for both teachers and students when AI-powered

technologies are incorporated into EFL learning and teaching. Particularly, from the standpoint of educators, integrating AI tools into EFL instruction and learning can benefit students' autonomy, motivation to study English, and English language proficiency.

Nonetheless, a number of issues and worries about the use of AI tools in EFL instruction and learning have also been raised. Concerns regarding the dependability and correctness of the data supplied by AI chatbots have been voiced by a number of researchers (Thái, 2023; Tlili, et al., 2023). According to Thái (2023) and Ali, Shamsan, Hezam, and Mohammed (2023), EFL learners' critical thinking and problem-solving abilities may suffer from an excessive reliance on AI technologies like Chat GPT. Other researchers (Farhi et al., 2023; Huang, Zou, Cheng, Chen, & Xie, 2023) contend that using AI Language Learning Tools causes EFL learners to experience a lack of human interaction, and that there are ethical issues, such as privacy, fairness, and bias, to be aware of when utilizing AI in EFL learning and teaching.

Artificial Intelligence in Egypt

This section does not address the usage of AI in Egyptian education; rather, it discusses the technology's availability and awareness in Egypt. With the intention of using AI to speed up Egypt's progress towards achieving its developmental goals—particularly the Sustainable Development Goals of the United Nations—the Ministry of Communication and Information Technology in Egypt established the National Council for Artificial Intelligence (NCAI) in 2019. NCAI collaborates with academics, businesses, and governmental organizations to form Egypt's national AI strategy (NCAI, n.d.).

Additionally, in line with Egypt's AI strategy, Dell Technologies and Ministry of Communications and Information Technology announced a new initiative to teach AI and its applications to students from five higher education institutions: the Arab Academy for Science and Technology, American University in Cairo, German University in Cairo, Cairo University, Ain Shams

University, and Cairo University (Alaa El-Din, 2022). Dell will solve a case study on artificial intelligence and its applications as well as provide seminars on data science and big data analytics as part of this programme (Alaa El-Din, 2022). This programme will increase the capacity of AI educators, and Dell intends to leverage it by launching the 'Train the Trainers Programme,' which will provide university professors with training sessions on a range of AI-related technology topics.

AUC has already begun investigating the application of AI to education. AUC's Centre for Learning and Teaching (CLT), a faculty service centre, has already released "Artificial Intelligence - Resources for AUC Faculty" to assist faculty in navigating and comprehending AI tools, particularly ChatGPT, which is having an impact on education (CLT, n.d). Additionally, "Digi-Bot," a chatbot designed to support digital transformation at the university and give staff, faculty, and students a more streamlined and effective way to access information and services, was developed by the digital transformation team (AUC, 2020).

Due to the growing popularity of artificial intelligence both globally and in Egypt, as well as the systematic, methodical approach to conducting the literature review using the aforementioned specific search strategies, there is little to no literature available about the use of AI in Egyptian higher education institutions and how this will impact the field's future.

Implications of the Research

It is clear from the research and literature analysis that artificial intelligence (AI) is becoming more and more popular in higher education, and instructors are eager to include it in their lessons. Based on the data and the UTAUT model (Venkatesh et al., 2003), it can be concluded that faculty members have high degrees of social influence, performance expectancy, and effort expectancy. But there are still some areas that need to be addressed, namely perceived risks and enabling situations. The study therefore has a number of ramifications for the successful integration of AI in higher education.

The results showed that although faculty members expressed their experiences and opinions regarding the application of AI in higher education, there were still issues and difficulties that they discussed, even though their opinions were largely supportive of the use of AI in teaching and learning. This study demonstrated that in order to achieve fairness and accessibility through the provision of high-speed internet and gadgets, the government must launch programmes aimed at narrowing the social class divide.

In addition, officials must create a comprehensive plan that addresses the socioeconomic difficulties facing Egypt's higher education system. A section on inclusivity, the perceived hazards, and the ethical issues surrounding the use of AI in education should all be included in this policy. This can be accomplished by adhering to the "AI and Education: guidance for Policy-makers" document published by UNESCO in 2021, which addresses the moral, inclusive, and egalitarian application of AI in education. Individual institutions can then take this policy and use it to build their own plans for achieving the policy's objectives.

Another implication of this study is that educators in higher education institutions can use it as a lens through which to see faculty members' reactions to the use of AI in teaching and learning. They can then use this information as a guide to begin integrating AI into their institutions using the tools the study mentions. The participants brought up the fact that AI exists and used the train as an example. You have the option to ride the train or just observe it pass by. Furthermore, as there will be a shortage of higher education in the future, artificial intelligence (AI) can assist in facilitating access to higher education. As a result, policymakers can research ways to develop AI-led learning.

Instruments of the Research:

To achieve the aim of the current research, the researcher prepared and used the following instruments:

- Perceptions of faculty members towards learning English using artificial intelligence applications questionnaire.

- Perceptions of students towards learning English using artificial intelligence applications questionnaire.

Data collection and Procedures:

A) The perceptions of faculty members towards learning English using artificial intelligence applications Questionnaire (Appendix 1)

1) Aim of the Questionnaire

The questionnaire aimed at collecting data about faculty members (n=30) concerning perceptions of faculty members towards learning English using artificial intelligence applications.

2) Description of the Questionnaire.

The Questionnaire included (10) items, measure the perceptions of faculty members towards learning English using artificial intelligence applications .

No	Items	Strongly Agree (5)	Agree (4)	Undecided (3)	Disagree (2)	strongly Disagree (1)
1	AI Applications can tailor learning to individual student needs.					
2	AI Applications can provide grammar, vocabulary, and pronunciation feedback, freeing up instructor time.					
3	AI Applications can offer more avenues for students to practice all language skills.					
4	AI Applications can provide instructors with					

	data on student performance to inform teaching strategies.					
5	**AI Applications can create interactive activities that boost student engagement.**					
6	**Using AI Applications can free up my time to focus on more complex aspects of language learning.**					
7	**AI applications can create a more engaging and interactive learning environment for EFL students.**					
8	**AI Applications help me have access to academic materials anytime and everywhere.**					
9	**AI Applications can provide me with personalized English language learning experiences.**					
10	**AI Applications can help develop my autonomy in learning English.**					

3) Sources of the Questionnaire

The researcher referred to some sources to design the Questionnaire.

These sources included: Hazaymeh & Remache (2024) and Sharawy, (2023).

Questionnaire Piloting:

The questionnaire was piloted by administering it to (10) EFL faculty members other than those participating in the study with the aim of:

- Checking clarity of questionnaire items.
- Checking readability of questionnaire items.
- Timing the questionnaire.

Questionnaire Timing:

Time was determined by taking the average of the time taken by each EFL faculty members taking the test. It was 20 minutes.

Validity of the Questionnaire

The researcher relied on the validity of the jury members to validate the questionnaire. Validation of jury members and internal consistency took place.

Validity by the Jury:

The researcher presented the questionnaire in its initial form to 8 professors in the field of curriculum and Methods of teaching EFL to express their opinions on the appropriateness of the questionnaire and its suitability for the students' level. Based on the viewpoints of the jury members the researcher made modifications agreed upon by the jury (80% and more). Cooper's equation was used to calculate the percentage of agreement among the jury members. The rate of agreement among the jurors on validation dimensions of questionnaire ranged between (88% - 100%), as the percentage of agreement on the questionnaire as a whole reached (98%), which is a high percentage. This indicates the validity of the questionnaire, after making the modifications approved by the jury members**.**

Internal consistency of the Questionnaire:

Internal consistency was calculated through the administration of the questionnaire to a group of (20) members as shown in the following table:

Table (1)
Pearson Correlation coefficient between scores on items and overall questionnaire of perceptions of faculty members towards learning English using artificial intelligence applications.

items	Correlation Coefficient of questionnaire items and total score of	items	Correlation Coefficient of questionnaire items and total score of
1	0.612**	6	0.673**
2	0.654**	7	0.699**
3	0.683**	8	0.776**
4	0.674**	9	0.796**
5	0.714**	10	0.724**

**** Correlation is significant at the at level (0.01)**

The previous table (1) shows the correlation coefficient between scores of items and the overall score of questionnaire have ranged between (0.612**) and (0.796**), all of which are statistically significant at the level of (0.01). This indicates that the questionnaire has internal consistency.

Reliability of the Questionnaire:

The reliability of the questionnaire was calculated using Cronbach's Alpha, Split-Half, and the Test-retest methods, as follows:

A. Cronbach's Alpha: The researcher used this method to calculate the reliability of the questionnaire by administering it to a group of (20) faculty members. The Cronbach's Alpha coefficient was (0.885), this indicates that the questionnaire has an appropriate degree of reliability.

B. Split-Half Method: The researcher used this method to calculate the reliability of the questionnaire by administering it to a group of (20) faculty members. The results were shown in the following table:

Table (2)
Reliability values of the questionnaire of perceptions of faculty members towards learning English using artificial intelligence applications (by Split-Half Method)

Variables	Items	Correlation Between Forms	Spearman-Brown Coefficient	Guttman Split-Half Coefficient
Total questionnaire	10	0.850	0.919	0.919

These values shown in table (2) indicate that the questionnaire has an appropriate degree of reliability.

C. Test retest: The reliability of the questionnaire was calculated by the method of administration and re-administration of the questionnaire using the Pearson correlation coefficient, where the researcher re-administered the questionnaire to the same sample of faculty members (20 members). The value of the reliability coefficient was (0.879**) at the level (0.01) indicating that the questionnaire is reliable.

B) The perceptions of students towards learning English using artificial intelligence applications Questionnaire (Appendix 2)

1) Aim of the Questionnaire

The questionnaire aimed at collecting data about students (n=150) concerning perceptions of students towards learning English using artificial intelligence applications.

2) Description of the Questionnaire.

The questionnaire included (10) items, measure the perceptions of students towards learning English using artificial intelligence applications.

No	Items	Strongly Agree (5)	Agree (4)	Undecided (3)	Disagree (2)	strongly Disagree (1)
1	Dependence on AI Applications might decrease focus on critical thinking and					

	communication skills.					
2	**AI Applications may not be suitable for teaching cultural understanding or complex language nuances.**					
3	**Instructors may need training to effectively integrate AI Applications into their courses.**					
4	**I am concerned about the potential for AI Applications bias to negatively impact student learning.**					
5	**Instructors might worry that AI Applications could diminish opportunities for personalized guidance.**					
6	**Using AI applications in the classroom could lead to a decrease in student-teacher interaction.**					
7	**I am worried about the reliability and accuracy of the information provided by AI Applications.**					
8	**I am worried that**					

	my privacy and security can be affected when using AI language learning Applications.					
9	**I am worried that AI Applications can make English language teachers redundant.**					
10	**I am worried that I will become over dependent on AI Applications in my English language learning.**					

3) Sources of the Questionnaire

The researcher referred to some sources to design the Questionnaire. These sources included: Sharawy, (2023) and Alhaisoni & Alhaysony (2017).

Questionnaire Piloting:

The questionnaire was piloted by administering it to (20) university students other than those participating in the study with the aim of:

- Checking clarity of questionnaire items.
- Checking readability of questionnaire items.
- Timing the questionnaire.

Questionnaire Timing:

Time was determined by taking the average of the time taken by each university student taking the test. It was 20 minutes.

Validity of the questionnaire

In this study, the researcher relied on the validity of the jury members as well as the internal consistency. The following is an explanation for this:

Validity by the Jury:

The researcher presented the questionnaire in its initial form to 8 professors in the field of curriculum and Methods of teaching EFL to express their opinions on the appropriateness of the

questionnaire and its suitability for the students' level. Based on the viewpoints of the jury members the researcher made modifications agreed upon by the jury (1) (80% and more). Cooper's equation was used to calculate the percentage of agreement among the jury members. The rate of agreement among the jurors on validation dimensions of questionnaire ranged between (88% - 100%), as the percentage of agreement on the questionnaire as a whole reached (98%), which is a high percentage. This indicates the validity of the questionnaire, after making the modifications approved by the jury members**.**

Internal consistency of the questionnaire:

Internal consistency was calculated through the administration of the questionnaire to a group of (30) students as shown in the following table:

Table (3)

Pearson Correlation coefficient between scores on items and overall questionnaire of perceptions of students towards learning English using artificial intelligence applications.

items	Correlation Coefficient of questionnaire items and total score of	items	Correlation Coefficient of questionnaire items and total score of
1	0.637**	6	0.648**
2	0.673**	7	0.782**
3	0.698**	8	0.636**
4	0.581**	9	0.372*
5	0.506**	10	0.662**

**** Correlation is significant at the at level (0.01) * Correlation is significant at the 0.05 level.**

The previous table (3) shows the correlation coefficient between scores of items and the overall score of questionnaire have ranged between (0.372*) and (0.782**), all of which are statistically significant at the level of (0.01). This indicates that the questionnaire has internal consistency.

Reliability of the questionnaire:

The reliability of the questionnaire was calculated using Cronbach's Alpha, Split-Half, and the Test-retest methods, as follows:

D. Cronbach's Alpha: The researcher used this method to calculate the reliability of the questionnaire by administering it to a group of (30) students. The Cronbach's Alpha coefficient was (0.819), this indicates that the questionnaire has an appropriate degree of reliability.

E. Split-Half Method: The researcher used this method to calculate the reliability of the questionnaire by administering it to a group of (30) students. The results were shown in the following table:

Table (4)

Reliability values of the questionnaire of perceptions of students towards learning English using artificial intelligence applications (by Split-Half Method)

variables	Items	Correlation Between Forms	Spearman-Brown Coefficient	Guttman Split-Half Coefficient
Total questionnaire	**10**	**0.692**	**0.818**	**0.818**

These values shown in table (4) indicate that the questionnaire has an appropriate degree of reliability.

F. Test retest: The reliability of the questionnaire was calculated by the method of administration and re-administration of the questionnaire using the Pearson correlation coefficient, where the researcher re-administered the questionnaire to the same sample of students (n=30). The value of the reliability coefficient was (0.832**) at the level (0.01) indicating that the questionnaire is reliable.

Results and Discussion

The ranking in the following table was used to evaluate the perceptions of members and students towards learning the English

language using artificial intelligence applications based on the weighted average values for each item:

Table (5)

Degree of agreement and extent of agreement according to a five-point Likert scale.

Questionnaire responses	Coding	Extent of Agreement	Evaluation level
strongly Disagree	1	From 1 to 1.80	very low
Disagree	2	From 1.81 to 2.60	Low
Undecided	3	From 2.61 to 3.40	average
Agree	4	From 3.41 to 4.20	high
Strongly Agree	5	From 4.21 to 5	very high

A) Results of faculty members' Perceptions towards learning English using artificial intelligence applications questionnaire:

This part of the study includes the results of overall questionnaire's items, each separately as well as each of the items of the questionnaire. This is shown in the following table (6):

Table (6)

Frequencies, Percentages, Averages, and Standard Deviations of the faculty members' perceptions towards learning English using artificial intelligence applications (N = 30)

N	Statement	Frequency	Responses					Mean	Standard Deviation	Ranking	Availability
		Percentage	strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
1	AI Applications can tailor learning to individual student needs.	Freq.	0	9	10	9	2	3.13	0.937	10	Average (neutral)
		%	0%	30%	33.3%	30%	6.7%				
2	AI Applications can provide grammar, vocabulary, and pronunciation feedback, freeing up instructor time.	Freq.	0	2	8	8	12	4.00	0.983	1	High
		%	0%	6.7%	26.7%	26.7%	40%				
3	AI Applications can offer more avenues for students to practice all language	Freq.	0	3	13	10	4	3.50	0.861	7	High
		%	0%	10%	43.3%	33.3%	13.3%				

N	Statement	Frequency	Responses					Mean	Standard Deviation	Ranking	Availability
		Percentage	strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
	skills.										
4	AI Applications can provide instructors with data on student performance to inform teaching strategies.	Freq.	0	4	11	7	8	3.63	1.033	4	High
		%	0%	13.3%	36.7%	23.3%	26.7%				
5	AI Applications can create interactive activities that boost student engagement.	Freq.	0	4	8	5	13	3.90	1.125	2	High
		%	0%	13.3%	26.7%	16.7%	43.3%				
6	Using AI Applications can free up my time to focus on more complex aspects of language learning.	Freq.	0	10	9	6	5	3.20	1.095	9	Average (neutral)
		%	0%	33.3%	30%	20%	16.7%				
7	AI applications can create a more engaging and interactive learning environment for EFL students.	Freq.	1	6	9	7	7	3.43	1.165	8	High
		%	3.3%	20%	30%	23.3%	23.3%				
8	AI Applications help me have access to academic materials anytime and everywhere.	Freq.	0	7	8	7	8	3.53	1.137	6	High
		%	0%	23.3%	26.7%	23.3%	26.7%				
9	AI Applications can provide me with personalized English language learning experiences.	Freq.	0	4	9	8	9	3.73	1.048	3	High
		%	0%	13.3%	30%	26.7%	30%				
10	AI Applications can help develop my autonomy in learning English.	Freq.	0	4	13	5	8	3.57	1.04	5	High
		%	0%	13.3%	43.3%	16.7%	26.7%				
Questionnaire as a whole								3.562	1.0424	High	

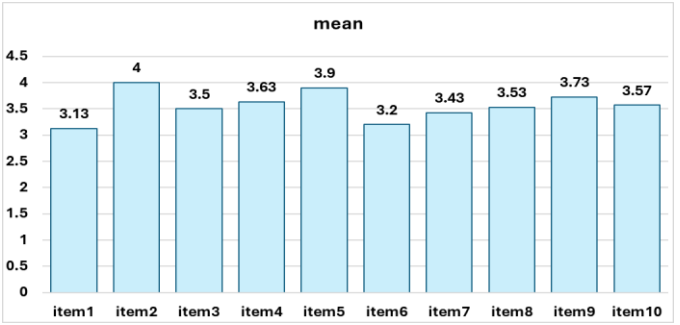
It is clear from the previous table (6) that the overall reached (3.562) with a standard deviation (1.0424). It confirmed the faculty members perceptions were high. This is because the weighted means of this level within scale category (3.41 to 4.20), which are considered high from the faculty members' perceptions. The item (2) came in first rank, which states "AI Applications can provide grammar, vocabulary, and pronunciation feedback, freeing up instructor time "with a weighted mean (4.00), while the item (1) came in last rank, which states "AI Applications can tailor learning to individual student needs "with a weighted mean (3.13). This indicates that there are positive perceptions among faculty members towards learning English using artificial intelligence applications

- **First Rank:** There is a level of agreement on items (2, 3, 4, 5, 7, 8, 9, 10) with weighted means (4.00, 3.50, 3.63, 3.90, 3.43, 3.53, 3.73, 3.57), and it is one of the indicators of fourth category (3.41 to 4.20) in the table (5), which confirms the statements are high.
- **Second Rank:** There is a level of agreement on items (1, 6) with weighted means (3.13, 3.20), and it is one of the indicators of third category (2.61 to 3.40) in the table (5), which confirms statements are medium.

These results can be illustrated graphically in figure (1):

Figure (1)

Means of faculty members' perceptions towards learning English using artificial intelligence applications questionnaire



B) Results of students' perceptions towards learning English using artificial intelligence applications Questionnaire:

This part of the study includes the results of overall questionnaire's items, each separately as well as each of the items of the questionnaire. This is shown in the following table (7):

Table (7)

Frequencies, Percentages, Averages, and Standard Deviations of the students' perceptions towards learning English using artificial intelligence applications (N = 150)

N	Statement	Frequency	Responses					Mean	Standard Deviation	Ranking	Availability
		Percentage	strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
1	Dependence on AI Applications might decrease focus on critical thinking and communication skills.	Freq.	6	5	37	61	41	3.84	0.997	3	High
		%	4	3.3	24.7	40.7	27.3				
2	AI Applications may not be suitable for teaching cultural understanding or complex language nuances.	Freq.	5	9	34	74	28	3.74	0.944	6	High
		%	3.3	6	22.7	49.3	18.7				
3	Instructors may need training to effectively integrate AI Applications into their courses.	Freq.	11	16	30	70	23	3.52	1.104	10	High
		%	7.3	10.7	20	46.7	15.3				
4	I am concerned about the potential for AI Applications bias to negatively impact student learning.	Freq.	7	7	32	78	26	3.73	0.962	7	High
		%	4.7	4.7	21.3	52	17.3				
5	Instructors might worry that AI Applications could diminish opportunities for personalized guidance.	Freq.	7	13	34	63	33	3.68	1.058	9	High
		%	4.7	8.7	22.7	42	22				
6	Using AI applications in the classroom could lead to a decrease in student-teacher interaction.	Freq.	5	7	28	71	39	3.88	0.962	2	High
		%	3.3	4.7	18.7	47.3	26				
7	I am worried about the reliability and accuracy of the information provided by AI Applications.	Freq.	1	1	26	72	50	4.13	0.762	1	High
		%	0.7	0.7	17.3	48	33.3				
8	I am worried that my privacy and security can be affected	Freq.	6	7	28	77	32	3.81	0.958	5	High
		%	4	4.7	18.7	51.3	21.3				

N	Statement	Frequency	Responses					Mean	Standard Deviation	Ranking	Availability
		Percentage	strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
	when using AI language learning Applications.										
9	I am worried that AI Applications can make English language teachers redundant.	Freq.	6	9	33	77	25	3.71	0.952	8	High
		%	4	6	22	51.3	16.7				
10	I am worried that I will become over dependent on AI Applications in my English language learning.	Freq.	8	10	24	67	41	3.82	1.075	4	High
		%	5.3	6.7	16	44.7	27.3				
Questionnaire as a whole								3.402	0.8777	High	

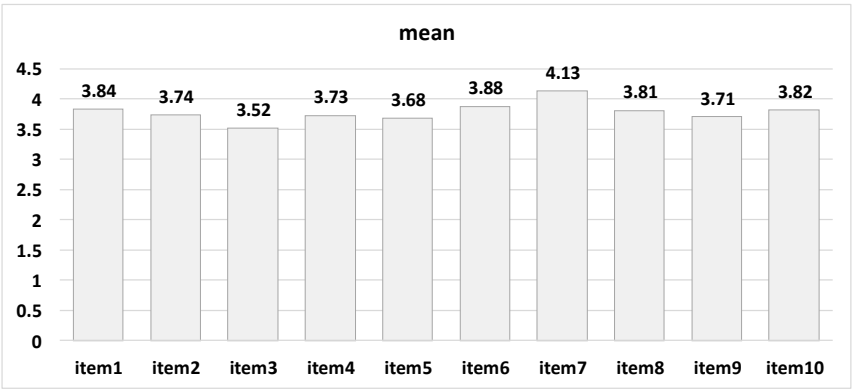
It is clear from the previous table (7) that the overall reached (3.402) with a standard deviation (0.8777). It confirmed the students' perceptions were high. This is because the weighted means of this level within scale category (3.41 to 4.20), which are considered high from the students' perceptions. The item (7) came in first rank, which states "I am worried about the reliability and accuracy of the information provided by AI Applications "with a weighted mean (4.13), while the item (3) came in last rank, which states "Instructors may need training to effectively integrate AI Applications into their courses" with a weighted mean (3.52). This indicates that there are positive perceptions among students towards learning English using artificial intelligence applications

- **First Rank:** There is a level of agreement on items (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) with weighted means ranging from (3.52 to 4.13), and it is one of the indicators of fourth category (3.41 to 4.20) in the table (5), which confirms high agreement of questionnaire sample on these statements are an indication of agreement of these items, and that the point of view of questionnaire sample tends to a positive perceptions towards agreement of these statements.

These results can be illustrated graphically in figure (2):

Figure (2)

Means of students' perceptions towards learning English using artificial intelligence applications questionnaire



Discussion of the Results

The study's conclusions shed light on the opinions and experiences of English majors in Egypt's higher education system about the use of AI tools in EFL instruction. According to the findings, EFL faculty members found using AI applications enhance students' autonomy and collaboration through sharing their experiences with their colleges and discussing the results with each other

Additionally, the study's participants had a generally good attitude on the use of AI tools in their EFL instruction. They believe AI solutions are user-friendly and efficient in improving both their language learning experiences and their level of language proficiency. These results are consistent with earlier studies such as Papaspyridis (2020) study that investigated effectiveness of AI applications in developing collaborative learning, and learning management.

The survey also highlights English majors' worries about the possible harm that AI technologies could do to their capacity for critical thought and problem-solving. The participants convey concerns regarding the excessive dependence on these technologies

and the possible constraints they might place on the advancement of higher-order cognitive abilities. This emphasizes the necessity of incorporating AI technologies into language acquisition in a balanced way so that they serve as helpful tools rather than taking the place of interpersonal communication. EFL faculty members and students found AI applications significant tools in acquiring specific skills such as listening and speaking since they can find authentic material through AI tools. The results of the current research are in line with Vall and Araya (2023) study that found artificial intelligence (AI) language learning tools include a variety of tools and methods that mimic human intelligence in order to help language learners acquire and advance their language abilities.

In addition, the results of the current research showed that using AI applications in EFL classrooms enhance the learners autonomy and self-assessment via autograder programs . AI applications also show the learners' mistakes which might help learners to correct their mistakes. These findings were in line with August and Tsaima (2021) study's results which showed how student's work is evaluated using an autograder program without the need for human intervention. This program scores multiple-choice exams and evaluates and grades written work.

Moreover, students found AI tools very useful in developing communication skills related to English language learning through checking their body movement and facial expressions during conversations based on their motions. These results are in agree with Haddawy et al.(2010) study that showed how an artificial intelligence and virtual reality system were employed for automated grading. The study of Haddawy et al.(2010) explained how the system uses a haptic device and video monitor to assess dental students' ability based on their motions. It then computes their ratings based on these motions and categorizes them as specialists or novices.

The study's conclusions also provide insight into what English majors anticipate from AI tools for their EFL coursework. Participants believe that AI tools will play a big part in language learning in the future. They also believe that formal training on the usage of AI tools should increase and that ethical considerations should receive greater attention. These expectations highlight how crucial it is to take into account the long-term effects of integrating AI tools into language instruction and to match those tools with the objectives and requirements of English learning.

Conclusion

In summary, the UTAUT model (Venkatesh et al., 2003) indicates that although faculty members scored highly on performance expectancy, effort expectancy, and social expectancy, they are generally open to adopting AI. However, there are still issues with facilitating conditions and perceived risk. The application of AI in Egypt's higher education system has the power to completely transform how instructors impart knowledge, students learn, and institutions function. Depending on how AI is applied, colleges can utilise it to personalise learning experiences, save time and effort, educate students with skills that are needed in the workforce, and create more equal and accessible solutions.

However, the use of AI in Egyptian higher education institutions is still in its infancy, and a number of issues need to be resolved, including worries about data privacy, a lack of infrastructure, the requirement for educators to upgrade their skills, and the lack of a policy text or strategy. AI is a technology that cannot be disregarded due to its potential advantages in higher education, notwithstanding these difficulties. In order to fully realize AI's promise to improve the caliber and accessibility of education, Egyptian universities should keep researching and experimenting with the technology.

Recommendations for Future Research

- Future research can investigate the viewpoints of students regarding the use of AI in higher education. This is because the

primary goal of implementing AI in higher education is to give students a better learning experience.

- Additional perspectives from different Egyptian institutions can be examined in order to extrapolate the results or even conduct a thorough investigation of a single institution. One might also look into the research on AI's application in K–12 education.
- More in-depth research may be done on the various sorts of disabilities and the various ways that equity could be attained, as well as how AI can be used to accomplish equity and accessibility.
- How AI can be applied to higher education's administrative functions in addition to teaching and learning could be a topic for future study. New AI tools and technologies emerge daily, thus this field of study is only getting started and will continue to grow.

Suggestions for further Research

The following suggestions were suggested to be researched in the light of the results of the current research:

- More research is necessary to determine the effectiveness of using AI applications in teaching the four language skills.
- More research is necessary to determine the effectiveness of AI applications in teaching English for special needs students.
- More research is necessary to investigate the effects of AI applications on students' creativity.

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