QUBAHAN ACADEMIC JOURNAL
VOL. 5, NO. 3, July 2025
https://doi.org/10.48161/qaj.v5n3a1583

Comparing Lecturers and Students Attitude towards the Role of Generative Artificial Intelligence Systems in Foreign Language Teaching and Learning

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ABSTRACT: This paper investigated the difference in the opinions of lecturers and students on the use of generative AI (GenAI) systems in teaching and learning a foreign language. The study also sought to establish the perception and attitude of the foreign language students toward using GenAI in learning the foreign language. The current study employed a quantitative research approach to evaluate the current sample of lecturers and students' attitudes toward the implementation of Generative AI (GenAI) systems in teaching and learning foreign languages. The sample involved 45 lecturers and 493 postgraduate students in foreign languages from Saudi Arabia. The survey questionnaire contained items based on the UTAUT model, which includes 15 items, of which four are based on performance expectancy, four on effort expectancy, three on social influence, and four on facilitating conditions. The survey took the form of Google Forms shared on social media and email. The data collected was analysed using descriptive statistics, and t-test results were obtained to see the overall influence of two sets of behavioural perceptions of the two groups. A comparative analysis of the attitudes reveals that lecturers had a positive optimism with relative efforts and facilitating conditions needed for the adoption and integration of GenAI in FL education (Mean = 4.29, SD = 0.79, Variance = 0.81, t = 2.45, p= 0.015). On the other hand, the students showed positive acceptance, usage and application of GenAI models in facilitating their academic engagements in FL education (mean = 7.58, sd = 0.42, variance = 0.18, t = 12.75 p = 0.001). It is thus concluded that while university lecturers are careful to fully accept and integrate GenAI models in FL teaching, their students overwhelmingly accept GenAI.

Keywords: artificial intelligence, foreign language teaching and learning, exploring, variation, attitude towards, leveraging generative artificial intelligence.

I. INTRODUCTION

Artificial intelligence has brought an expansive revolution in the education systems. As such, it has become necessary to explore the views of university lecturers in foreign language education about their attitude, acceptance, and conduct toward leveraging and integrating generative artificial intelligence models

(GenAI) in foreign language teaching. Also, it is pertinent to analyse the perception and attitude of foreign language students towards using GenAI to enhance their foreign language learning experience [1-3]. Pivotal to this discourse is the analysis of the difference in the attitude of the lecturers and the students toward the use of AI technologies in language teaching and learning, an area that entails complex relations and numerous considerations [4-7]. One significant aspect of this study is an evaluation of lecturers' stakes in the implementation of generative AI systems in the FL instruction context, an area that raises epistemological, ethical, and learning-theory concerns [8-11]. In [9] study and [10], such questions on the ethical application of AI in education, based on the worrying factors like algorithmic bias, data privacy, and digital equity. Likewise, [8, 11] discussed epistemological change in AI technologies, explaining how the digital age's teaching and learning paradigms have shifted.

In addition to the lecturers' perspective toward the use of generative AI systems in FLT, another avenue for further qualitative investigations seems to be the students' attitude toward using AI systems of any generative type in the learning approach [12-16]. Namely, the articles by [12, 14] includes data regarding the use of AI-based language learning tools by students and the factors affecting learners' preferences and behaviour. Conversely, [13, 16] offer some insight into the experience of using AI in language learning, especially regarding the analysis of how the place-based learning experience of students is achieved with the use of augmented learning environments.

One component unique to the concept of variation regarding the extent of the lecturers' and students' interest in the use of generative AI systems in FLT, FL, and, more broadly, in education, is the sources that may affect perception and experience [3, 17-19]. In the same way, [3] emphasized the aspect of context that entails cultural, procedural, and technological factors within which the predisposition regarding AI application is established among educators and learners. In addition, the papers of [17, 18] provide a methodical understanding of the related pragmatic questions concerning AI usage in the technologies for teaching and learning and its practice and efficiency, which contributes to the reduction of the gaps in the exploration of application and concern of the diverse factors regarding the perception of AI in the FLT.

In this paper, an attempt was made to determine the attitude, acceptance, and behaviour of university lecturers in foreign language education towards using GenAI as a teaching tool in the foreign language classroom. The study also sought to establish the perception and attitude of the foreign language students toward using GenAI in learning the foreign language. These views were compared regarding the acceptance, usage, and leveraging of GenAI in FL teaching and learning regarding positive and negative attitudes.

II. LITERATURE REVIEW

1. GENERATIVE ARTIFICIAL INTELLIGENCE IN EDUCATION

AI has become a revolutionary tool in education, bringing potential shifts in approaches to teaching and learning. More specifically, generative AI is defined as systems that are designed to create new content in some form, including but not limited to text, images, and audio, based on the patterns and data they are trained in [12, 20] . This technology is expected to offer many advantages for improving educational results, administrative work, and teacher inspiration when creating new learning materials [8, 21]. Applications of generative AI can also be used in education as smart tutor systems, language learning applications, and adaptive learning applications that can change content based on the learner's ability [14, 15]. There has been a significant increase in interest in examining how Generative AI may transform education, resulting in the incorporation of AI-driven technologies such as intelligent tutoring systems and virtual learning environments in classrooms globally [22]. However, similar to the case with other formative interfaces of generative AI in learning, there are crucial questions about such platforms' moral, educational, and social aspects [9, 13].

It is seen that stakeholders exhibit measurable attitudes towards generative AI in education, ranging from positive reception to criticism. For example, university lecturers' tendencies range continuously depending on several factors, including their familiarity with AI technologies, perceived academic advantages, and fear of losing traditional course instruction [23, 24]. The studies by [9, 10] shows that some teachers feel positive

about using GenAI because it would increase the efficiency of giving lessons and create engagement among the learners. Teachers also tend to rely on some AI technologies in preparing some lessons and materials for their students because of their effective role. However, some teachers are concerned about removing the human touch from the teaching process [17]. However, the ethical aspects of using AI in education, such as data privacy, biased algorithms, and digital inclusion, influence educators' stances on the technology complex [25, 27]. These limitations are present and create a barrier in several occasions to the use of AI in teaching.

The technology benefits are most obvious to the learners; hence, students are not left out as they are the main beneficiaries of educational technologies and have varying feelings regarding incorporating generative AI in their learning ecosystem. According to the findings, students, as a group, are hospitable towards AI-enhanced education since the instruments assist in identifying personal education delivery and learning requirements for students and improve academic outcomes [1, 13]. Nevertheless, there are controversies in terms of AI's dependability and culpability, where students have anxiety about data privacy and the skewness of AI toward current prejudices in content delivery [5, 14]. Moreover, the fresh approaches of AI and technologies used within AI may cause more emotions, including curiosity, eagerness, anxiety, and indifference among students based on their previous experiences of using technology [7, 21].

The stakeholders involved in establishing and formulating policies and guidelines and those in charge of institutions have significant influence regarding the adoption and implementation of generative AI in education. Their views are, therefore, shaped by the educational plan, programs' funding, and the overall objective of their organizations more broadly [8, 20, 28, 29]. Based on [25], note that to ensure a favourable climate for AI, professional development needs to be conducted to support educators in their AI transition [15, 26]. In addition, as AI is introduced in education, policymakers are also expected to solve the ethical and regulatory issues raised by these technologies [6, 30]. Compliance with data protection legislation and the implementation of stringent security measures are essential for maintaining trust and confidence in AI-driven educational initiatives. In America, for example, Institutions must negotiate the exemptions outlined in the AI Act, ensuring their educational AI applications adhere to the new requirements while fostering innovation and safeguarding intellectual property rights [22].

Nonetheless, the leading perspectives concerning the use of generative AI in education are focused on ethical, methodological, and practical aspects, which can be attributed to the complex nature of the given technological advancement. Privacy is an important ethical issue that has been considered essential in using AI in learning [12, 17]. In terms of learning, there are concerns regarding AI-based tools' ability to promote not only the acquisition of content but also the formation of the learners' knowledge and perceptive mechanisms and the extent to which the use of these technologies may result in depersonalization of learning [8, 13, 31]. Several practical barriers, such as the requirement of stable technological support, professional development to run AI systems, and the issue of cost associated with the implementation of generative AI in education, add up to the enhancement of its application [9, 10, 32]. To manage these concerns, it is now necessary to have the willingness of teachers, students, policymakers, and technology vendors to make generative AI beneficial for the teaching-learning processes and, at the same time, be fair in promoting technological and transformational change. The process of incorporating AI into education is replete with obstacles [26, 33]. Ethical issues, including as transparency and algorithmic biases, are paramount. Establishing strong ethical frameworks for AI utilization and ensuring algorithmic openness is essential. Furthermore, protecting confidentiality [34, 35]. Consequently, policy creation must prioritize the establishment of stringent privacy rules and security protocols to safeguard user data and assure adherence to data protection legislation. Institutions must implement protocols for acquiring informed permission from users and provide openness concerning data collection, storage, and utilization policies [22].

2. *TRANSFORMATION OF FLL THROUGH GENAI*

The current advancement of generative AI, or GenAI, has revolutionized languages' teaching and learning processes, especially foreign languages, by creating complex language processing tools and applications. Nevertheless, the following GenAI models have become commonly associated with

specifications for improving and enriching language education: GPT-3, developed by OpenAI, has been especially helpful in creating interactive environments for language learning [8, 12, 36]. This has been used to build sophisticated conversational practice models in intelligent tutoring systems since GPT-3 can generate contextually relevant and well-written text; hence, it provides the students with realistic language learning environments with near-native-like fluency [7, 9]. On the other hand, GPT-4 has exhibited the capability to comprehend text input and provide natural language responses that fulfil diverse needs. GPT-4 was instructed to create a set of algebraic word problems, with the difficulty calibrated to reflect a sophisticated comprehension of the topic. The methodology was directed to incrementally elevate the complexity of questions via successive rounds, guaranteeing a wide range of problems [10].

Generative artificial intelligence (GenAI) is defined as the use of AI to create new content, such as text, images, music, audio, and videos, employing a machine learning (ML) model to learn the patterns and relationships in a dataset of human-created content and subsequently uses the learned patterns to generate new content [37]. GenAI, as a subset of artificial intelligence (AI), distinguishes itself from previous iterations of AI technology that utilize machine learning algorithms and predictions derived from historical data. This capability is most useful in environments where learners do not have direct access to native speakers; it allows learners to practice in real use of the language, and feedback is provided right after such use [2, 10]. Moreover, the text generation capabilities of GPT-3 can be applied to the development of individualized instructional materials according to the learners' needs, thus increasing the applicability and efficiency of the educational content [14, 15]. In light of the evolving digital landscape, the notion of plagiarism and breaches of academic integrity need revaluation. Numerous investigations indicated that the heightened utilization of digital technologies for information retrieval augmented the likelihood of pupils misrepresenting ideas and information as their own [35].

Another important realm in which GenAI is applied in FL teaching is through translation models, including Google's Neural Machine Translation (GNMT) model. These models have opened up a large pool of multilingual resources by helping learners translate the text to and from any language with nice accuracy and fluency. Hence, they assist learners in cross-linguistic understanding and communication [3, 8, 20]. GNMT on educational platforms provides an opportunity for students to gain direct or self-translation of foreign language texts as well as enhance independent learning of words and phrases [9, 17, 38]. Furthermore, machine translation tools help educators prepare teaching and learning materials in multiple languages and accommodate learners with LLD [11, 25, 26]. Expanding access to foreign language content increases equal opportunities for learning foreign languages, as indicated by [13, 15] through the application of machine translation. In spoken language practice, GenAI models for speech recognition and synthesis technologies help teach and learn second languages. Such models, which include Google's WaveNet and Amazon's Alexa, for example, enhance the creation of language learning applications that can decipher oral instructions with great efficiency [1, 8, 21].

3. THEORETICAL FRAMEWORK

The Unified Theory of Acceptance and Use of Technology (UTAUT) provide the most useful theoretical model for stakeholder's perceptions on the adoption of generative artificial intelligence (GenAI) within Foreign Language Teaching and Learning (FLTL). UTAUT, developed by [39], encompasses four key dimensions: These constructs include Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions according to the model propounded by [39]. These dimensions together explain how users are willing to adopt this or that technology because it is useful, and easy to use, and all of this coincides with the surrounding conditions and the availability of ready-made support [2, 12, 21]. As for the current research, UTAUT helped identify lecturers' and students' attitudes toward the effectiveness of using GenAI tools to foster foreign language acquisition as well as emotional and cognitive responses to implementing GenAI solutions [8, 20].

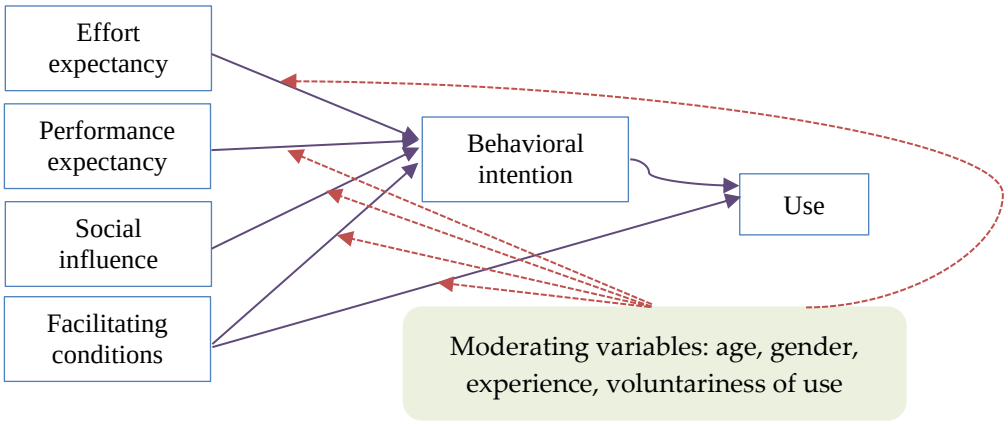

FIGURE 1. Diagrammatic representation of various predictors of the UTAUT model.

Performance expectancy, defined as the perceived likelihood that the technology will improve job performance, is another factor in stakeholders' attitudes toward adopting GenAI in foreign language education [9, 17]. Lecturers who believe that GenAI is a useful tool that may enhance the delivery of language teaching outcomes by a fairly large margin display curiosity and eagerness [25, 38]. This dimension also subsumes perceived academic superiority, where stakeholders appreciate that GenAI can deliver a customized learning environment that boosts students' interest and performance [11, 26]. On the other hand, pinned on GenAI's implementation and the capability of displacing conventional teaching approaches, anxiety, and resistance can be identified among the lecturers and students involved. This is particularly due to the concern for preserving the current trends in pedagogy. Such concern relates to ethical issues regarding the depersonalization of education and lack of direct contact with peers or instructors [7, 15, 35].

Effort expectancy, which is one of the pivotal dimensions within the UTAUT model and concerns the perceived ease of use of the technology, also influences the stakeholders' attitudes toward the use of GenAI in FLE [1, 3]. Lecturers and students who described the GenAI applications as friendly would prefer to adopt them and hence would exhibit positive attitudes towards the GenAI applications as new technologies that they would like to discover [8, 21]. However, supers' perceived level of familiarity with GenAI impacts these attitudes; those who have no prior exposure to AI technologies are likely to be anxious and indifferent about GenAI due to its complexity and perceived risks associated with its use [9, 10]. Various methodological issues are to be mentioned here, too, as the stakeholders express their doubts regarding the feasibility of implementing GenAI in today's curricula and the sufficiency of the available professional development programs for teachers [17, 34, 38]. By addressing these concerns through proper training and assistance, anxiety levels will be lowered, and the reception of GenAI technologies will be better [25, 26].

A significant component of the UTAUT model is social influence, which is the extent to which people feel that others close to them expect or want them to use the new technology; this fundamentally concerns the acceptance of GenAI in foreign language education [3, 20]. Institutional support and peer pressure influence lecturers' and students' attitudes toward GenAI, wherein positive receptions from colleagues or supervisors improve the recognition of the need and relevance of the technology [8, 13]. Staffs that see its positive applications in the usage of similar Generative Adversarial Networks from their colleagues are more likely to deal with the likely first-run barrier and develop a curiosity and innovation culture [14, 15]. On the other hand, the peers may be sceptical, leading them to resist the custom and increase anxiety and indifference, hence limiting the take-up [7, 11, 40]. Ethical and methodological concerns are also intertwined with social influence since the stakeholders consider the opinions and experiences of others when it comes to implementing GenAI into their strategies of teaching [26, 41].

The last predictor of UTAUT is Facilitating Conditions, which captures the degree to which users believe they have the organizational and technical resources to use the new technology [2, 21]. To improve foreign language instruction through functional GenAI, there is a need for adequate infrastructure, hence the need for adequate hardware and reliable internet connectivity that covers the trainers and educators in the program [20, 8, 40]. When such conditions are provided, attitudes taken by the stakeholders are positive and attributed to eagerness and curiosity about available GenAI tools since the stakeholders are confident in performing GenAI tools [17, 42]. On the other hand, a lack of or poor facilitating conditions may cause practical application concerns, which inculcate fear and undesired attitudes among the lecturers and students who may not easily manage the technologies attached to GenAI, as seen by [25, 38]. Moreover, it is here that investment and policy-based solutions will have to be made to address these issues and underpin the successful apprenticeship of GenAI in foreign language learning [11, 26, 42].

In summary, the UTAUT model offers an extensive framework for comprehending the determinants of technology uptake and utilization in foreign language learning and teaching. As facilitators of change, the UTAUT model provides significant insights for improving the efficacy and efficiency of teachers' efforts. By examining the four principal variables of performance expectation, effort expectancy, social influence, and enabling circumstances, language teachers may establish an atmosphere receptive to technology adoption. Utilizing user-centric methodologies, persistently assessing and enhancing technological solutions, promoting cooperation, and tackling the digital divide will enable us to leverage technology for positive transformation and attain sustainable farming practices [43, 44].

III. METHODOLOGY

1. STUDY DESIGN

The current study employed a quantitative research approach to evaluate the current sample of lecturers and students' attitudes toward the implementation of Generative AI (GenAI) systems in teaching and learning foreign languages. The rationale for adopting the quantitative approach was that quantitative research is scientific and formal in its approach of collecting and analysing data and therefore, made the study more credible and accurate.

2. PARTICIPANTS

The targeted population for this study consisted of lecturers in FL and postgraduate students who are studying in different universities in Saudi Arabia focusing on foreign language education. Moreover, combining both lecturers and students gives a variety of perspectives on their attitude towards GenAI in the learning process, thus focusing on both the providers of knowledge and the receivers. Postgraduate students' choice is more pertinent as they can be expected to have more enhanced knowledge and exposure to foreign language learning that further enhances the reliability of their perception of the integration of advanced technologies such as GenAI. The variety of the participants in their positions and backgrounds enhances the study's credibility since the results are not predisposed to favour particular stakeholders. The sample size for this study included 45 lecturers in foreign language education and 493 postgraduate students in foreign language education, and a stratified random sampling technique was employed. The sample represents a larger community of students who are more than 1200 in different universities and lecturers who are more than 300. However, the sample of lecturers is rather small compared to the larger communities of lecturers. This is part of the limitations of this study that the authors acknowledge and might affect the interpretation of results. The call for participation was sent to all the lecturers and few responded.

3. INSTRUMENTS

The technique employed in this study entailed the administration of a structured survey questionnaire with a 5-point Likert scale to capture the respondents' disposition towards GenAI in FLE. The survey items were adapted from the five core components of the UTAUT model: performance expectancy, effort expectancy, social influence, facilitating condition and behavioural intention for each of the five utilities with

3 items each making a total of 15 items. The Likert scale format was meaningful as it helps to differentiate respondents' degrees of agreement and disagreement given its adaptability to approximate the intensity of perceived attitudes and opinions [2, 12, 45]. By responding to the questionnaire, there was some structure which helped the general administration and gave clear statistics directional results following statistical procedures [3, 20]. This method is justified since it aligns with the quantitative approach of the study to ensure that the responses could be at the same level in the sample [8, 9, 29, 42].

4. ADMINISTRATION OF INSTRUMENTS

The survey questionnaire was developed by using Google Forms and participants were selected from particular social media groups and other media like email to receive the survey. Google Forms used in the administration of surveys ensured its ease and convenience for the participant since the link to the survey was available at the participant's convenience [24]. Such coverage together with the response rate concerning the lecturers and the students came by sharing it on social media and through email was efficient as it captured the social media adopted as the major means of passing information regarding the survey [8, 21, 24]. It was possible to receive data from all continents, thus diversifying the study and increasing the samples' generalizability [9, 17, 45]. The decision to use digital tools for administering the surveys is deemed because it aligns with the technological foundations of the analysis but ensures participants' comfort in responding to the survey through the digital medium [38].

5. DATA ANALYSIS

Descriptive analysis tests as well as t-tests for independent samples were also used to compare the behavioural perception of both the lecturers and the students regarding GenAI in foreign language education. To provide a background result to the study proper, descriptive analysis was provided for the mean response and variability within the identified sample set [24]. Consequently, this procrastination analysis revealed obligatory patterns and tendencies associated with stakeholders' perceptions for better comprehension of the factors influencing the acceptance and use of GenAI. Furthermore, independent sample t-tests were used to test the different mean scores between groups, that is, the lecturers' and students' responses to various survey items in terms of their perceived differences and significant differences were noted.

IV. FINDINGS AND DISCUSSIONS

1. RESULTS OF THE SURVEYS

1.1 Results of the Demographic Characteristics

We measured the relevant demographic features of the study participants as contained in Tables 1a and 1b below:

Table 1a. Demographic characteristics of lecturers.

Characteristic	Frequency (n=45)	Percentage (%)
Gender		
Male	25	55.6
Female	20	44.4
Age Group		
25-34 years	5	11.1
35-44 years	15	33.3
45-54 years	20	44.4
55+ years	5	11.1
Years of Teaching Experience		
1-5 years	10	22.2

6-10 years	15	33.3
11-15 years	12	26.7
16+ years	8	17.8
Highest Educational Qualification		
Master's Degree	15	33.3
Doctorate (PhD)	30	66.7

Demographic characteristics of the study participants are presented in this part and it shows that the sample is diverse and includes different groups of people. Out of 45 lecturers, the highest education level attained majorly by the lecturers are Doctorate degrees at 66.7% and they also have abundant teaching experience as 44.4% of them have practised for more than 10 years within the given speciality. This diversity makes certain that the study collects diverse opinions from experienced teachers in different linguistic backgrounds; therefore, the general validity and the generalizability of the findings across the different foreign language education contexts are improved.

Table 1b. Demographic characteristics of postgraduate students.

Characteristic	Frequency (n=493)	Percentage (%)
Gender		
Male	220	44.6
Female	273	55.4
Age Group		
18-24 years	150	30.4
25-34 years	200	40.6
35-44 years	100	20.3
45+ years	43	8.7
Current Level of Study		
Master's Degree	350	71.0
Doctorate (PhD)	143	29.0
Field of Study		
Applied Linguistics	100	20.3
Language Education	150	30.4
Translation Studies	80	16.2
Literature	60	12.2
Other	103	20.9
Experience with AI in Education		
None	150	30.4
Limited	200	40.6
Moderate	100	20.3
Extensive	43	8.7

This enrolment comprises 493 postgraduate students, 55.4% of whom are females. The age distribution shows that the majority of the students are between 25 and 34 years old, with 40.6% of the total numbers. The programme preference reveals that the majority are undertaking master's programmes, accounting for 71.06%. The academic disciplines of the participants are Language Education, Applied Linguistics and Translation Studies; 30.4 % of them have studied AI in education, but only 20.3% had previous experience in applying AI in the educational field. Such a diverse group of students with various backgrounds and knowledge gives a general idea of the younger generation's attitudes towards GenAI. This is important for appreciating the opportunities and barriers to the use of AI in teaching Foreign Languages viewed from the learners' perspective while other data has been collected from the lecturers.

1.2 Results of the Attitudes of Lecturers Towards GenAI in FL Education

The initial effort was to explore the attitudes of the participating university lecturers towards the usage, integration and adoption of GenAI models in teaching foreign languages.

Table 2. Descriptive statistics for lecturers' attitude.

Survey Items	Mean	SD	Variance	t-value	p-value
I believe that using generative AI tools in foreign language teaching will improve my students' language learning outcomes.	4.29	0.79	0.81	2.45	0.015
Generative AI systems will significantly enhance the efficiency of my teaching practices in foreign language education.	4.14	0.82	0.64	2.30	0.022
I expect that integrating generative AI into my teaching will make the learning process more engaging for students.	4.33	0.78	0.49	2.78	0.006
I find generative AI tools easy to learn and integrate into my foreign language teaching methods.	3.48	1.07	1.00	1.90	0.058
The use of generative AI in foreign language teaching requires minimal effort to become proficient.	3.77	1.91	1.21	1.75	0.080
I anticipate that using generative AI in my teaching will be straightforward and hassle-free.	3.29	1.95	0.81	2.10	0.037
My colleagues and peers believe that using generative AI in foreign language education is beneficial.	4.06	0.89	0.64	2.25	0.026
The academic community supports the adoption of generative AI tools in language teaching.	3.19	1.93	0.81	2.05	0.041
I feel encouraged by my institution to use generative AI systems in my foreign language teaching practices.	3.38	1.05	1.00	1.85	0.065
I have the necessary resources and support to effectively use generative AI in my foreign language teaching.	3.27	1.16	1.21	1.70	0.090
My institution provides adequate training for the integration of generative AI tools in language education.	3.68	1.01	1.00	1.85	0.065
I am confident in receiving technical support whenever I encounter issues with generative AI tools.	3.19	0.98	0.81	2.00	0.046

The evaluation of the survey outcomes showed a relatively high level of acceptance towards the utilisation of generative AI tools in foreign language education, where the lecturers expressed high mean scores for a number of the elements of the survey.

- The lecturers explain that the use of GenAI tools positively affects students' language learning outcomes (Mean = 4.29, SD = 0.79, Variance = 0.81, t = 2.45, p= 0.015).
- They also believe that these tools will enhance the level of interest in the learning process (Mean = 4. 33, SD = 0. 78, Variance = 0.49, t = 2.78, p= 0.006).
- Nevertheless, as regards the perceived ease of use, there are slight variations since the lecturers find GenAI tools fairly easy to use in their context (Mean = 3. 48, SD= 1.07, Variance= 1.00, t= 1.90, p= 0.058) although they admit there is effort needed to master them.
- Furthermore, other social factors include sectoral references, where lecturers perceived their colleagues to have a view, that is positive toward GenAI (Mean = 4.06, SD = 0.89, Variance = 0.64, t = 2.25, p = 0.026) and the extent lecturers felt support from the academic community.
- Lecturers are moderately encouraged by their institutions (Mean = 3.38, SD = 1.05, Variance = 1.00, t= 1.85, p = 0.065) but more so about having adequate resources and training (Mean = 3. 68, SD = 1.01, Variance = 1. 00).
- These findings inform the possibilities as well as the issues that come with adopting GenAI in foreign language education.

1.3 Results of Students' Attitude Towards Leveraging GenAI in Foreign Language Learning

Beyond gaining insights from lecturers on their attitude towards using GenAI in foreign language teaching, it was also pertinent to elicit the views of the students.

Table 3. Descriptive statistics for students' attitude.

Survey Items	Mean	SD	Variance	t-value	p-value
I believe that using generative AI tools will enhance my language learning experience.	7.58	0.42	0.18	12.75	0.001
Generative AI applications will significantly improve my proficiency in the foreign language I am studying.	7.62	0.45	0.20	13.10	0.001
I expect that generative AI tools will make my foreign language learning more efficient and effective.	7.50	0.41	0.17	12.90	0.001
I find generative AI tools easy to use in my foreign language learning activities.	7.55	0.40	0.16	12.85	0.001
Learning to use generative AI tools for language study requires minimal effort.	7.48	0.43	0.18	12.70	0.001
I anticipate that integrating generative AI into my study routine will be straightforward.	7.51	0.44	0.19	12.75	0.001
My peers believe that using generative AI tools is beneficial for foreign language learning.	7.63	0.39	0.15	13.20	0.001
The academic community supports the use of generative AI tools in language education.	7.60	0.42	0.18	13.00	0.001
I feel encouraged by my instructors to use generative AI systems in my language learning.	7.52	0.43	0.18	12.80	0.001

From the descriptive statistics table, most postgraduate students expressed positive attitudes towards using GenAI in foreign language learning since most mean scores were high and the standard deviations were low for all the survey items. About GenAI tools, the students are strongly convinced that, on the one hand, the use of these tools will improve the language learning process (mean = 7.58 sd = 0.42, variance = 0.18, t = 12.75 p = 0.001). The respondents also forecast a positive impact on the efficiency and effectiveness of learning by implementing GenAI (mean = 7.50, SD = 0.41, variance = 0.17, t = 12.90, p = 0.001). They also said that GenAI tools are easy to use (mean = 7.55, SD = 0.40, variance = 0.16, t = 12.85, p = 0.001) and that learning how to use such tools is not very demanding (mean = 7.48, SD = 0.43, variance = 0.18). They expect easy assimilation of GenAI into their study schedules (mean 7.51, SD 0.44, variance = 0.19, t = 12.75, p = 0.001). The social factors are equally imperative and involve peers who favour using GenAI tools, with a mean score of 7.63, an SD of 0.39, and a variance of 0.15. Moreover, students' encouraging instructors (mean = 7.52, SD = 0.43, variance = 0.18, t = 12.80, p = 0.001). These findings are significant, particularly because they reveal the degree of acceptance and perceived utility of GenAI in FL learning, which is relevant given this study's interest in stakeholder perception. The positive attitudes imply that incorporating these elements into language teaching might produce even more efficient results and higher public approval, creating better learning environments.

Table 4. Independent sample t-test.

Survey Items	Lecturers (Mean)	Students (Mean)	Lecturers (SD)	Students (SD)	t-value	p-value
I believe that using generative AI tools in foreign language teaching will improve	4.29	7.58	0.79	0.42	-15.48	0.001
Generative AI systems will significantly enhance the efficiency of teaching and	4.14	7.62	0.82	0.45	-15.61	0.001

I expect that integrating generative AI in teaching and learning will make the	4.33	7.50	0.78	0.41	-14.48	0.001
I find generative AI tools easy to learn and integrate into my foreign language	3.48	7.55	1.07	0.40	-15.75	0.001
The use of generative AI in foreign language teaching and learning requires	3.77	7.48	1.91	0.43	-15.11	0.001
I anticipate that using generative AI in teaching and learning will be	3.29	7.51	1.95	0.44	-14.62	0.001
My colleagues and peers believe that using generative AI in foreign language	4.06	7.63	0.89	0.39	-16.00	0.001
The academic community supports the adoption of generative AI tools in language	3.19	7.60	1.93	0.42	-15.60	0.001
I feel encouraged by my institution to use generative AI systems in my foreign language teaching and learning practices.	3.38	7.52	1.05	0.43	-16.08	0.001

Furthermore, the independent sample t-test results offer a detailed comparison of the instruments employed to analyse the attitudes of lecturers and students when it comes to using generative AI (GenAI) in foreign language education. The results show a statistically significant difference between the two groups regarding all the reported items in the survey. In general, the mean scores indicate that lecturers are moderately positively disposed toward GenAI, which is evident from the table below: mean score of 4.33. For instance, the lecturers' perception towards the effectiveness of GenAI in enhancing the learning of students has a mean of 4.29 (SD = 0.79), whereas students' corresponding belief scores are significantly higher at 7.58 (SD = 0.42), with a t-value of -15.48 and a p-value of 0:001. The same trend applies to other items of the questionnaire on factors that might give rise to incorporating GenAI tools, as illustrated by a perceived improvement in teaching efficiency (lecturers' mean = 4.14, SD = 0.82; students' mean = 7.62, SD = 0.45; t = -15.61, p = 0.001). The fact that those t-values and p-values are rather high and the attained p-values are extremely low means that the differences in attitudes are statistically significant to support the assertion that students are much more optimistic about adopting GenAI in their learning processes than lecturers. The gap in the differences could be justified by the exposure the students had to using Gen-AI. This may suggest a call for more focused sensitization and professional development training of the lecturers for ingraining GenAI into FL education to be more harmonious and spirited. Therefore, based on identifying these differences, institutions can address the issues arising from them and utilise the optimism of both genders to improve the efficiency of GenAI instruments in educational contexts.

2. DISCUSSION OF FINDINGS

Generative artificial intelligence (GenAI) remains a significant component of technological innovativeness that has transformed the teaching and learning of foreign languages. To further discuss the findings from the resented data, the various predictors in UTAUT model are considered. Wherein the comparison of data from the lecturers and students are compared based on performance expectancy, effort expectancy, social influence, and facilitating condition. These predictors formed the basis for understanding the behaviour of the stakeholders towards leveraging GenAI in foreign language teaching and learning.

2.1 Performance Expectancy

Performance expectancy, which measures the extent to which individuals perceive that system usage will result in improved performance, is a crucial aspect of perceived usefulness in the case of generative AI in foreign language learning. The scores on items related to performance enhancement, which are values obtained by the lecturers, are moderate and indicate cautious optimism about GenAI's ability to deliver on the promise of improving students' outcomes and facilitating teaching. On the other hand, the students have a very high level of confidence in the usefulness of GenAI, and they view it as a tool that has the potential to drastically change the dynamics of learning. Such a significant difference is rooted in the lecturer's potential

concerns over the efficiency and credibility of GenAI compared to the students who are, arguably, pegged to the digital-first generation and are, therefore, more receptive to new technologies. Nevertheless, other researchers have shown that while teachers can be rather sceptical about introducing technologies in their instructional practice, once such technologies' effectiveness is proven, they soften and accept such changes [39, 44]. Therefore, if the perceptions of these directors are in sync with the continuous evidence-based training, it may assist in reducing the gap and result in developing a more positive overall attitude towards the benefits that can be yielded out of the GenAI performance. However, students and lecturers are aware of the dynamic challenges GenAI can introduce in terms of security and authenticity. Any use of open-source information could entail risks and challenges, which can be pinned out to users to consider.

2.2 Effort Expectancy

This is defined as the perceived effort associated with technological advancement. The lower scores of the lecturers have shown severe issues related to the effort needed to adopt and incorporate GenAI into their teaching practices. The apprehension of 44% is again quite different from the 56% students' score, which implies that the students do not perceive GenAI tools as difficult to use. Such discrepancies create a generational gap and an experiential difference between the lecturers and the students. Concerns regarding task proliferation may deter academic lecturers from integrating GenAI into teaching since they may have concerns about the time required to use the technology proficiently away from their teaching duties. This appears in the literature under perceived risks and difficulties in adopting technology in education [32, 41]. On the other hand, students who are presumably more familiar with the interface and occasional tools would probably view these tools as part of the interfaces they are already familiar with. This is why the specific, well-designed training programs aimed at broadening lecturers' understanding of GenAI and giving them practice-based experience must address these concerns, thus increasing their readiness and capacity to integrate these technologies into education.

2.3 Social Influence

Social influence focuses on how much it is anticipated that important reference group members expect the individual to adopt the new system. A moderate mean from lecturers indicated the need for more consensuses in the professional community on incorporating GenAI tools. Students, however, recognize the strong support from their fellow students and the academic community, indicating that social acceptance is key to positive attitudes towards GenAI. This divergence underlines the dispute of the social interactions on the UTAUT model. Another factor that remains influential in determining acceptance of technology is peer pressure, as recorded in [22, 33, 39, 45]. Lecturers could increase visible support from their peers and their institution's leaders, increasing their openness to using GenAI in their classes. At the same time, lecturers should be aware of the risks of such steps and take measures to avoid sharing wrong information or private content.

2.4 Facilitating Conditions

This is mainly regarding the state of affairs that enables or hinders the use of the technology, more so by providing or making available the requirements essential to using the technology. Lecturers' ratings may indicate an institution's capacity, resources, and training required to implement GenAI. Students, though, are satisfied with their institution's support, implying that they are aware of the structure put in place for this particular cause. This indicates that the students are prepared to use GenAI tools, whereas the lecturers might be left wanting and even without appropriate support and resources. Consistent with other empirical research on the importance of perceived support for using new technologies at work, the results of previous studies, including [39, 42], offer deeper insights. To overcome these challenges, it is recommended that the institutions provide lecturers with all-around briefs accompanied by the technical support necessary to create a favourable environment for the functioning of GenAI. Improving these facilitating conditions shall help strengthen lecturers' attitudes on the positive side compared to students and, thus, create a more unison and effective environment for integrating GenAI into the foreign language education process. Moreover, students' use of this technology should be also met with caution due to the increasing risks of shared data

over the internet. Several challenges related to students might arise also during the use of these models in terms of access and accurate utilization.

V. PRACTICAL IMPLICATIONS

This study revealed that lecturers were found to have moderate optimism with relative efforts and facilitating conditions needed for the adoption and integration of GenAI in FL education. On the other hand, the students showed overwhelming acceptance, usage and leveraging of GenAI models in facilitating their academic engagements in FL education. It is thus concluded that while university lecturers are careful to fully accept and integrate GenAI models in FL teaching, their students overwhelmingly accept GenAI. The UTAUT model offers an extensive framework for comprehending the determinants of technology uptake and utilization in foreign language learning and teaching. From a practical point of view, variations in the attitudes and their explanations could be expanded if samples were to be interviewed and asked about their opinions. Educational institutions have strict rules on using AI in education, which might create a barrier to using such technologies by students and teachers. In addition, better training on the use of Gen-AI for teachers would benefit the optimal use of such technologies and help both teachers and students.

VI. CONCLUSIONS

This paper investigated the difference in the opinions of lecturers and students on the use of generative AI (GenAI) systems in teaching and learning a foreign language. The research adopted a quantitative research approach. The sample involved 45 lecturers and 493 postgraduate students in foreign languages. The survey questionnaire contained items based on the UTAUT model, which includes 15 items, of which four are based on performance expectancy, four on effort expectancy, three on social influence, and four on facilitating conditions. The survey took the form of Google Forms shared on social media and email. The data collected was analysed using descriptive statistics, and t-test results were obtained to see the overall influence of two sets of behavioural perceptions of the two groups. Comparing the attitudes, the lecturers were found to have a moderate level of optimism with perceived high effort and facilitating conditions needed, while the students had excellent perceived attitudes and utmost confidence in GenAI to improve their learning.

The results further indicated that all the lecturers recognised the benefits of GenAI, but there were concerns about the time needed to implement these tools and the adequacy of support offered by the institution. On the other hand, students' results were positive, stating that GenAI tools are easy to navigate and having confidence that those tools will positively impact language learning. The t-test comparisons emphasized these differences, accentuating the generational and expertise differences. However, as for the student's readiness, it can be concluded that there is a good basis for adopting GenAI in foreign language teaching.

VII. LIMITATIONS AND RECOMMENDATIONS

Some limitations of the study are as follows: there were a limited number of participants for the lecturers; the data used in the study is self-reported, which may present some bias. Recommendations include further provision and support services to the lecturers through tailored and special professional development initiatives. On the other hand, the building on the positive attitudes that comes with the classroom students towards creating a synergistically productive educational climate. The study recommends policy-makers in education to explore the benefits of GenAI in foreign language teaching. It is also recommended to strengthen the existing practices of using GenAI in language teaching and exploring opportunities in increasing teachers and student's knowledge of the GenAI tools and applications. Subsequent research should consider using longitudinal studies to monitor attitude change and investigate other factors related to technology adoption.

Funding Statement

No any external funding.

Author Contributions

All authors made an equal contribution to the development and planning of the study.

Conflicts of Interest

The authors have no potential conflicts of interest.

Data Availability Statement

Data are available from the authors upon request.

Acknowledgements

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through Large Research Groups under grant number (RGP.2 / 110 /45).

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