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The Effect of AI-Mediated Dynamic Assessment on EFL Oral Performance Skills and Self-Confidence of Student Teachers at Faculties of Education

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The Effect of AI-Mediated Dynamic Assessment on EFL Oral Performance Skills and Self-Confidence of Student Teachers at Faculties of Education

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Abstract:

The current research aimed at investigating the effect of implementing dynamic assessment (DA) mediated by an AI application on developing some EFL oral performance skills and self-confidence of sophomore student teachers in the English Basic Education section. A quasi-experimental design with a pre- post two-group administration was implemented. Instruments included: an EFL oral performance skills checklist for determining the most necessary oral performance skills for the second-year student teachers in the English basic education section, a pre-post oral performance skills test with an analytic rubric for scoring it and a speaking self-confidence scale. Five main EFL oral performance skills were determined by experts as necessary for target participants. Research sample consisted of two intact groups of fifty second- year English basic education section students (N= 50); equally divided into an experimental and a control group. A dynamic assessment-based program for EFL oral performance was developed. The program was applied to both groups but with different mediators. The experimental group was taught using the AI application as a mediator within the framework of the DA-based program, while the control group had the instructor as the mediator in the program. Results revealed that the AI- mediated dynamic assessment had a medium effect on four out of five EFL oral performance skills among the student teachers and their self- confidence as there were statistically significant differences between the experimental and control group students' mean scores on the post-administrations of the instruments of the research. However, the control group outperformed the experimental group in the non-verbal component. Finally, some recommendations and suggestions for further research were proposed.

Key Words: *AI-mediated Dynamic Assessment, EFL oral performance skills, self-confidence, student teachers.*

مستخلص البحث

استهدف البحث الحالي دراسة أثر تطبيق التقييم الدينامي باستخدام تطبيق للذكاء الاصطناعي كوسيط للتواصل على تنمية بعض مهارات الأداء الشفهي باللغة الإنجليزية والثقة بالنفس لدى الطلاب المعلمين بالفرقة الثانية تخصص لغة انجليزية بشعبة التعليم الاساسي. تم تبني التصميم شبه التجريبي ذا التطبيقين القبلي والبعدي على مجموعتين. واشتملت أدوات الدراسة على ما يلي: قائمة بمهارات الأداء الشفهي باللغة الإنجليزية لتحديد اهم المهارات المناسبة لطلاب الفرقة الثانية تخصص لغة انجليزية بشعبة التعليم الاساسي، اختبار قبلي- بعدي لمهارات الأداء الشفهي يصاحبه مقياس أداء تحليلي متدرج لتصحيح الاختبار، وكذلك مقياس الثقة بالنفس في أثناء التحدث. تم تحديد خمس مهارات للأداء الشفهي باللغة

الإنجليزية بواسطة الخبراء، والتي تعد أساسية بالنسبة لعينة البحث المستهدفة. وتكونت عينة البحث من مجموعتين مستقلتين بإجمالي خمسين طالبا بالفرقة الثانية تخصص لغة انجليزية بشعبة التعليم الاساسي (ن= ٥٠) تم تقسيمهم بالتساوي إلى مجموعتين تجريبية وضابطة. تم كذلك تصميم برنامج في مهارات الأداء الشفهي قائم على التقييم الدينامي، والذي تم تطبيقه على مجموعتي البحث ولكن مع اختلاف الوسيط. تم تطبيق البرنامج على المجموعة التجريبية باستخدام تطبيق للذكاء الاصطناعي كوسيط في إطار البرنامج القائم على التقييم الدينامي، بينما كان المعلم هو الوسيط في إطار نفس البرنامج بالنسبة للمجموعة الضابطة. أوضحت النتائج ان التقييم الدينامي بوساطة الذكاء الاصطناعي كان له تأثيرا متوسط الحجم في تنمية أربع مهارات من خمس للأداء الشفهي باللغة الإنجليزية لدى الطلاب المعلمين وكذلك ثقتهم بأنفسهم اثناء التحدث حيث وجدت فروق ذات دلالة إحصائية بين متوسطات درجات الطلاب في المجموعتين التجريبية والضابطة على التطبيق البعدي لأدوات البحث. ومع ذلك فقد تفوق طلاب المجموعة الضابطة على طلاب المجموعة التجريبية في المهارات غير اللفظية. وأخيرا، قدم البحث مجموعة من التوصيات والمقترحات لبحوث مستقبلية.

الكلمات المفتاحية: *التقييم الدينامي بوساطة الذكاء الاصطناعي، مهارات الأداء الشفهي باللغة الإنجليزية، الثقة بالنفس، الطلاب المعلمون.*

Introduction:

Speaking, classified as a productive oral skill, encompasses more than the articulation of words, involving various complex processes. In language education, speaking is widely acknowledged as the most significant skill, functioning as the cornerstone of teaching and learning practices. Mastery of English speaking skills is crucial for individuals to meet their educational, professional, and personal objectives (Bueno, Madrid, & McLaren, 2006). Mastering these skills offers boundless educational benefits, empowering individuals to actively engage in daily learning activities, debates, and group discussions. It fosters the development of critical thinking, enhances effective communication, and enables successful interactions with people worldwide. Further, it enables individuals to pursue higher education abroad, secure better career opportunities, effectively utilize e-resources and the internet, expand their knowledge base, gain societal respect, boost self-confidence, and foster overall personal development (Alshammari, 2022; Parupalli, 2019).

For English as a Foreign Language learners, mastering oral English communication skills is often more demanding than developing other language skills such as reading, listening, and writing. With the advent of the Fourth Industrial Revolution, the need for proficiency in oral English communication has grown significantly. As a fundamental aspect of language learning, oral performance plays a pivotal role, given that the core objective of language is communication in both spoken and written forms. Recent insights in EFL contexts highlight that graduates with strong oral English communication skills are better positioned for professional success than their peers who lack these abilities (Idrus, 2016; Ibna Seraj & Hadina, 2021).

With special reference to EFL student teachers, achieving educational excellence requires proficiency in English communication, a critical skill for their future profession as educators. It is essential to equip them with innovative strategies to enhance their communication abilities, particularly oral skills, to ensure success in their teaching careers. In recent years, particularly with the rapid expansion of private schools, employers have expressed growing concerns about the oral proficiency of prospective EFL teachers, which has become a contributing factor to graduate unemployment. This issue may stem primarily from the educational system and the instructional methods employed in their training. Most classes in EFL teacher preparation programs are conventional, lecture-based, and teacher-centered, which hinder the enhancement of students' speaking skills. Interactions between students and instructors are sparse, providing insufficient opportunities to strengthen students' English language proficiency, especially in terms of oral communication (Kharboush, 2019).

Despite the significance of oral communication skills in EFL settings, the oral performance of tertiary-level learners does not meet the expected level, with some cases still being unintelligible (Afshar & Asakereh, 2016). Numerous factors contribute to this issue, including environmental, psychological, and linguistic elements. Notably, the persistence of traditional lecture-based teaching methods in EFL contexts, where learners are often passive participants, has been a barrier to enhancing their oral communication skills (Abid, 2018; Bruner et al., 2015). Furthermore, the absence of varied teaching methods and resources, along with the challenge of managing large class sizes—common in many EFL settings—led to a lack of student participation, thereby negatively affecting oral performance. In such situations, it was difficult for teachers to involve all students in oral activities (Aleksandrzak, 2011; Al Hosni, 2014; Dabiri & Gilakjani, 2019). Psychological factors, including learners' shyness, anxiety, self-efficacy, reluctance, emotions, and confidence, play a more significant role than motivation, nervousness, and fear in hindering speaking abilities. Furthermore, linguistic difficulties, such as insufficient language knowledge, fluency, accuracy, pronunciation, and vocabulary, present barriers to the development of learners' oral skills (Hojat & Afghari, 2013; Ibna Seraj & Hadina, 2021).

Despite its importance, teaching speaking has not been valued in schools and universities for a few years and English language teachers have continued to teach speaking just as a repetition of drills or memorization of dialogues (Jorjani& Abdolmanafi-Rokni, 2015; Leong& Ahmadi, 2017).

However, due to the quick change and constant development of the job market, EFL teachers are required to develop the necessary qualifications and, most importantly, to acquire "good speaking skills." As noted by Yaman (2014), improving speaking skills poses a significant challenge in EFL contexts like Egypt. Research findings suggest that integrating innovative approaches into conventional teaching methods to foster a new environment for oral practice, both in and out of the classroom, is vital for the development of learners' oral proficiency (Bunjan & Suppasetseree, 2017; Darmi & Albion). Lana et al. (2018) emphasized that technology, ranging from audiobooks to language applications, played a significant role in developing oral skills by facilitating accurate pronunciation and appropriate word usage in EFL contexts. Additionally, online-based teaching methods that fostered virtual language communities were instrumental in enhancing learners' oral skills (Bunjan & Suppasetseree, 2017).

Rosmayanti (2018) identified two essential components for successful speaking: linguistic and non-linguistic aspects. The linguistic elements encompass vocabulary, grammar, pronunciation, sentence structure, and fluency, while the non-linguistic elements involve personality traits such as self-confidence and the influence of the intergroup environment. Self-confidence plays a crucial role in EFL students' oral performance. Several studies have found that higher self-confidence in students is generally associated with improved performance in speaking tasks and activities (Rahma, 2017; Loan, 2019; Thiziri, 2019; Abdelbaki, 2022). In conclusion, it can be inferred that self-confidence is a personal attribute that fosters a positive and realistic self-perception, enabling individuals to believe in their ability to achieve success and competence independently.

Numerous English language teaching (ELT) researchers argue that assessment is a critical component in stimulating the learning process and can significantly aid students in improving their learning outcomes. Teaching and assessment are intrinsically linked components of the educational process, each informing and enhancing the other. Effective teaching requires ongoing assessment to gauge student understanding and engagement, allowing educators to adapt their instructional strategies in real time (Douglas, 2014). Research indicates that when assessments are utilized as tools for learning- rather than merely as measures of performance, especially formative assessment- they can significantly enhance instructional effectiveness and student outcomes. By creating a feedback

cycle where assessment informs teaching and vice versa, educators can better support student learning, ensuring that instruction is responsive to the evolving needs of their students. Therefore, assessment is considered an indispensable element of the teaching and learning framework (O'Malley & Pierce, 1996; Tiara, Rahman, & Handrianto, 2021).

However, Fatemipour and Jafari (2015) highlighted that "Static assessment (SA) can only measure the learner's actual level of performance (what they can perform independently) but cannot assess their potential level of performance (what they can perform with assistance)." SA prioritizes test results over the individuality of students, disregarding the gradual improvement in their performance. It separates teaching from assessment by emphasizing learners' overall proficiency rather than focusing on the dynamics of the learning journey. While summative assessments play an important role in evaluating performance, they tend to reduce language competence to a narrow metric, neglecting the multifaceted nature of learning and development (Shohamy, 2020).

In response to the disadvantages of SA, dynamic assessment appeared as a more flexible approach. This form of assessment is process-oriented, serving as an alternative approach that fosters learners' responsibility for their own learning (Beaumont et al., 2011). It emphasizes the importance of instructor-student interaction, as this interaction highlights the gap between students' current knowledge and the potential knowledge they can achieve. DA is recognized as an integrated approach that merges teaching and assessment within a single framework to foster learning by delivering mediation through hints and prompts. This approach heavily relies on the interaction between language instructors and FL learners. The teacher acts as an intervener, offering scaffolding to guide students in successfully completing their tasks. According to Xiaoxiao and Yan (2010), Dynamic Assessment (DA) is a mediational and structured instructional approach focused on students' future growth rather than solely evaluating their past achievements. In this approach, "teachers serve as supporters, providing timely feedback on entire task processes" (p. 25).

While Dynamic Assessment (DA) has established a significant position in developmental psychology, it is only recently that L2 researchers have begun to explore it, driven by its strong theoretical foundation and its potential to assist students in acquiring new cognitive skills (Sherkuziyeva et al., 2023). Rooted in Vygotsky's sociocultural theory and Zone of Proximal Development (ZPD), DA emphasizes the importance of mediation in improving cognitive and learning performance, especially through

dialogic interactions between teachers and students (Poehner & Lantolf, 2003). So, ZPD represents the gap between a learner's current capabilities and what they can achieve with the aid or scaffolding from the teacher, relevant in both assessment and classroom environments. Here, language learners are provided with effective support to perform tasks successfully, especially in developing their speaking skills, which are inherently interactive (Poehner & Lantolf, 2003).

Sternberg and Grigorenko (2002) and Vergara et al. (2019) indicated that school and clinical psychologists have been investigating Dynamic Assessment (DA) as a method of more effectively assessing an individual's aptitude for future improvement by incorporating instruction into the assessment process. Therefore, as Baharloo (2013) puts it, DA centers around two key principles: firstly, teaching and testing are so interwoven that it is hard to separate them at a specific point in time. Secondly, even while being tested, learners receive guidance from teachers within their Zone of Proximal Development, as this model supports any mechanisms that aid development. As a result, assessment is not just a tool for measurement, but for enhancing learners' knowledge. It aims to identify the type of intervention necessary to improve learners' performance. As a result, development takes precedence over measurement.

With specific reference to oral performance or speaking skills, there is a strong relationship that relates it to dynamic assessment. A recent systematic review of five international peer-reviewed research examining the effects of dynamic assessment in EFL speaking contexts demonstrated that dynamic assessment can be effectively employed in EFL classes to enhance learners' speaking skills. The review determined that EFL learners exhibited a favorable reaction to dynamic assessment when the interactionist approach was applied in speaking classes (Gilani et al., 2021).

A paradigm shift in several sectors, including language instruction, has been sparked by the development of artificial intelligence (AI). Integrating artificial intelligence (AI) technologies with conventional teaching approaches has created new opportunities for automated and customized feedback and assessment systems. While the use of AI in language acquisition is not new, its incorporation into assessment and feedback is a rapidly developing and revolutionary field (Liu, 2023). Speech recognition technology has revolutionized the assessment of speaking and pronunciation in language learning by enabling real-time analysis of speech patterns, intonation, and pronunciation. It provides personalized feedback and assessment, creating an interactive and responsive learning environment

tailored to individual needs, thereby facilitating focused improvements in speaking skills (Witt, 2012; Xi, 2010).

In the context of English as a Foreign Language (EFL), challenges in developing speaking skills often stem from constraints like limited classroom time and learners' reluctance to engage in communication due to various affective factors. These issues hinder EFL learners' opportunities for adequate output practice during class sessions. The integration of AI tools, including online platforms and apps, enables EFL learners to transcend traditional classroom constraints like limited class size, brief class durations, and overcrowded classrooms. These technologies offer constructive feedback, foster communication beyond class hours, and support the continuous development of speaking skills through interactive exercises, chatbots, and virtual assistants (Fathi, Rahimi & Derakhshan, 2024; Rahimi & Fathi, 2022).

In conclusion, AI is a fertile field of study that can enrich instructional and assessment practices through the potentials and resources it provides. It can be used for leveraging oral performance skills through dynamic assessment with the aid of chatbots or conversational agents. It can also have positive effects on affective variables such as self-confidence or decreasing anxiety as it creates a stress-free and, consequently, safe environment for students to practice their language skills. While Chatbot-mediated instruction is gaining increasing attention, research on its impact on improving EFL learners' speaking skills remains scarce (Fathi, Rahimi & Derakhshan, 2024).

Context of the problem:

Speaking a foreign language is a complex process, with both teachers and learners often finding it the most difficult skill. Consequently, this skill is frequently overlooked or inadequately practised in English language instruction. However, oral performance instruction proves to be especially challenging for language teachers, particularly those who are non-native speakers of the target language. In the context of foreign language learning, English is taught as an academic subject, with no emphasis on communication outside the classroom, making it the sole setting for EFL students to practice the language. Therefore, the fact that the oral performance of non-native EFL teachers may be considerably deviant from acceptable standards of oral language proficiency in English should be considered (Aristizábal-Jiménez, 2020; Alafifi, 2020; Kharboush, 2019; Hasan, 2014).

In contrast to ESL and native English contexts, teaching speaking in an EFL setting is more demanding. Students in these contexts typically study English solely as an academic subject, without real-world communication opportunities, leading to few chances for practice, which complicates the development of speaking skills.

During teaching the Microteaching sessions to second year basic education EFL student teachers, the researcher observed that their oral performance skills were below average, especially during their presentations and mini- lesson demonstrations. They did not master the necessary oral performance skills that enable them to be competent teachers; that's why they feel unconfident about speaking in public in front of their colleagues and professors. This problem was substantiated through an interview held by the researcher with a number of those student teachers (n= 20) asking them some questions related to microteaching and other general questions. Students demonstrated weakness in most oral performance skills, such as fluency, accuracy and even non-verbal skills. They were hesitant, produced incoherent utterances, did not maintain eye contact with the interviewer, and most words were incorrectly pronounced.

They confirmed that they tried to avoid speaking in public as much as possible in all the sessions they attended. Moreover, they highlighted that they feel unconfident about their speaking skills, which is why they avoid participating in almost all the sessions they attend at college.

Statement of the problem:

The problem of the current research was identified based on the researcher's observations, the results of the pilot study interview, and the review of related literature as follows:

Student teachers in the English Basic Education section at the Faculty of Education, Mansoura University, have weaknesses in their EFL oral performance skills that qualify them to be competent prospective teachers. In addition, they lack self-confidence in their speaking skills, and this consequently contributed to their weak oral performance. That's why the current research was an attempt to solve that problem by using a research-validated approach, which is a dynamic assessment that is mediated through AI applications.

Questions of the research:

The current research sought to answer the following main question:

What is the effect of AI- mediated dynamic assessment on EFL oral performance skills and self-confidence of sophomore student teachers at the English Basic Education Section at the Faculty of Education?

The following sub-questions were derived from the main question :

1- What are the most necessary EFL oral performance skills that should be mastered by sophomore student teachers at the English Basic Education Section at the Faculty of Education?
2- What are the features of an AI- mediated Dynamic Assessment intervention for developing EFL oral performance skills and self-confidence of the targeted student teachers?
3- What is the effect of an AI- mediated Dynamic Assessment on the EFL oral performance skills of the targeted student teachers?
4- What is the effect of an AI- mediated Dynamic Assessment on the self- confidence of the targeted student teachers?
5- Is there a positive correlation between speaking self- confidence and EFL oral performance skills?

Hypotheses:

The current research attempted to verify the following hypotheses:

1- There is a statistically significant difference between the mean scores of the experimental and control group students on the post-administration of the EFL oral performance skills test in favor of the experimental group.
2- There is a statistically significant difference between the mean scores of the experimental group students on the pre- and post-administrations of the oral performance skills test in favor of the post- administration.
3- There is a statistically significant difference between the mean scores of the experimental and control group students on the post-administration of the self- confidence scale in favor of the experimental group.
4- There is a statistically significant difference between the mean scores of the experimental group students on the pre- and post-administrations of the self- confidence scale in favor of the post-administration.
5- There is a positive correlation between the EFL oral performance skills and speaking self- confidence.

Instruments and materials:

The researcher designed and administered the following instruments:

1- An EFL oral performance skills checklist for identifying the most important skills that should be mastered by student teachers in the English Basic Education section at the Faculty of Education.

2- An EFL oral performance skills test for assessing student teachers' oral performance skills before and after the experimental intervention.
3- An analytic rubric for scoring the oral performance skills test.
4- A speaking self-confidence scale for assessing student teachers' self-confidence in speaking.

Purpose of the research:

The present research aimed at:

1- Identifying the most important EFL oral performance skills that should be mastered by EFL Basic Education student teachers to be competent future teachers.
2- Determining the features of an AI- mediated dynamic assessment that could be implemented for developing EFL oral performance skills and self- confidence of EFL student teachers at Basic education section.
3- Determining the effect of using AI- mediated dynamic assessment on enhancing EFL oral performance skills of EFL Basic Education student teachers.
4- Determining the effect of using AI- mediated dynamic assessment on enhancing self- confidence of EFL Basic Education student teachers.

Significance of the research:

It was hoped that the current research would contribute to:

1. Enriching literature concerning the development of oral performance skills necessary for EFL student teachers as part and parcel of their teaching competence.
2. Directing the attention of EFL university professors towards the importance of utilizing dynamic assessment as a systematic method of assessment to enhance instructional practices.
3. Enabling student teachers at colleges of Education to benefit from dynamic assessment as an approach that enhances their learning and language development.
4. Drawing the interest of researchers in the realm of EFL instruction to dynamic assessment as a flexible approach for developing oral performance skills and its suitability for developing other language skills.
5. Staying updated with innovative trends in AI and the applications that can be integrated within instructional approaches for leveraging instructional practices.

6. Enriching literature concerning dynamic assessment and its implications in language instruction, and particularly EFL oral performance skills.
7. Enriching literature concerning self- confidence development of EFL student teachers as part and parcel of their teaching competence.

Delimitations of the research:

The current research was delimited to the following delimitations:

1- A sample of second-year student teachers (N= 50) enrolled in the English Department, Basic Education section, Faculty of Education, Mansoura University. They were equally divided into an experimental and a control group.
2- Some oral performance skills that should be mastered by those student teachers as determined by EFL specialists through the checklist administered for that purpose. These skills included Fluency and coherence, Lexical resources, Grammatical range and accuracy, Pronunciation, and Non-verbal components.
3- An AI application called *Replika*- the free version.
4- The first term of the academic year 2023- 2024, in the microteaching section.

Definition of terms:

AI- Mediated Dynamic Assessment

Haywood& Lidz, (2006) defined dynamic assessment as "a subset of interactive assessment that includes deliberate and planned mediational teaching and the assessment of the effects of that teaching on subsequent performance".

Lantolf and Poehner (2008) indicated that dynamic assessment is "an approach that provides a diagnostic understanding of where the learner is at while also boosting development by providing particular mediations or very small 'hints' to the learner during the assessment process in order to help the learner to move past or overcome obstacles to problem-solving".

According to Noels et al. (2019), DA is a "process-oriented approach in which assessment and learning are considered integrally connected rather than separate" (p. 99).

AI-mediated dynamic assessment is operationally defined as an approach that provides a diagnostic understanding of where the learner is at while also boosting development by providing particular mediations or very small hints through an AI virtual agent to the learner during the assessment process to help the learner move past or overcome obstacles that hinder them from mastering EFL oral performance skills.

EFL Oral Performance Skills:

Oral performance skills and speaking skills are usually used interchangeably, however, the term oral performance skills was intentionally used to confirm the inclusion of the nonverbal component with other speaking subskills.

Speaking is defined as "an interactive process of constructing meaning that involves producing, receiving and processing information. Its form and meaning are dependent on the context in which it occurs, the participants, and the purposes of speaking" (Burns& Joyce, 1997). According to Nunan (2003), speaking is "a productive oral skill that involves the production of a system of verbal utterances to send meaning". Furthermore, Rizvi (2006, p.92) defined speaking as "an interactive and communicative process that involves speakers and listeners. It is not only the oral production of written language, but the mastery of a wide range of sub-skills of learners as well."

According to Chaney and Burk (1998) and Nunan (2003, p. 217), speaking involves the creation and exchange of meaning across different contexts by conveying messages through both verbal and nonverbal symbols. It facilitates meaningful communication between individuals, aiming to elicit responses while adhering to culturally appropriate communication norms.

Oral performance is operationally defined as the ability of EFL student teachers in basic education to communicate orally in the classroom to fulfill intensive performance objectives, using accurate pronunciation, grammar, and vocabulary. In essence, they are required to master sub-skills such as Pronunciation, Accuracy/Grammar, Vocabulary, Fluency, and non-verbal communication.

Self-confidence in speaking:

Murray (2006) defined self-confidence as the conviction in one's own ability to pursue and achieve goals, take risks, and perform effectively, regardless of potential outcomes and without being hindered by fear. Similarly, Adalikwu (2012: 6) defined self-confidence as "the belief that a person has in his ability to succeed at a task, based on whether or not they have been able to perform that task in the past."

Self-confidence is the belief in one's own abilities to achieve goals and perform well without fear of outcomes, as defined by Nety, Wahyuni, Nurhaeni (2020), and Tridinanti (2018).

It is operationally defined as sophomore student teachers' belief in their ability to achieve desired goals in oral performance tasks, take risks,

and perform effectively, demonstrating mastery of component subskills without being hindered by fear.

Review of literature and related studies:

The following section sheds more light on the main variables of the current research, which are EFL oral performance skills, speaking self-confidence, and AI-mediated dynamic assessment.

EFL oral performance skills:

Among the four language skills, speaking appears to be the most significant. Individuals proficient in a language are commonly termed "speakers," suggesting that speaking encompasses all aspects of language mastery. Furthermore, a majority of foreign language learners prioritise the acquisition of speaking skills above others (Ur, 2009). Speaking is an interactive process of meaning formation that encompasses receiving, processing, and producing information (Brown, 1994; Burns & Joyce, 1997).

Speaking constitutes an interactive process of meaning construction, encompassing the production, reception, and processing of information (Brown, 2007). The form and meaning of spoken communication are contingent upon the contextual factors, including the participants, their shared experiences, the physical environment, and the objectives of the interaction. Yuliastuti (2011) posits that speaking involves the construction and dissemination of messages through verbal and non-verbal symbols across diverse contexts.

The purpose of language encompasses the communication of needs, desires, ideas, information, and emotions. Similar to writing, speaking exhibits various genres, each corresponding to specific communicative purposes. The functions of language have been classified in numerous ways, with Halliday's communication functions being among the most recognized and frequently referenced. He illustrated that the function of oral language can be either instrumental, personal, interactional, regulatory, representational, heuristic, or imaginative (First Steps, 2013). A distinction was established between talk as a process and talk as performance. Talk as performance denotes structured activities in which learners address an audience. Talk as a process denotes the utilization of verbal communication for the purposes of learning, collaboration, and the establishment of social relationships (Jones, 1996).

Following the same line of thought, numerous language experts have endeavored to classify the functions of speaking in human interaction. Among them, Richards and Renandya (2002) and Richards (2008: 21–28)

proposed a three-part framework for speech functions: interaction, transaction, and performance. These categories differ in both form and function, necessitating distinct teaching methodologies for effective instruction. Firstly, talk as interaction is associated with "conversation" and highlights the way speakers aim to portray themselves to others, placing less importance on the content of the message. This form of communication is more oriented toward the listener than the information's precision or clarity. Typical examples include joking, engaging in small talk, chatting, and initiating or closing casual discussions. Secondly, talk as a transaction pertains to instances where the emphasis lies on the content of the message and the actions involved. Being message-focused, it prioritizes clarity and accuracy, as well as the effective and meaningful exchange of information. Examples include making phone calls, participating in class discussions, ordering food, booking hotel rooms, and engaging in general problem-solving activities. Finally, according to Richards (2008: 27), talk as performance involves public speaking that conveys information to an audience, such as in speeches, presentations, or public announcements. This type of communication is defined by its formal structure, predictable sequence, and dual focus on the audience and the message being delivered. Both structure and precision hold significant importance in this type of communication. It closely resembles written communication rather than spoken, as it is typically pre-planned and predominantly monologic in nature.

In addition to categorizing speaking functions, Brown and Abeywickrama (2019) identified five fundamental types of speaking, which include imitative, intensive, responsive, interactive, and extensive (monologue) forms. Tasks involving extensive oral production, like storytelling, oral presentations, and speeches, provide limited or no chances for listeners to interact, with responses often confined to nonverbal cues. That’s why it much resembles talk as performance. They highlighted the components of oral performance as being micro- and macro- skills. Micro skills pertain to the production of smaller linguistic units, including phonemes, morphemes, words, collocations, and phrases, whereas macro skills involve attention to broader aspects like fluency, discourse, functional language use, style, cohesion, nonverbal communication, and strategic choices. Furthermore, both DeBoer (2007) and Patel (2014) confirmed that non-verbal components, such as maintaining eye contact and using facial expressions, are dynamic aspects that convey and reflect the speaker’s emotions, intentions, and overall attitude.

Effective English-speaking performance requires various competencies in oral production. These include grammatical competence, or understanding the structure of the language; discourse competence, which ensures coherence and cohesion in speech; sociolinguistic competence, enabling appropriate language use in context; and strategic competence, which equips learners to make their speech understandable (Bailey & Nunan, 2005). Together, these competencies enable comprehensive language use and enhance speaker confidence (Boonkit, 2010).

Actually, the challenge of teaching English oral performance stems from the diverse purposes of English communication. Without a clear understanding of these purposes by both teachers and learners, achieving successful oral performance becomes impossible (Burns& Joyce, 1997; Hasan, 2014). However, many research studies manipulated the development and assessment of oral performance skills. They attempted using various approaches and methods of teaching such as task- based learning (Torky, 2006; Boonkit, 2010; Hasan, 2014), hypermedia as a delivery tool (Jorjani& Abdolmanafi-Rokni, 2015), inverted instruction (Kharboush, 2019), professional learning communities (Alafifi, 2020), generative learning strategies (Barakat& Ibrahim, 2024), engaging in communicative practices such as group discussions, solving problems collaboratively, and participating in role-play scenarios (Tumova, 2002; Oradee, 2012). Further, creative approaches such as dramatics, storytelling, and literature have effectively enhanced speaking skills (Mohammed, 2004; Ainy, 2007). Additionally, multimedia programs have also demonstrated their effectiveness in improving speaking abilities (Diyyab, 2013; Farag, 2015), and digital video recordings were also effective in enhancing EFL oral performance (Göktürk, 2016).

The ability to speak effectively is a vital part of language acquisition. Nonetheless, assessing speaking skills is challenging as it involves multiple influencing factors (Luoma, 2004). Essential components of speaking assessment encompass syntax, vocabulary, pronunciation, fluency, and accuracy (Madsen, 1983). Dynamic assessment is a contemporary approach for improving EFL oral performance skills (Xiaoxiao& Yan, 2010; Yang, 2017; Alshammari, 2022).

Speaking Self-confidence

Self-confidence plays a crucial role in EFL students' oral performance. According to Rosmayanti (2018, p. 1) “The two components that make up successful speaking are linguistics and non-linguistics. Linguistic aspects include vocabulary, grammar, pronunciation, sentence structure, and

fluency. Additionally, a non-linguistic aspect includes personality traits such as self-confidence and an intergroup environment." Self-confidence is essential for success in English speaking skills, as it significantly benefits EFL learners (Hasan et al., 2020). It empowers students with the belief that they can overcome challenges and accomplish goals deemed difficult by others. Furthermore, self-confidence reduces speaking-related anxiety, encouraging students to express themselves without hesitation. Confident EFL learners are better equipped to conquer fears and suppress negative thoughts, resulting in improved fluency in English (Audina et al., 2021; Kinasih & Olivia, 2022).

There are explanations regarding the factors that influence self-confidence, encompassing both internal and external factors. Audina, Hasanah, and Desvitasari (2021) outlined these factors, which can be represented as follows:

a) Self-Image: A person's self-perception significantly affects their confidence. When an individual believes in their abilities, they become more willing to embrace challenges, handle difficult situations, and find solutions to rectify setbacks, fostering overall self-confidence.
b) Life Experiences: When a person recognizes their competence in a particular skill or field, they are more likely to persist, even if they make occasional mistakes. This inner confidence motivates ongoing improvement.
c) Environment: Negative and toxic environments, where individuals are treated harshly or subjected to abuse, can erode self-confidence. It is crucial for a person to be supported by those around them, including family and friends. The absence of supportive individuals can lead to a significant decrease or even the complete loss of self-confidence.
d) Education: Confidence is closely linked to knowledge and competence. As Goldsmith (2010: 28) points out, one cannot feel confident unless they possess the necessary knowledge and skills. Continuous education, learning, research, and a commitment to ongoing reading are essential components of building and maintaining self-confidence.

Similarly, Pasarlay (2020) highlighted the key factors influencing students' self-confidence in the classroom. One significant aspect is the pressure students feel when they perceive their peers as more proficient in English. The level of encouragement from teachers and family also plays a pivotal role in enhancing confidence. This motivation positively impacts

students' self-esteem. Additionally, a students' command of English grammar, vocabulary, and skills substantially affects their willingness to participate in class. The classroom atmosphere is crucial for fostering oral discussions. The teacher's involvement in conversational classes and the feedback they provide are also critical determinants of student engagement.

There have been various attempts to unleash the components of self-confidence in speaking in an EFL classroom. According to Doqaruni (2010), confidence in speaking English is shaped by three fundamental components: linguistic proficiency, psychological assurance, and a willingness to engage. He defined linguistic proficiency as the knowledge and application of grammar, vocabulary, and pronunciation; psychological assurance as the comfort and security felt while speaking English; and willingness to engage as the eagerness to interact with native English speakers. Park and Lee (2005) identified four components of self-confidence that were believed to affect students' oral performance in English. They include the following:

a) **Language Ability Confidence**: This dimension reflects students' belief in their ability to learn English and their perceived linguistic competence.

b) **Situational Confidence**: This aspect emphasizes the self-confidence students experience during English communication in specific situations.

c) Communication Confidence: This measure reflects students' competence to interact effectively in English. In the "willingness to communicate theory," this concept is known as linguistic self-confidence, which encompasses self-rated language proficiency and the absence of anxiety.

d) Language Potential Confidence: It indicates students' confidence in their future English proficiency.

In a categorization that is similar to types of motivation, Gurler (2015) classified self-confidence into two subtypes: intrinsic self-confidence and extrinsic self-confidence. Intrinsic self-confidence involves an individual's thoughts and emotions related to their self-acceptance and contentment. Elements of intrinsic self-confidence include self-esteem, self-love, self-awareness, setting clear goals, and positive thinking. On the other hand, extrinsic self-confidence pertains to an individual's behavior and attitude when interacting with others. The building blocks of extrinsic self-confidence are effective communication and emotional control. Finally, Norman and Hyland (2003) identified three components of confidence:

cognitive (knowledge of one's abilities), performance (the ability to take action), and emotional (comfort related to the previous two aspects).

Wright (2009) identified distinct characteristics that are common among individuals with high self-confidence. They possess a strong sense of ambition, viewing life as more than mere survival and demonstrating an intense desire for success and goal attainment. Additionally, they are inherently goal-oriented, continually setting objectives for themselves and striving for peak performance and extraordinary achievements. Proficiency in communication is another hallmark, as they exhibit an adept ability to engage intelligently, ask pertinent questions, absorb advice, and prioritize effective listening over excessive talking. Their high self-confidence enables them to build and nurture relationships through kindness and love, stemming from a positive self-image, which in turn, steers them away from toxic associations.

On one hand, with reference to oral performance in the EFL context, Doqaruni (2010) identified three key aspects indicating high confidence in EFL speaking: an advanced level of grammar, vocabulary, and pronunciation, paired with a sense of security and confidence in communicating in English, and a willingness to engage, including being eager to converse in English with native speakers of English. Thiziri (2019) furthermore added that students with high self-confidence take risks during oral sessions, speaking without hesitation while also actively interacting and seeking clarification when faced with unclear concepts.

On the other hand, Nety, Wahyuni and Nurhaeni (2020) and Harisha (2020) asserted that students lacking confidence are typically extremely fearful and timid. They may face difficulties expressing their opinions and may even struggle to construct complete and meaningful sentences in class. Low-confidence learners often feel uncomfortable, afraid, and frustrated in the classroom, leading to reduced effectiveness and satisfaction, ultimately affecting their overall academic achievement.

It is worth noting that research has consistently underscored the pivotal role of self-confidence in determining the success of EFL students. Several studies, such as those by Tridinanti (2018), Hasan, Hanafi and Sadapotto (2020), Audina, Hasanah and Desvitasari (2021), and others, explicitly showcased a direct positive correlation between EFL learners' self-confidence and their proficiency in speaking. In the realm of methodology, various studies have illustrated the benefits of diverse approaches and technological aids in enhancing self-confidence among EFL students. Faizah (2022) underscored how digital storytelling can stimulate

students' confidence in their English-speaking abilities. Kinasih and Olivia (2022) provided insights into the benefits of movies in fortifying public speaking skills within an online environment. Bastiar and Utomo (2020) spotlighted Instagram as an effective tool, noting its potency in augmenting the speaking confidence of English literature students. In a similar vein, Maulina, Noni and Basri (2019) illustrated how platforms like WhatsApp, when used innovatively for audio and video recordings, could instill a daily habit of speaking, subsequently enhancing students' confidence. Kheryadi (2018) and Leong and Ahmadi (2017) further expanded on this theme, underscoring the overarching role of technology in not only improving confidence but also in fostering a more positive and motivated mindset towards foreign language acquisition.

Dynamic Assessment (DA)

As noted by Elliot (2003, p. 16), Vygotsky is regarded as the "theoretical forefather" of dynamic assessment (DA), with his zone of proximal development (ZPD) being a pivotal component. Vygotsky (1978) emphasizes that combining assessment with teaching can enhance learning outcomes. His sociocultural theory underscores that DA introduces fresh and diverse approaches to assessment in language learning. DA is not designed to replace traditional tests but to complement them. In this approach, learners' abilities are flexible and subject to change, reinforcing the notion that abilities are not fixed (Sternberg & Grigorenko, 2002).

While dynamic assessment (DA) has secured a significant role in developmental psychology, its adoption in second language (L2) research is still in the early stages (Mallahi & Saadat, 2020). The appeal of DA lies in its solid theoretical basis and its effectiveness in facilitating the development of new cognitive skills. DA stands apart from traditional assessment methods by emphasizing the dynamic and adaptable nature of human abilities, as opposed to viewing them as static. Rooted in Vygotsky's sociocultural theory (SCT), dynamic assessment (DA) represents an integrated and dynamic approach to assessment and instruction, characterized by its fluidity and adaptability. Furthermore, it functions as a method to explore individual differences and their instructional consequences by embedding intervention directly into the assessment framework, highlighting the interplay between assessment and learning (Zangoei et al., 2019). As a mediator, the teacher remains attuned to the student's surrounding context, particularly the Zone of Proximal Development (ZPD), which Vygotsky describes as "the distance between the actual developmental level as determined by independent problem

solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more scientists" (Hizriani, Khairatunnisa& Handrianto, 2022; Vygotsky, 1978).

Dynamic assessment (DA) is rooted in sociocultural theory, with its foundational concepts being the Zone of Proximal Development (ZPD), scaffolding, and mediation. According to Vygotsky (1978), the ZPD refers to "the difference between actual developmental levels as indicated by autonomous problem-solving and prospective developmental levels as indicated by problem-solving under adult helps or in cooperation with more competent peer" (p. 86). According to Vygotsky, development can be divided into three zones. The first zone represents knowledge already acquired by the learner. The second zone includes concepts that learners can grasp with support from more knowledgeable individuals. The third zone pertains to knowledge that remains inaccessible to learners, even with assistance. Learning occurs when students are situated within their optimal Zone of Proximal Development (ZPD). Scaffolding denotes the structured support offered to learners to complete tasks they cannot manage alone. This guidance is gradually withdrawn as learners gain competence to perform the tasks independently (Ebadi & Rahimi, 2019; Lantolf & Poehner, 2011). Another foundational concept in dynamic assessment (DA) is mediation. According to Lantolf and Poehner (2011), effective mediation is based on three principles. The first principle states that assistance should be delivered incrementally, beginning with implicit support and moving to explicit help as needed by the students. Second, explicit assistance should be provided when implicit support proves insufficient. Lastly, mediation should take the form of dialogue, fostering interaction between the teacher and learner to co-construct meanings. Mediation can manifest in various forms, such as hints, questions, suggestions, and explanations, tailored to the exchange within the framework of DA models. It can also be standardized where all learners receive the same assisting prompts, or non- standardized where assisting prompts are different in quality and quantity, based on the learner's needs (Harahap et al., 2024).

The approaches to implementing dynamic assessment (DA) vary widely based on the timing and manner of support provided. The two primary models of DA are the interventionist and interactionist approaches (Davoudi & Ataie-Tabar, 2015). Lantolf and Poehner (2004), in developing a theoretical basis for DA processes, labeled different forms of mediation as interactionist or clinical DA and intervention or psychometric DA, respectively. The key distinction between the two models is how the

mediation is delivered to learners. On one hand, Brown's interventionist dynamic assessment (DA) employs tasks and materials specifically designed and analyzed to anticipate the challenges learners might encounter. Mediation in this approach is systematically structured through hints, prompts, and leading questions, with varying levels of explicitness. On the other hand, Feuerstein's interactionist dynamic assessment (DA) allows unlimited mediation, demanding that mediators use all possible means, short of giving answers, to help learners surpass their existing independent performance (Jin, 2023). According to Shrestha (2020), interventionist DA is a quantitatively oriented, development-based method inspired by Vygotsky's initial writings. It incorporates standardized forms of assistance, where the learner's endpoint is predetermined, and progress is measured by the speed at which they reach this goal.

A novel model of dynamic assessment (DA), termed Hybrid DA (HDA), has recently gained support from researchers and scientists (e.g., Sadek, 2015; Roohani & Shafiee Rad, 2019). Rooted in sociocultural theory (SCT) and the Zone of Proximal Development (ZPD), the HDA approach integrates features from both interactionist and interventionist models of DA. One of its primary interventionist characteristics is a measurement segment designed to assess and grade student improvement (Shafiee Rad, 2021). In the post-pandemic era, the evolving demands of language education highlight the need for innovative research to determine the optimal classroom-based DA model that is practical for both students and educators. Potential future research directions include the seamless integration of computer technologies into DA procedures to assess diverse facets of language output and the application of empirical DA programs in educational contexts that focus on under-represented languages and demographic groups (Jin, 2023).

Sternberg and Grigorenko (2002) identified two prevalent formats of dynamic assessment: the "sandwich" and "cake" designs. In the "sandwich" format, instruction is delivered in a single phase between a pre-test and a post-test. This approach comprises three stages: an initial traditional assessment of the targeted skills, an intervention focused on addressing areas of difficulty, and a final assessment similar to the first. The "cake" format introduces instruction incrementally, layering guidance after each test item depending on the examinee's response. Test items are presented one at a time: a correct response leads to the next item, while an incorrect response triggers a graded sequence of hints. These hints aim to progressively guide the examinee toward the correct answer.

Many previous studies proved the effectiveness of dynamic assessment with its various models in developing language skills. With specific reference to speaking and oral performance skills, studies conducted by Safa, Donyaie, and Mohammadi (2015), Farokhipours (2016), Ebadi and Asakereh (2017), Yang (2017), Siwathaworn and Wudthayagorn (2018), Estaji and Farahanynia (2019), Koroglu (2019), Kao (2020), Fahmi, Pratolo, and Zahruni (2020), Safdari and Fathi (2020), Alshmmari (2022), Ritonga et al. (2022) and Harahap et al. (2024) focused on investigating the effectiveness of either the interactionist or the interventionist models of DA or comparing both of them. Both models proved effective in developing oral performance skills. Further, the mobile- based or mediated DA through text chat and voice-chat contexts also proved effective in developing speaking skills as documented by Rezaee, Alavi, a Znd Razzaghifard (2019). In addition, Sohrabi and Safa (2020) and Ghahderijani et al. (2021) proved the effectiveness of group dynamic assessment (G- DA); Sherkuziyeva et al. (2023) proved the effectiveness of computerized dynamic assessment (C-DA) in developing oral performance skills as well.

Despite its advantages, dynamic assessment (DA) has certain limitations, such as the considerable time needed to provide individualized mediation for each student. Additionally, it demands thorough teacher preparation in second language teaching and assessment methods. Continuous teacher training is essential for success. Consequently, the effectiveness of DA is influenced by factors such as the teaching context, the allocated time, and the teacher's proficiency in implementing this approach (Vergara et al., 2019).

Artificial intelligence in language learning

Recently, there has been a rapid increase in interest in utilizing chatbots and artificial intelligence (AI) to support and enhance English language learning. Artificial intelligence provides a personalized learning atmosphere in which learners continuously practice linguistic skills and activities appropriate to their current English level, needs, or interests. With the ability to personalize and adapt to the unique needs of learners, AI-powered language learning platforms significantly improve the efficiency and effectiveness of language acquisition (Kim, Cha & Kim, 2019). Additionally, AI monitors learners' progress, highlights weaknesses, and offers tailored feedback and relevant practice exercises. Collectively, these innovations have revolutionized language learning, making it more accessible, interactive, and individualized (Jaiswal & Arun, 2021; Kessler, 2018).

The rapid progress in technology, including various applications of artificial intelligence (AI), has opened new avenues for research. One AI innovation that has recently captured the interest of language researchers is chatbot-mediated instruction (Huang et al., 2023; Jeon, 2021, 2022; AbuSahyon, 2023). These chatbots are computer applications leveraging AI and natural language processing to engage learners in real-time conversations, resembling interactions with actual people. Social chatbots are designed to engage users in intelligent interactions through voice, text, and images (Henkel et al., 2020). These chatbots are increasingly utilized in various roles, including personal and shopping assistants (e.g., Alexa, Siri, Google Assistant), customer service agents (e.g., BOA's Erica), and companions for friendship (e.g., Replika, Anima, Kajiwoto, Microsoft XiaoIce). By enhancing the interaction between learners and chatbots with naturalness and authenticity, AI allows EFL learners to practice language use in context, free from temporal or spatial constraints (Pentina et al., 2023). As a result, AI-driven chatbots represent technological advancements that offer authentic platforms for EFL learners to engage in meaningful communication and generate language output (Bower, 2019).

In language learning, educational chatbots typically exhibit three main features. Firstly, they provide round-the-clock availability, enabling students to practice their language skills whenever they wish, a flexibility human partners cannot readily offer (Huang, 2022). Secondly, chatbots deliver comprehensive language-related information that human partners may sometimes lack (Fryer et al., 2019). Well-developed chatbots have the potential to offer a wider variety of expressions, questions, and vocabulary. Moreover, they can manage repetitive responsibilities, such as addressing standard inquiries and facilitating continuous language practice (Fryer et al., 2019; Kim, 2018). Using chatbots as learning companions enables learners to practice their new language without time constraints. Kim et al. (2019) emphasized that chatbots can enhance speaking abilities, including activities like reading aloud and answering questions.

For EFL instruction, chatbots and conversational agents open up new possibilities for interactive language feedback. These AI-based technologies engage learners in conversational exchanges, delivering immediate and human-like responses. This interaction fosters an enriched and supportive learning environment, enabling learners to develop and practice their language abilities effectively (Chae et al., 2023). AI-mediated chatbots offer a practical substitute for human conversation partners when direct interaction is not feasible. For EFL learners who have limited access

to native or non-native speakers in classroom settings or beyond, these chatbots provide a stress-free and accessible platform for communication, unrestricted by time or space (Fathi, Rahimi & Derakhshan, 2024).

Chatbots provide a range of beneficial features, such as conducting conversations via audio and text, delivering thoughtful answers to questions, enabling interactive communication, and offering pronunciation feedback (Walker & White, 2013). Consequently, EFL learners can improve their learning efficiency, gain autonomy, feel more at ease, and overcome anxiety. Additionally, chatbots make language learning more enjoyable and engaging, build confidence, and reduce transactional and psychological distances (Fathi, Rahimi & Derakhshan, 2024). Additionally, chatbots can facilitate a wide range of language learning exercises, including conversational practice, grammar refinement, and vocabulary development. Chatbot-mediated instruction proves effective in strengthening learners' grammar and vocabulary skills, creating a personalized and flexible learning environment enriched with constructive feedback (Jeon, 2021; Huang et al., 2022).

With specific reference to oral performance skills, several foreign and Arab studies aimed at investigating the use of AI for improving them. Johnson (2019), for example, investigated the effects of AI avatar-based interaction on non- native speakers' speaking performance. His research findings demonstrated that the students who practiced English speaking with AI avatars improved their fluency and self-confidence. Qiao et al. (2023) explored the impact of artificial intelligence-based instruction on enhancing second language (L2) speaking skills and self-regulation in natural learning contexts. Their approach utilized the Duolingo application, integrating natural language processing, interactive activities, personalized feedback, and speech recognition technology. Similarly, Zou et al. (2023) examined how various forms of automatic feedback provided by AI speech evaluation programs contribute to the development of speaking skills among English as a foreign language (EFL) learners. Madhavi et al. (2023) explored the advantages of utilizing ICT and AI technologies to enhance students' spoken communication skills, as well as the challenges students face in developing these skills. Additionally, Kim and Su (2024) demonstrated that chatbot-mediated interactions fostered a learner-friendly environment, leading to greater engagement and an increased willingness to communicate. Conversational AI tools, such as ELSA Speak, Replika, and Lyra chatbots, have been shown to effectively improve speaking skills, particularly pronunciation, as evidenced by studies conducted by Junaidi et al. (2020),

Kholis (2021), Lin and Mubarok (2021), Makhlouf (2021), El Shazly (2021), Kang (2022), Pentina et al. (2023), Indriyani et al. (2024), and Marlinda and Nur Huda (2024).

Based on the previously reviewed literature and related studies, it is clear that oral performance skills are essential competencies for student teachers. They need to be competent and have self- confidence in their performance as well. In addition, among various approaches that were used and experimented with for their effectiveness in developing oral performance or speaking skills, dynamic assessment is proposed to have proved effective in enhancing EFL language skills, especially speaking skills. To keep updated with innovative instructional practices, various attempts were made to renew DA by accompanying it with new trends to become computerized, mobile-mediated- or even hybrid. In the current research, DA was mediated through an AI chatbot or application to verify whether it had a positive effect on developing EFL oral performance skills and self-confidence of student teachers in the Basic Education section at Faculties of Education.

Methodology:

Participants:

Participants in the current research were two intact groups of sophomore or second year students enrolled in English Basic Education section at Faculty of Education, Mansoura University. They were fifty students (N= 50) equally divided into two groups (n= 25); one was the experimental group to whom AI- mediated dynamic assessment was applied, and the other was the control group to whom human- mediated dynamic assessment was applied. Students in both groups had almost the same level of competence and experience in English and belonged to the same economic level. Their ages ranged between 19 and 20 years old. They constituted a homogenous group of student teachers who graduated from the literary section at the general secondary stage. The experiment took place in the microteaching session.

Design of the study:

A quasi-experimental approach was utilized in this study, incorporating pre- and post-administrations within a two independent groups framework to investigate the effect of using AI- mediated dynamic assessment intervention in developing the EFL oral performance skills and self- confidence of EFL Basic Education section student teachers at Faculties of Education.

Procedures

First, designing the instruments and materials of the research:

Instruments and materials used in the current research were as follows: (available with the researcher upon request)

1- The EFL oral performance skills checklist:

The checklist was designed for identifying the EFL oral performance skills necessary for second year English Basic Education student teachers at Faculties of Education. The skills in the checklist were based on reviewing literature related to oral performance and speaking skills assessment, especially Brown and Abeywickrama's (2019) "*Language assessment: Principles and classroom practices"* and the Speaking Band Descriptors of the IELTS language proficiency test. The checklist was presented to EFL specialists (N= 10) to check its validity and select the most appropriate skills for the target students.

Based on the TEFL specialists' opinions and recommendations, the final list of the oral performance skills necessary for second year English Basic Education student teachers comprised the following skills: *fluency& coherence, lexical resource, grammatical range and accuracy, pronunciation, and non- verbal component.* These skills were the base for designing the oral performance skills test and the rubric for scoring that test and assessing the students' oral performance skills.

2- Oral Performance Skills Test (OPST):

The oral performance skills test aimed at assessing the oral performance of second year students enrolled in English basic education section at Faculty of Education, Mansoura University. The test was designed in the light of the oral performance skills checklist agreed upon by specialists in the field. The initial version of the test included three different questions. The researcher took the language level and the characteristics of the participants into consideration when structuring the questions of the test. The questions depended mainly on monologue performance of the students. The first question was about telling a story illustrated through pictures, the second question required students to select one of three topics of interest to them to talk about, and the third question required them to select one word from five words to explain in a mini- presentation. Each question allowed them one minute for preparation and taking notes if necessary, and 3 minutes for talking or performing the required task.

To establish content validity of the test, it was presented to a group of jurors (N= 5) to evaluate the questions in terms of coverage of the target skills, appropriateness to the participants and clarity of the language used,

and to suggest any modifications to its questions. The jurors agreed upon the accuracy and suitability of the questions.

The internal consistency and reliability of the oral performance skills test were estimated through the test pilot administration to (30) second year student teachers other than participants in the main research. Results of this pilot study were as follows:

First, the internal consistency was estimated through two procedures: a) the correlation coefficient between the score of each question and the total score of the skill being assessed was estimated, and the results are shown in the following table:

Table 1: Correlation coefficients between questions and skills included in the test

Skills	No	Correlation Coefficient	Skills	No	Correlation Coefficient
Fluency and coherence	**1**	**0.909****	**Pronunciation**	**1**	**0.894****
	2	**0.815****		**2**	**0.794****
	3	**0.941****		**3**	**0.486****
Lexical resource	**1**	**0.842****	**Non- verbal component**	**1**	**0.721****
	2	**0.645****		**2**	**0.904****
	3	**0.757****		**3**	**0.821****
Grammatical range and accuracy	**1**	**0.575****			
	2	**0.902****			
	3	**0.829****			

*** significant at 0.01 level*

Table (1) illustrates that the correlation coefficients between the score of each question and the total score of the skill are positive at 0.01 level which supports the valid internal consistency of the Oral Performance Skills Test.

b) the correlation coefficient between the score of each skill and the total score of the test was estimated. Results are displayed in the following table:

Table 2: Correlation coefficients between skills and the total score of the test

Skills	**Correlation Coefficient**	**Sig**
Fluency and coherence	0.908	0.01
Lexical resource	0.857	0.01
Grammatical range and accuracy	0.976	0.01
Pronunciation	0.892	0.01
Non- verbal component	0.862	0.01

As shown in Table (2), the correlation coefficients were positive and statistically significant at the 0.01 level, indicating a high degree of internal consistency in the test.

Second, the reliability of the test was also assessed by getting the value of Cronbach- Alpha coefficient (α), through which the extent to which the test items are related to each other is shown, and the correlation of each item (skill being assessed in each question) with the total score of the test. Results are displayed in the following table:

Table 3: Values of Cronbach- Alpha reliability coefficient for the OPST

Skills	**N of Items**	**Cronbach's Alpha**
Total	15	0.933

The reliability coefficient of the test as a whole was (0.933) which indicates that the oral performance skills test is reliable and can be administered as one of the research instruments.

The time of the test was determined by getting the sum of time specified for talk in each question (3 minutes), in addition to time specified for planning or preparation for the answer (30 seconds for each question), and the time for giving instructions (1 minute). Thus, 12 minutes would provide an appropriate time for each student to answer all the questions.

3- The rubric for scoring the oral performance skills test:

For scoring the speaking skills test, an analytic rubric was created and included in the final version of the test. This rubric provided a detailed breakdown of the assessment criteria across four levels: 1 = Poor, 2 = Needs Improvement, 3 = Acceptable, and 4 = Distinguished. The 4-point scale was selected due to its ability to distinguish between quality levels and its practicality in grading clearly. To minimize the likelihood of observers gravitating toward the middle score, often used as a "dumping ground" (Arter & McTighe, 2001: 31), an even number of score points was chosen. The "Poor" category represented the absence of mastery in the targeted speaking sub-skill. The "Needs Improvement" level signaled progress toward acceptable performance, although mastery had not yet been achieved. The "Acceptable" level aligned with the expected mastery of the sub-skill being assessed. Finally, the "Distinguished" level recognized extraordinary performance, signifying mastery beyond typical expectations. The initial version of the rubric was submitted to jurors for validation. Only minor adjustments were made to its indicators, resulting in its finalized version.

Reliability of the rubric:

To assess the reliability of the rubric, the inter-rater method was applied, analyzing the performance of the same student. The level of agreement between the raters' evaluations was measured using the "Cooper" formula:

Percentage of agreement = (number of agreements / (number of agreements + number of disagreements)) × 100

To ensure reliability, the researcher collaborated with a colleague as a co-rater. After presenting the test and rubric and reviewing their content and instructions, the co-rater assessed the performance of three students not included in the main study. The agreement coefficient for each student was calculated, as shown in the following table.

Table 4: Coefficient of Agreement on the performance of the three students

Coeff. Agree. For 1st student	Coeff. Agree. For 2nd student	Coeff. Agree. For 3rd student	Mean Coeff. Agree.
86%	90%	87%	**87.66%**

With a mean agreement coefficient of 87.66% between the two observers, as detailed in the previous table, the rubric demonstrates strong reliability.

According to the data in Tables (3) and (4), both the test and its rubric exhibit a high degree of reliability, validating their use as dependable measurement tools.

4- The self-confidence in speaking scale:

The self-confidence in speaking scale was designed to assess the confidence of second-year EFL student teachers in the basic education section prior to and following the implementation of the experimental treatment. The scale consisted of twenty items comprising positive and negative statements. A 4-point Likert scale (① never, ② sometimes, ③ often, and ④ Usually) was used for rating the choices of the scale.

To assess validity of the scale, a group of TEFL specialists and psychologists (N = 5) evaluated the scale's statements for clarity and appropriateness. Their feedback indicated that the scale was well-suited to measure students' self-confidence in speaking.

To estimate the construct validity of the scale, it was piloted to a sample of (30) second- year student teachers at Faculty of Education other than participants in the main study. The internal consistency of the self-confidence in speaking scale was estimated through calculating both the correlation coefficient of the score of each item with the total score of the scale. The following table displays the values of the correlation coefficients and their significance levels.

Table 5: Correlation coefficients between statements and total score of the scale

No	Correlation Coefficient	No	Correlation Coefficient
1	**0.728****	**11**	**0.558****
2	**0.456***	**12**	**0.602***
3	**0.826****	**13**	**0.51***
4	**0.604****	**14**	**0.82****
5	**0.545****	**15**	**0.534****
6	**0.644****	**16**	**0.513****
7	**0.676****	**17**	**0.591****
8	**0.572****	**18**	**0.683****
9	**0.613****	**19**	**0.649****
10	**0658****	**20**	**0.716****

*****Correlation is significant at the 0.01 level.***

****Correlation is significant at the 0.05 level.***

Statistics in table (5) indicate that correlation coefficients between the statements of the scale and the total score of the scale were positive and statistically significant at 0.01& 0.05 levels; and this indicates that the scale has a high level of internal consistency.

Reliability of the self- confidence in speaking scale was assessed through Cronbach's Alpha method. The values of Cronbach's Alpha coefficient calculated for the motivation scale are demonstrated in the following table:

Table 6: Values of Alpha reliability coefficient for the self- confidence in speaking scale

Total	No of Items	Cronbach's Alpha
	20	0.895

Results in table (6) indicate that reliability coefficient for the whole scale was 0.895 which reflects that the reliability of the scale was high, and the scale proved suitable for administration.

Second: The AI- mediated Dynamic Assessment Program:

The main aim of the proposed AI- mediated dynamic assessment treatment was developing the EFL oral performance skills of sophomore student teachers and increasing their EFL speaking self- confidence. For achieving this aim, five EFL oral performance skills modules in addition to an introductory session were designed. The program was taught to both the control and experimental groups, through the instructor as a mediator for the control group, and the AI application as a mediator for the experimental group.

The interactionist approach to dynamic assessment was implemented in the present research, which depends on the interactive dialogues occurring between the mediator and the students, where the standardized

mediation forms presented to students were determined and implemented based on the nature of the dialogic interactions between the learners and mediator and based on the expected nature of the errors produced by the learners. The interactionist approach was preferred because of its flexibility in addressing the problems generated during speaking and dialogic interactions since it does not, unlike the interventionist approach, adhere to a fixed order or go in a systematic manner regardless of the linguistic problems generated by the learners. The 15 mediation forms used in the present study were organized in the following typology from the most implicit to the most explicit form of mediation. Not all forms of mediation were implemented in each session. This typology was adopted from Poehner (2005).

Figure (1): The dynamic assessment mediation typology

1. Helping Move Narration Along	9. Metalinguistic Clues
2. Accepting Response	10. Translation
3. Request for Repetition	11. Providing Example or Illustration
4. Request for Verification	12. Offering a Choice
5. Reminder of Directions	13. Providing Correct Response
6. Request for Re-narration	14. Providing Explanation
7. Identifying Specific Site of Error	15. Asking for Explanation
8. Specifying Error	

(Source: Poehner, 2005, p. 160)

The AI mediator used in the current research was *Replika;* an artificial intelligence-powered software designed to interact with humans. Replika emerged as the preferred choice among AI-based chatting platforms for two reasons. Firstly, it focuses on genuine human interaction and employs updated instructional approaches to enhance teaching and learning experiences. Furthermore, it fosters interpersonal engagement, proving to be a useful language learning aid (Nushi & Askarian, 2021; Yin & Satar, 2020). Secondly, unlike other platforms that limit users to voice or text interactions, *Replika* provides an innovative oral-visual interaction mode, allowing participants in the experimental group to interact with 3D AI avatars through visual and spoken communication. The participants could observe AI avatars' facial expressions, gestures, and eye movements through smartphones and/or tablets, which are features of oral-visual interaction. Since participants of the experimental group could perform speaking activities under conditions similar to those of the control group, who interacted through face-to-face interactions, all participants in this study could engage in oral-visual interactions with their mediators. However, the free version of *Replika* provided limited choices of the oral-visual chat feature. The screenshots of *Replika* are illustrated in Figure (2):

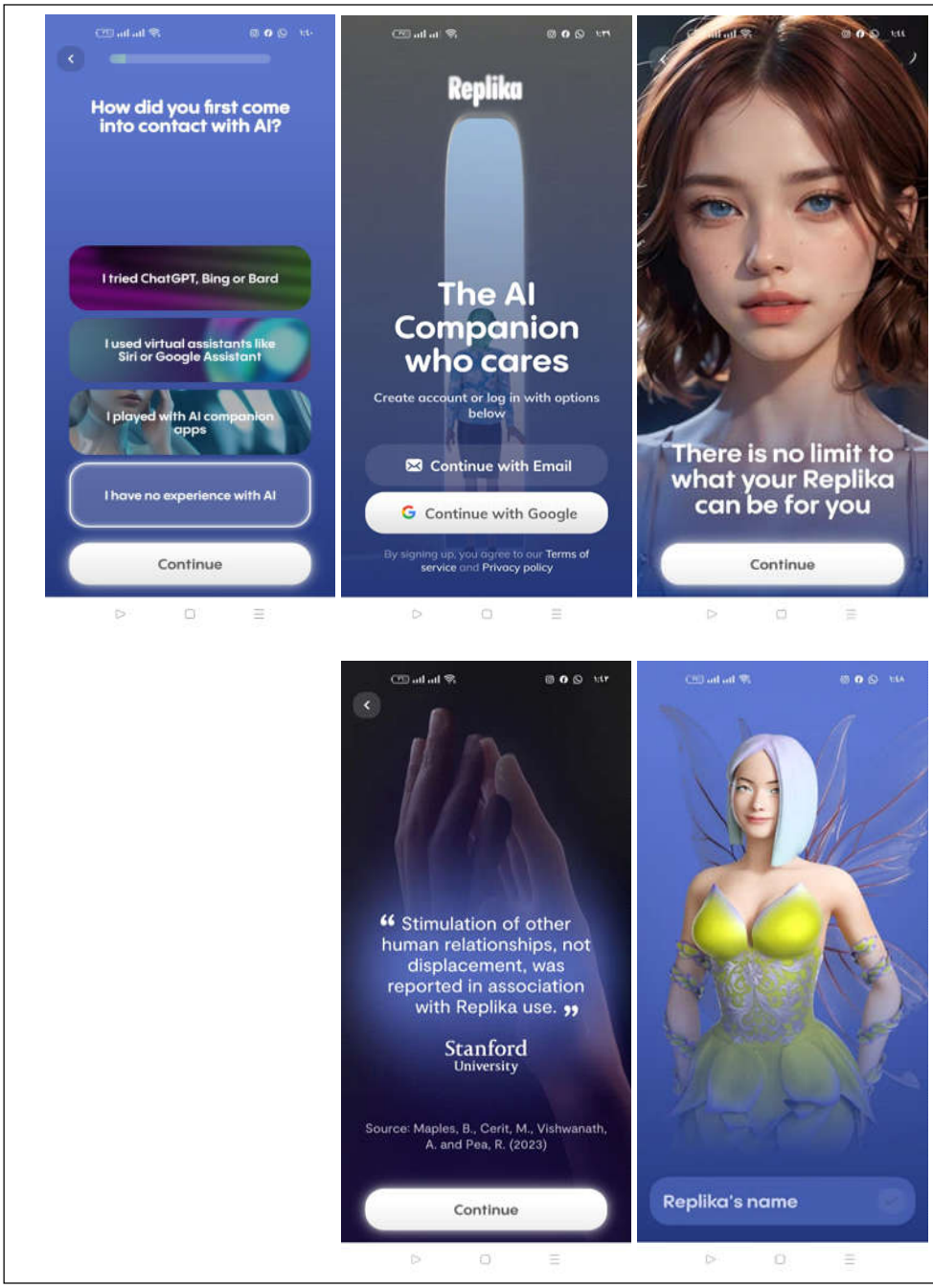

Figure 2: Screenshots for creating the avatar of “Replica” application

The five EFL speaking modules were divided into ten sessions in addition to an introductory session that was applied prior to the modules. Each module addressed one topic and was divided into two sessions, which were applied in two meetings per week. In addition, five main speaking tasks were included in each module, namely warm-up, presentation, controlled practice, free practice, and assessment. In each module, the warm-up, presentation, and controlled practice tasks were presented to students in the first session of the module. In contrast, the free practice and the assessment tasks were presented in the second session of the module in addition to a reflection form that was given to students at the end of the second session.

The experimental intervention:

A quasi-experimental approach with a pre-post two-group design was used in the present research. The following steps were carried out:

- ***Pre-intervention***

The EFL oral performance skills and speaking self-confidence of second-year students in the English Basic Education section were evaluated prior to the experimental treatment at the beginning of the first semester of the academic year 2023/2024. Homogeneity between the control and experimental group participants was confirmed by administering the EFL oral performance skills test and the speaking self-confidence scale to both groups before implementing the experimental treatment. Tables (7) and (8) display whether there was any significant difference between the control and experimental groups concerning the pre-administration of the instruments of the research.

Table 7: comparing control and experimental groups on the pr-administration of the OPS test

SKILLS	Groups	N	Mean	Std. Deviation	t Value	Df	Sig
Fluency and coherence	Experimental	25	4.2	1.08	0.408	48	Not Sig
	Control	25	4.08	0.997			
Lexical resource	Experimental	25	4	0.913	1.231	48	Not Sig
	Control	25	3.72	0.678			
Grammatical range and accuracy	Experimental	25	3.8	1	0.427	48	Not Sig
	Control	25	3.68	0.988			
Pronunciation	Experimental	25	4	1.155	0.123	48	Not Sig
	Control	25	4.04	1.136			
Non- verbal component	Experimental	25	4.28	1.061	1.835	48	Not Sig
	Control	25	3.8	0.764			
Total	Experimental	25	20.28	4.523	0.869	48	Not Sig
	Control	25	19.32	3.172			

The data in Table (7) indicate that there is no statistically significant difference between the mean scores of the control and experimental groups on the oral performance skills test pre-administration, with "t" values being insignificant at the 0.05 level of significance.

Table 8: Comparing control and experimental groups on the pr-administration of the speaking self- confidence scale

Total	Groups	N	Mean	Std. Deviation	T Value	Df	Sig
	Experimental	25	28.36	5.016	0.933	48	Not Sig
	Control	25	27	5.292			

Table (8) demonstrates that no statistically significant difference was found between the mean scores of the control and experimental group students on the pre-administration of the speaking self-confidence scale, as the "t" values were not significant at the 0.05 level.

Based on the results of the pre- administration of the research instruments, the homogeneity of both the control and experimental groups was established, and any variance in performance could be attributed to the effect of the AI- mediated DA.

- ***The intervention***

The content of the DA-based EFL oral performance program for sophomore student teachers at the English Basic Education Section consisted of five modules; each module was divided into two sessions. The control group studied the program with the instructor as a mediator, while the experimental group studied the program with the AI application (Replika) as the mediator. During the first semester of the academic year 2023/2024, experimental treatment was conducted. The procedures adopted for the treatment were as follows:

- ✓ An orientation session was conducted for the instructor of the control group about the DA and the mediation topology. The researcher explained the philosophy of DA, its stages and features, and the nature of the program. The instructor of the control group applied the program with the traditional procedures of DA according to the sandwich model (pre-test, instruction, post- test). The experimental group, on the other hand, was instructed by the researcher and they used the AI application as a mediator.
- ✓ The treatment involved implementing ten sessions and an introductory session. Students adhered to the same phases during all sessions, following the sandwich DA model.

- **Post- intervention**

Following the experimental treatment, the EFL oral performance skills test and the speaking self-confidence scale were administered post-intervention to measure the development of oral performance skills and self-confidence levels in students from both the control and experimental groups.

Results:

The study results are organized and presented in alignment with the research hypotheses, as detailed below:

Testing the first hypothesis:

The first hypothesis stated that "There is a statistically significant difference between the mean scores of the experimental and control group students on the post-administration of the EFL oral performance skills test in favor of the experimental group". To verify the first hypothesis, the researcher used "**t" test** for independent groups to determine the significance of the differences between the mean scores of the experimental and control group students on the post-administration of the oral performance skills test.

The following table illustrates (t) values and their statistical significance.

Table 9: ***Comparing performance of the control and experimental groups on the post-administration of the oral performance skills test***

SKILLS	Groups	N	Mean	Std. Deviation	t Value	Df	Sig
Fluency and coherence	Experimental	25	10.32	0.852	6.254	48	0.01
	Control	25	8.8	0.866			
Lexical resource	Experimental	25	9.72	0.936	3.04	48	0.01
	Control	25	9.04	0.611			
Grammatical range and accuracy	Experimental	25	9.72	1.1	5	48	0.01
	Control	25	8.16	1.106			
Pronunciation	Experimental	25	10.12	0.971	5.89	48	0.01
	Control	25	8.24	1.268			
Non- verbal component	Experimental	25	10.44	1.003	1.43	48	Not Sig
	Control	25	10.04	0.978			
Total	Experimental	25	50.32	2.824	8.14	48	0.01
	Control	25	44.28	2.407			

Table (9) demonstrates that the experimental group students achieved a higher total mean score compared to the control group. The total t-value was significant at the 0.01 level, indicating a statistically significant difference between the experimental and control groups in the total score of oral performance skills following the administration of the oral performance skills test, favoring the experimental group. Further, when comparing the

oral performance sub- skills, there were four sub- skills where the statistical differences between the experimental and control groups' mean scores were significant at 0.01 level. However, the statistical difference between the two groups in the non- verbal component was insignificant. This indicates that the AI- mediated dynamic assessment did not have a profound effect on the nonverbal communication skills.

In other words, the experimental group students outperformed their counterparts of the control group in four out of five oral performance sub-skills and in the total score of the test as measured by the EFL oral performance skills test. Consequently, the first hypothesis was partially verified and accepted.

Testing the second hypothesis:

t-test for dependent samples was used to test the second hypothesis which is "There is a statistically significant difference between the mean scores of the experimental group students on the pre- and post-administrations of the oral performance skills test in favor of the post-administration". Results are illustrated in table (10).

Table 10: comparing performance of the experimental group on the pre- and post- administrations of the OPS test

SKILLS	Measurement	N	Mean	Std. Deviation	T Value	Df	Sig	(η2)
Fluency and coherence	Pre	25	4.2	1.08	20.66	24	0.01	0.45
	Post		10.32	0.852				
Lexical resource	Pre	25	4	0.913	18.89	24	0.01	0.16
	Post		9.72	0.936				
Grammatical range and accuracy	Pre	25	3.8	1	18.44	24	0.01	0.342
	Post		9.72	1.1				
Pronunciation	Pre	25	4	1.155	17.35	24	0.01	0.42
	Post		10.12	0.971				
Non- verbal component	Pre	25	4.28	1.061	20.28	24	0.01	0.041
	Post		10.44	1.003				
Total	Pre	25	20.28	4.523	23.5	24	0.01	0.58
	Post		50.32	2.824				

Table (10) indicates that significant t-values at the 0.01 level were observed for each oral performance skill and the overall score. This highlights a statistically significant improvement in the mean scores of the experimental group students in the post-administration of the oral performance skills test compared to the pre-administration, attributed to the implementation of AI-mediated dynamic assessment. Furthermore, the table reveals a moderate effect size of the AI-mediated DA on the targeted oral

performance skills. Thus, the findings confirm the effectiveness of the AI-mediated DA in enhancing students' EFL oral performance skills, thereby affirming the second hypothesis of the research.

Testing the third hypothesis:

The table below illustrates the findings related to the third hypothesis, which focused on the difference between the control and experimental groups' mean scores on the speaking self-confidence scale following its post-administration.

Table 11: ***Comparing performance of the control and experimental groups on the post-administration of the speaking self-confidence scale***

Speaking Self-confidence scale	Groups	N	Mean	Std. Deviation	t Value	Df	Sig.
	Experimental	25	72.34	3.834	48.04	48	0.01
	Control	25	33.72	1.208			

Table (11) illustrates that the total mean score of the experimental group students on the speaking self- confidence scale was higher than that of the control group. In addition, *t*-value was significant at (0.01) level which reflects that there is a statistically significant difference between the experimental and control groups in the total score of the post-administration of the speaking self- confidence scale favoring the experimental group. In other words, students in the experimental group demonstrated superior speaking self-confidence compared to those in the control group, as assessed by the speaking self-confidence scale.

Consequently, the third hypothesis was verified and accepted.

The fourth hypothesis stated that "There is a statistically significant difference between the mean scores of the experimental group students on the pre- and post- administrations of the speaking self- confidence scale in favor of the post- administration". To verify this hypothesis, the researcher used "**t" test** for dependent samples to determine the significance of the differences between the mean scores of the experimental group students on the pre-and post-administrations of the scale. The following table illustrates (t) values and their statistical significance.

Table 15: comparing the performance of the experimental group on the pre-and post- administrations of the speaking self-confidence scale

Speaking self-confidence scale	Measurement	N	Mean	Std. Deviation	t Value	Df	Sig	(η2)
	Pre	25	28.36	5.016	30.24	24	0.01	0.979
	Post		72.34	3.834				

Results in Table (15) clarify that The experimental group students' mean scores on the speaking self-confidence measure were significantly higher after the post-administration compared to the pre-administration. Mean score of the post- administration was (72.34) for the total score of the scale; which is a high value when compared to the Mean of the pre-administration (28.36). The value of "t" was statistically significant at (0.01) level, a result that indicates that the AI- mediated DA was effective in developing speaking self-confidence for the targeted sample. Consequently, the fourth hypothesis was verified and accepted.

The effect of the treatment on enhancing the speaking self-confidence of students in the English basic education part was assessed by estimating the effect size using η^2. The statistics in Table (15) demonstrate that the overall effect size of the treatment was (0.979), indicating a substantial effect, as the effect size should be equal to or exceed (0.14). These figures indicate that 97.9% of the fluctuation in students' self-confidence over their oral performance can be ascribed to implementing AI-mediated dynamic assessment.

To verify **the fifth hypothesis** which states that "There is a positive correlation between the EFL oral performance skills and speaking self-confidence", the researcher used simple Pearson correlation coefficient to estimate the correlation coefficient between the scores of the experimental group students on the post- administrations of the EFL oral performance skills test and the speaking self- confidence scale. The following table illustrates value of Pearson correlation coefficient and its statistical significance:

Table 16: Pearson's correlation coefficients between EFL oral performance skills and speaking self-confidence

r	OPS test	Sig.
Speaking self-confidence scale	**0.807**	0.01

The data presented in Table (16) show a significant positive correlation between the experimental group's post-administration scores on the EFL oral performance skills test and the speaking self-confidence scale, with an (r) value that was statistically significant at the 0.01 level. As a result, the fifth hypothesis was accepted, confirming a positive relationship between the two variables.

Discussion:

The current research sought to explore the influence of implementing AI- AI-mediated dynamic assessment for developing EFL oral performance skills and speaking self-confidence of sophomore student

teachers at the English Basic Education Section. Except for the non-verbal component of oral performance, A statistically significant difference was identified at the 0.01 level between the mean scores of the experimental and control group students on the post-administration of the EFL oral performance skills test, with the experimental group showing superior performance. Furthermore, there was a statistically significant difference between the pre- and post-administrations of the test for the experimental group, with the post-test results showing a marked improvement. This means that the oral performance skills of sophomore English Basic Education students improved as a result of applying the AI- mediated DA. Moreover, the results demonstrated a statistically significant difference at the 0.01 level in the mean scores of the experimental and control groups on the post-administration of the speaking self-confidence scale, with the experimental group showing higher scores. Additionally, a statistically significant difference was observed between the pre- and post-administrations of the scale within the experimental group, favoring the post-administration scores. Finally, the study highlighted a positive correlation between oral performance skills and self-confidence and that increased self-confidence can contribute much to enhancing EFL oral performance skills and vice versa.

The current research supports the effectiveness of employing dynamic assessment (DA), especially AI- mediated DA, as a framework for teaching and developing oral performance skills of sophomore English Basic Education student teachers and their self- confidence in speaking. The findings of the current research corroborate the previous relevant studies that investigated the effect of using DA on developing language skills such as developing writing skills (Davoudi& Ataie-Tabar, 2015; Ebadi& Rahimi, 2019; Roohani& Shafiee Rad, 2019; Shafiee Rad, 2021)and improving speaking skills (Farokhipours, 2016; Koroglu, 2019; Rezaee, Alavi& Razzaghifard, 2019; Fahmi, Pratolo& Zahruni, 2020; Ghahderijani et al., 2021; Ritonga et al., 2022; Sherkuziyeva et al, 2023; Harahap et al., 2024).

The achieved results could be attributed to the to specific characteristics of DA. It has systematic procedures and very useful features, especially mediation, that enable teachers to scaffold students in the targeted competences until they reach their zone of proximal development and master the targeted skills. The most vital element of all dynamic models is the extensive interaction between the mediator and the learner, which places the student at the heart of the educational experience. Through this intense interaction, students can activate their prior knowledge and work towards

higher levels by receiving scaffolding and support from the instructor or other competent individuals, with a focus on enhancing the learners' learning potential (Lantolf & Poehner, 2011). With specific reference to the AI- AI-mediated DA, the native oral performance of the chatbot virtual agent Replika helped students to master the oral performance sub-skills of fluency and coherence, lexical resource, grammatical range and accuracy, and especially pronunciation.

As for the non- verbal component, the experimental group students did not achieve a significant improvement when compared to their counterparts in the control group. This result could be attributed to the limited visual interactive features of the free version of the application. According to Wang (2004), the oral-visual interaction is comparable to the traditional face-to-face interaction, but at a much deeper level, as it allows learners to be able to interact orally and visually with one another, as well as employ nonverbal clues such as eye contact, body movements, hand gestures, and facial expressions in an authentic learning environment. In contrast, students in the control group had full opportunity to interact both verbally and non- verbally with their human- mediator where they acquired non- verbal communication skills. That's why control group students outperformed their peers in the experimental group in the non- verbal component.

Additionally, the integration of AI-mediated DA creates a more learner-centered environment. This, in turn, alleviates students' fear of failure, stimulates their enthusiasm for continued learning, and provides the self-assurance necessary for them to reach higher levels of achievement by showcasing mastery through the support of interventions. Most importantly, DA procedures focus on both assessing and developing learners' skills, unlike traditional psychometric assessments, which primarily concentrate on evaluating learners' abilities. AI-mediated DA seamlessly integrates instruction and evaluation, requiring an understanding of learners' zones of proximal development (Zangoei et al., 2019). The AI- mediated DA group practised oral performance skills in an environment that they described as a safe and stress-free environment where they did not have fears of criticism or having low grades from the instructor. That's why the students in the experimental group outperformed those in the control group in speaking self-confidence.

Generally speaking, students who participated in the research expressed their satisfaction with and enthusiasm about the way they have practiced EFL oral performance skills. Variety of speaking activities

included in the program and the idea of having an AI mediator were effective factors in fostering their participation. They found it different, encouraging, interesting, and suitable for their abilities. They were especially interested in the idea of having their virtual character where they chose their preferred avatar for their conversational partner. In addition, their speaking self-confidence increased as the virtual mediator agitated their enthusiasm to participate and show their full potential in achieving high levels of oral performance and participation. A factor that contributed much to improving their pronunciation, fluency, accuracy and lexical resources.

Conclusions:

In conclusion, Artificial Intelligence is becoming an immersive field of study in all industries and fields especially in education. It is promising with all its technologies, applications and tools that can revolutionize learning and development. It was of great benefit in leveraging oral performance skills and speaking self-confidence of student teachers at the Basic Education Section at Faculties of Education and would be of great benefit for improving other language skills.

Recommendations:

Considering the outcomes of the current research, the following recommendations are provided:

- Dynamic assessment is a fertile field of practice that educators can benefit from in different subject areas, especially in language learning. So, it is recommended that it should be integrated into language instruction.
- Dynamic assessment is known for its adaptive, promising, and fruitful results in special needs education; thus, it should be used in special education and inclusive EFL classrooms.
- Artificial Intelligence could be made use of un various educational fields, so teachers should keep updated with its beneficial applications that have the potential to promote their instructional practices.
- Student teachers, especially those enrolled in the English basic education section, should seek the chance to foster their language and oral performance skills to be competent future teachers.
- Artificial intelligence is a raw field of research, so language researchers should investigate the potentials of implementing it in language instruction.

Suggestions for further research:

In the light of results reached and recommendations proposed by the current research, the following research topics are suggested:

- Investigating the effect of integrating dynamic assessment in teaching EFL skills in inclusive classrooms.
- Investigating the impact of AI applications on enhancing EFL listening comprehension skills in various educational stages.
- The effectiveness of implementing a DA- based program in developing teaching skills of English major student teachers.
- The effect of applying AI- supported DA in professional development programs for in- service EFL teachers

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