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**Regular Article**

**Effects of a Google Classroom-based speaking programme on developing connected speech skills in EFL college students**

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**APA Citation:** Mekheimer, M. (2024). *Effects of a Google Classroom-based speaking programme on developing connected speech skills in EFL college students*, *BSU Journal of Pedagogy and Curriculum*, 3(5), 1- 30.

Received: **26/9/2023**; Accepted: **11/10/2023** ; Published: **01/01/2024**

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**Abstract**

*There is a heightened need for efficient language instruction in computer-assisted language learning (CALL) settings, given the changes in educational settings. Online classrooms, which rely solely on digital platforms, pose challenges to teaching oral proficiency in foreign languages, particularly English. This study, using a mixed-methods approach, aimed to investigate how the Read, Reflect, Design, and Develop (R2D2) ID model combined teaching and learning activities for speaking based on students' speaking skills, learning experiences, and ideas about speaking in English. The study found the intervention had a positive impact on the participants' (N = 25) skills in phonological, linguistic, paralinguistic, and thinking skills. These findings suggest that the programme has an overall large impact on the development of connected speech skills. Findings also showed that students achieved course learning objectives in speaking proficiency, demonstrating an upper-intermediate level of proficiency. The study also highlighted the use of technology in teaching spoken communication, including Telegram conferencing and Google Video Meet. Students expressed contentment with the diverse range of speaking opportunities and used field notes to document observations and interactions.*

**Keywords:** connected speech; R2D2 ID model; CALL; asynchronous online learning

## Introduction

Language is often considered to be a fundamental aspect of human cognition and affect, serving as a means of linking individuals to their surroundings and facilitating cross-cultural interactions. Language has a crucial role as a vehicle for both expression and communication, serving as a gateway that facilitates social encounters that may have otherwise remained inaccessible. The process of acquiring proficiency in a new language can be perceived as a formidable undertaking, given the vast array of languages that exist globally. However, the benefits of learning a new language far outweigh the challenges. It not only opens up opportunities for personal growth and career advancement but also allows individuals to gain a deeper understanding and appreciation of different cultures and perspectives.

Over 50% of the global population speaks 23 languages, with Standard English being the most prevalent (Eberhard et al., 2023; EFL-speaking countries, 2021; Szmigiera, 2021). English proficiency is crucial for personal growth, career opportunities, international communication, and business transactions. Its dominance in various industries like technology, science, and entertainment has led to its widespread adoption as a lingua franca. As a result, learning English has become a necessity for individuals seeking to thrive in a globalised world. Additionally, the ability to communicate effectively in English opens doors to educational opportunities and enhances cross-cultural understanding.

In recent times, the emergence and persistence of the COVID-19 global pandemic from late 2019 to 2022 have underscored the necessity for modifications in English education, particularly in terms of prioritising non-traditional Arabic educational alternatives. Considerable scholarly inquiry has been conducted on the utilisation of technology in English language teaching (ELT) across diverse educational contexts, spanning from primary to tertiary education (Chen et al., 2016; Levy & Stockwell, 2006). This research encompasses several educational settings, including conventional in-person classrooms, face-to-face classes, hybrid courses (combining online and in-person components), and entirely online Computer Assisted Language Learning (CALL) environments.

In spite of the current focus on the teaching of English language skills, research in computer-assisted language learning (CALL) continues to be predominantly centred around language skills such as reading or writing that have effectively adapted to online learning environments. Several scholarly works have explored various aspects of learner motivation and engagement, instructional practices, teacher education and professional development, educational technology, cultural studies, and computer-assisted language learning (CALL) (Blake & Guillen, 2020; Godwin-Jones, 2021; Gonzalez-Lloret, 2015; Veletsianos, 2010). But there is a paucity of research on how online education programmes can be used to develop connected speech skills in English as a foreign language.

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Connected speech plays a crucial role in fostering the acquisition of native-like speaking patterns, such as the tendency to slur sounds, link words together, and employ commonly used phrases in ordinary conversations. In contemporary times, educators have exhibited a growing recognition of the challenges linked to instructing connected speech in the English language inside conventional classroom environments as well. As a result, various teaching strategies and resources have been developed to address this issue. These include incorporating authentic listening materials, such as podcasts or TV shows, that expose learners to naturally connected speech patterns. Additionally, interactive activities like role-playing or conversation practice can help students become more comfortable with using connected speech in real-life situations.

Consequently, they have recently recognised the significance of providing entirely online courses or using computer-assisted language learning (CALL) environments as viable alternatives. The significance of teaching English-speaking skills, both strategically and culturally, has been heightened by economic and technological progress on non-traditional educational platforms. Consequently, the integration of computer-mediated and technological resources to provide English instruction has become increasingly imperative in different skill areas.

One of the difficulties encountered while instructing English in a non-conventional setting, such as an online classroom, pertains to the effective pedagogy of oral communication skills. In the context of synchronous online classrooms, the utilisation of technological tools enables the facilitation of face-to-face interactions between teachers and students, hence facilitating real-time communication where both parties can visually and audibly perceive one another. In the context of asynchronous online classes, the act of verbal communication poses certain challenges (Blake & Guillen, 2020; Blake & Kramsch, 2007; Blake & Shiri, 2012). The teacher is required to take into account various considerations, including the organisation and delivery of activities aimed at facilitating student-to-student and student-to-instructor oral communication, the assessment of speaking skills, and the provision of feedback to students (Brown & Green, 2020; Son, 2018).

The inclusion of teaching and learning activities in a carefully planned instructional design process is of utmost significance and warrants careful consideration when incorporating speaking objectives in an asynchronous, online English classroom. Effective teaching and learning activities can enhance student engagement and promote active participation in the online English classroom. These activities can include interactive discussions, role-playing exercises, and multimedia presentations that encourage students to practice their speaking skills in a virtual environment. Additionally, incorporating authentic materials and real-life scenarios into the instructional design process can help students develop their speaking abilities in a meaningful and practical way. By carefully considering these factors, instructors can create a dynamic and interactive learning experience that fosters the development of speaking skills in an asynchronous setting.

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The objective of this study was to investigate the impact of incorporating teaching and learning activities for speaking, using an instructional design model, on students' speaking practices, learning experiences, and perceptions of speaking experiences in the asynchronous, online English undergraduate classroom. The study aimed to provide insights into how instructional design models can enhance speaking skills in an online learning environment. The findings of this research can be valuable for educators seeking effective strategies to promote speaking proficiency in asynchronous English language courses.

The research investigated a single asynchronous, online English as a Foreign Language (EFL) undergraduate course. During the span of eight weeks, students engaged in multiple iterations of learning activities centred around communicative competence. This study extensively examined students' experiences, connected speech practices, and perceptions by collecting data from various sources and perspectives.

### **Aim, Rationale, and Significance**

The study investigates the R2D2 ID model's impact on students' speaking practices, learning experiences, and perceptions in an online EFL classroom. It was conducted at Beni Suef University, focusing on an asynchronous undergraduate course with eight weeks of content modules, discussions, exercises, and assignments. The research aims to understand the impact of instructional design on students' speaking skills and learning experiences within an asynchronous online EFL classroom. The study uses a comprehensive instructional framework to investigate speech patterns and experiences within a specific instructional design model.

The study contributes to understanding learning and activity design in TEFL and its relation to the broader language learning context and, more particularly, to the Egyptian context. By examining the effectiveness of instructional design in an asynchronous online EFL classroom, the research provides valuable insights that can inform pedagogical practices and curriculum development in Egypt. Additionally, the findings may have implications for other contexts with similar language learning challenges and technological resources. It provides valuable insights into the impact of the R2D2 ID model on students' speaking practices and experiences in online EFL classrooms. Although not a proficiency study, the qualitative investigation's findings contribute significantly to the existing knowledge of English as a Foreign Language Proficiency.

The findings can help educators and researchers in the field of EFL education devise innovative approaches for incorporating purposeful learning activities into the asynchronous online EFL classroom. The study emphasises the importance of incorporating technology into a well-designed instructional framework, aligning with good language teaching practices, to improve student outcomes. Further investigation is needed to gain a comprehensive understanding of the current use of ID and pedagogical practices in the virtual, self-paced EFL learning environment.

### Literature review

The field of English as a Foreign Language (EFL) instruction is currently facing ideological disputes over the essential aspects of language skills that students should acquire (Lo, 2019; Ryding, 2013). EFL is characterised by diglossia, where multiple varieties of a language coexist within a specific geographic area, each serving distinct communicative purposes (Wardhaugh and Fuller, 2015). Formal English as a Foreign Language (EFL) is a unique linguistic code widely recognised as Standard English that encompasses two significant dialects, American English and British English, the latter of which is characterised by its received pronunciation.

Modern Standard English (MSE) is widely employed in English as a Foreign Language (EFL) communities for many purposes, including media, academia, and formal settings (Richards & Rodgers, 2014). The selection of a certain code or dialect to be taught is a matter of concern for English as a Foreign Language (EFL) instructors, who must consider their ideological and philosophical perspectives regarding the significance of acquiring proficiency in spoken forms of English for effective communication (Ryding, 2013). The instructional approach employed inside the classroom setting significantly influences the teaching of English-speaking skills (Vai & Sosulski, 2016).

An instructional design (ID) amenable to asynchronous online learning should be integrated into TEFL classrooms to improve speaking skills. Strategic curriculum planning can enhance connected speech skills through activities like role-plays, discussions, debates, and multimedia materials such as videos and podcasts. Additionally, incorporating real-life scenarios and authentic materials can help learners develop their fluency and pronunciation in English. Real-life contexts, such as simulations or interactions with native speakers, can also enhance English-speaking skills. These activities provide authentic language input and enhance students' English-speaking abilities.

Various educational levels, including approach, method, design, and technique, have an impact on the use of technology in English as a Foreign Language (EFL) classrooms. The decision to focus on English-speaking skills or integrate spoken varieties is often based on instructors' ideological stances. The inclusion of proficient tasks for enhancing speaking strategies in virtual classrooms is complex. Online course design considers the learning environment, including the structure and dissemination of educational material.

Course authoring systems are a viable method for delivering material, as they enable users to develop computer-assisted language learning (CALL) products that possess a professional appearance akin to professionally generated materials. The Learning Management System (LMS) is another notable characteristic seen in online learning, serving as a comprehensive tool for the creation and administration of online courses (Blake & Guillen, 2020; Czerkowski & Gonzales, 2014; Pacansky-Brock, 2017).

In conclusion, the establishment of a clear instructional objective is crucial for teaching English as a Foreign Language (EFL) in an asynchronous online setting. Course

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designers and teachers must carefully consider the proper educational theoretical framework and suitable model when designing curriculum.

### ***Models of Instructional Design***

Several well-established educational learning theories, including behaviourist, cognitive, constructivist, and contemporary, have informed the development of instructional design models (Levy & Stockwell, 2006; Naidu, 2013; Ryding, 2013). The conceptualization of learning beliefs is exemplified in an instructional design model that emphasises specific elements of pedagogy and learning within the theoretical framework (Seel et al., 2017). These models provide a systematic approach to designing and delivering instruction, taking into account the different ways in which learners acquire knowledge and skills. By incorporating principles from various learning theories, instructional design models aim to create effective and engaging learning experiences for students. Additionally, these models help instructional designers align their teaching strategies with the desired learning outcomes, ensuring that the instructional materials are relevant and meaningful to the learners.

The positivist approach of behaviourism, as proposed by Skinner (1974), is considered one of the earliest ideas in the field of learning. Educators that embrace behaviourism prioritise the observation of students' actions in response to external stimuli and outcomes (Kay & Kibble, 2016). The primary focus of this pedagogical method is on the conditioning process that shapes behaviour, particularly in the context of language learning. The ultimate goal of instruction is to enable learners to effectively utilise the language in practical applications (Wiggins & McTighe, 2005; Russell & Murphy-Judy, 2020).

Two instructional design models that align with the principles of this theory are the Dick and Carey (1968) and the ADDIE (1975) models, which are considered first-generation models in the field of instructional design. These models provide a systematic approach to designing instruction by emphasising the importance of analysing learner needs, setting clear objectives, and creating engaging learning experiences. They also highlight the iterative nature of instructional design, as they both involve multiple stages of development, implementation, and evaluation. These models have been widely used in various educational settings to create effective and efficient instructional materials that promote meaningful learning experiences for learners.

The Dick and Carey (1968) model, published in "The Systematic Design of Instruction" (Dick, 1996), is a goal-oriented and procedural structure with nine sequential processes. It leads to the evaluation of teaching and outlines instructional goals, which are explicit statements outlining specific behaviours expected of learners as a direct result of the instructional process (Seel et al., 2017). The model has undergone several updates since its initial release (Dck, 1996). One notable update to the Dick and Carey model is the inclusion of a feedback loop, which allows for continuous improvement and refinement of the

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instructional design. Additionally, the model emphasises the importance of learner-centred instruction, recognising that learners have different needs and preferences that should be taken into account during the design process.

The ADDIE model, on the other hand, is a widely used instructional design framework that stands for Analysis, Design, Development, Implementation, and Evaluation. ADDIE, a behaviourist-positivist ID model, was developed by the Centre for Educational Technology in 1975 for performance-based learning in education, offering a structured approach to instructional design (Branch, 2009). ADDIE focuses on the systematic development of effective instructional materials and emphasises the importance of iterative feedback loops throughout the design process (Molenda, 2003). The ADDIE model provides a structured approach for instructional designers to identify learning needs, design engaging content, develop appropriate assessments, implement instruction, and evaluate its effectiveness.

Instructional goals are defined through a systematic approach that involves addressing specific problems, goal clarity, and available resources (Dick & Carey, 2009; Seel et al., 2017). The process starts by identifying the learner's desired skills and knowledge, and then it conducts a thorough analysis of the learners and linguistic contexts to produce performance assessment objectives. The next phase involves formulating assessments, designing an instructional strategy, and creating materials to help students demonstrate their proficiency in the objectives. This systematic approach ensures effective learning and development.

A crucial component of the Dick and Carey (1968) model entails the subsequent phase, which involves the development of an assessment framework to evaluate training. This framework enables the identification of necessary enhancements and modifications to the instructional process. The ultimate phase in the model involves the formulation and implementation of a summative assessment of training in order to evaluate its efficacy (Dick and Carey, 2009; Obizoba, 2015; Seel et al., 2017). The model mentioned is widely considered one of the most significant in the field of instructional design (Seel et al., 2017).

On the other hand, ADDIE begins with analysis—a thorough evaluation of the learning environment (Branch, 2009; Russell & Murphy-Judy, 2020). This includes examining course architecture, technologies, media, and learners' characteristics. The language instructor considers factors like learning goals, philosophies, techniques, and strategies to achieve the intended learning results. This phase is crucial for effective instruction and student engagement in language, as the language instructor takes into account several factors, such as learning goals, philosophies, techniques, and strategies, in order to achieve the intended learning results (Russell & Murphy-Judy, 2020, p. 4).

The two "D's" represent design and development. In the design phase, a teacher creates a framework to achieve course objectives. This includes content modules, tasks, assignments, and assessments. In the "D" step, the instructor analyses each module's

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objectives to align them with the course's goals. The framework undergoes continuous examination to ensure a logical and coherent sequence, achieving the desired final outputs. This process ensures the course's objectives are aligned with the course's goals (Russell & Murphy-Judy, 2020).

The ADDIE (1975) concept's "I" phase refers to the implementation stage, where pedagogical practices are adjusted for online language courses (Russell & Murphy-Judy, 2020). This stage involves instructors delivering course content, students actively participating in activities, and focusing on teaching methodologies that promote social interactions. The "E" phase involves a comprehensive assessment of the entire process to enhance the course. The ADDIE model emphasises the importance of reflection, critique, and potential revision at each stage of conception, development, and deployment (Branch, 2009; Russell & Murphy-Judy, 2020).

The Dick & Carey (1968) and ADDIE (1975) models are instructional design techniques rooted in behaviourist-positivist principles. These models prioritise teacher-centred instruction and emphasise the achievement of student outcomes through a meticulously organised and methodical sequence of stages. Both instructional models were developed as a direct outcome of the behaviourism movement in the field of education, and they currently stand as two of the most widely recognised instructional design models in existence.

### ***Cognitivist-oriented ID Models***

The cognitive learning theory emphasises the acquisition, construction, and representation of knowledge within the learner's cognitive framework. Jean Piaget's theory focuses on the cognitive development of individuals, emphasising the role of instructors in guiding students towards problem-solving and active engagement in the learning process. Two instructional design frameworks associated with this theory include the Morrison, Ross, & Kemp (2007) model and ASSURE (1996). The ID model by Morrison, Ross, and Kemp (2007) comprises nine elements within the instructional design process, including learners, objectives, methods, and assessment.

The first step involves identifying the instructional problem, which is crucial for guiding activities and priorities during the design process of the language learning environment. The second component involves examining and evaluating content and task analysis, which delineates the necessary content for resolving performance issues. The third element involves identifying learner instructional objectives, which serve the purpose of developing suitable instructional strategies and establishing a framework for assessing student learning outcomes. The fourth element involves identifying learner instructional objectives, which encompass the cognitive domain, psychomotor domain, and affective domain. Content sequencing refers to the strategic arrangement of content that facilitates the learner's attainment of the intended objectives.



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The fifth aspect pertains to the optimal sequencing of teaching, employing two techniques: the Posner and Strike strategy and the Reigeluth strategy. In the sixth component, instructional strategies pertaining to good pedagogy are formulated to provide learners with practical experiences and foster motivation to actively establish connections between their existing knowledge and novel material. Instructional tactics, such as presentation and generative approaches, facilitate the learner's acquisition and mastery of course objectives. The seventh component involves formulating the message through a written paragraph introduction, pretest, or graphic organiser. The eighth component involves creating suitable evaluation tools to measure the achievement of objectives. The final stage in the model is to identify and utilise relevant resources that can facilitate the effective implementation of instructional delivery. (This paragraph is too long; try to divide it into two paragraphs.)

The instructional design model proposed by Morrison, Ross, and Kemp (2007) is characterised by its adaptability and learner-centric approach, making it a suitable framework for assessing English as a Foreign Language (EFL) courses delivered through online, hybrid, or traditional in-person formats with integrated technology. By incorporating this instructional design model, educators can ensure that their courses are designed in a way that meets the needs and preferences of their EFL learners. This model emphasises the use of various resources and technologies to enhance the learning experience, such as multimedia materials, interactive activities, and online collaboration tools. Additionally, it encourages educators to regularly assess and evaluate the effectiveness of their instructional delivery methods to make necessary adjustments and improvements.

### ***The ASSURE Model***

ASSURE (1996) is a six-step ID model developed under cognitivist learning theory (Bajracharya, 2019). It is a cyclical, procedural, and classroom-oriented design model that focuses on technology integration in classroom teaching (Kim & Downey, 2016). The model consists of six steps: analysing learners, setting standards and objectives, selecting strategies, utilising technology, media, and materials, requiring learner participation, and evaluating and revising. It helps teachers select, use, and evaluate technology and instructional resources as essential parts of the systematic design process. Both the Morrison, Ross, and Kemp (2007) model and the ASSURE (1996) model are popular ID models in the cognitivist education movement.

### ***Contemporary ID models***

In light of critical evaluations of linear models, a number of modern models have surfaced in recent times. These present-day models embody a recursive and reflective technique that provides an alternative to the linear approach to design. Two models that exemplify the more contemporary perspectives on instructional design (ID) include the Rapid Prototyping model, introduced in 1995, and the R2D2 model, developed in 1999 (Bonk, Curtis, & Zhang, 2006).

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The concept of rapid prototyping (1985) emerged as a result of the commonalities observed between instructional designers and software designers in their efforts to develop impactful teaching materials. Lantz (1985) is commonly recognised as a prominent figure in the field of rapid prototyping, having provided a definition that characterises it as a methodological approach to system development. This approach involves the construction and utilisation of a system model for the purposes of system design, implementation, testing, and installation (Lantz, 1985, p. 1). According to Tripp and Bichelmeyer (1990), the model is designed to facilitate the execution of parallel processes concurrently, making it suitable for instructional design (ID). This suitability arises from the model's ability to accommodate the necessary flexibility required in managing the heightened intricacies inherent in fields heavily reliant on human factors, such as the instructional process (p. 36).

"Rapid Prototyping" (1985) is a methodology that involves evaluating requirements and content, forming preliminary learning objectives, and refining and paralleling earlier processes. It is used in language learning to assess tutorial software programmes for voluntary language learners, aiming to develop a comprehensive system for implementation among a broader population. Rapid prototyping, which emerged in 1985, encompasses models built in recent times due to advancements in computer technology and has been significantly influenced by various disciplines, particularly those in computer and natural sciences (Tripp & Bichelmeyer, 1990).

One additional modern ID worth examining is the R2D2 (1999) model of instructional design. The R2D2 approach, developed in 1999, promotes adaptability among participants in the ever-changing online environment of English as a Foreign Language (EFL) instruction. The R2D2 (1999) paradigm of instructional design is a modern approach that promotes adaptability in the ever-changing online environment of English as a Foreign Language (EFL) instruction. The R2D2 Model of Instructional Design emphasises participation in the design and development process, believing that there is no singular, preset set of solutions (Bin Mubayrik & Al-Mutairi, 2022).

This model should not be confused with other learning models, such as Bonk and Zhang's 2006 model or Pederson's 2005 model (Pederson, 2005). The R2D2 model was created through a collaborative effort between NASA and the University of Houston to enhance instructor training. It is characterised by its non-linear approach to instructional design, incorporating four key parts: recursive, reflective, design and development, and disseminating (Willis, 1995). It evolved into a four-phase model of read, reflect, design, and develop later, as is suggested in Bonk et al. (2006).

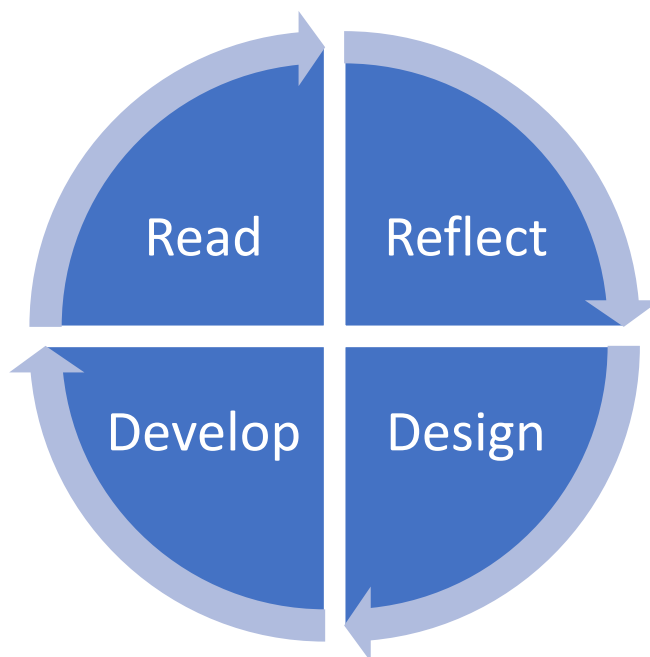
The Read stage is particularly suitable for individuals who are inclined towards verbal and auditory learning styles, as it facilitates problem-solving and the acquisition of knowledge. The Reflect stage is well-suited for individuals who possess introspective and observant learning styles. This stage facilitates the process of problem clarification and the building of knowledge. The design stage is particularly well-suited for those who have a

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preference for visual learning. This stage facilitates the process of analysing solutions and representing knowledge. Moreover, the design stage is characterised by a hands-on approach, allowing learners who prefer hands-on activities to engage in solution evaluation and knowledge transfer to others. Figure 1 shows this sequence of stages in the R2D2 model:

### Figure 1

*The R2D2 model (Adapted from Bonk, Curtis & Zhang, 2006)*



Each element in the model can be repeatedly emphasised during the creative editing and reworking of the material. The collaborative nature of this team endeavour promotes the examination of matters relevant to all individuals involved in the educational process (Willis and Wright, 2000). Design and development involve a continuous cycle of revision and redesign, involving elements like media, environment, products, and evaluation (Willis, 1995). This process requires teamwork and diverse expertise. In language learning, applications can include posting on publicly accessible platforms, engaging in peer reviews, and completing final projects. This extends the course's audience beyond formally enrolled students, encompassing a more diverse community of individuals seeking knowledge. The dissemination focus prioritises the development of components and support systems that cater to a wider audience.

Within these areas of focus, the learner is engaging in the utilisation of preexisting resources or the creation of novel resources in order to both reflect upon and develop fresh ideas and concepts. The process of reflection is an ongoing practice within an iterative design approach, and it is manifested through various forms of visual representation.

The graphic representation of a model has evolved to be deliberately non-linear, with the original model resembling a triangular shape with aligned aspects of definition, design,

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development, and dissemination (Willis, 2000). This design pattern assumes designers work on all three aspects intermittently, making it neither predictable nor prescribable (Willis and Wright, 2000, p. 5). The updated model, with no obvious starting and ending points, is intentionally blurry on the outside to represent the model's focus and centralization as the work progresses. This change aligns with behaviourist, positivist, and constructivist theories.

### ***Behaviourist, positivist, and constructivist theories***

Empirical data can support the behaviourism principles on which traditional ID models like Dick and Carey (1968) and ADDIE (1975) are based. However, these models overlook specific truths in one classroom due to the lived experiences of students (Willis, 2009). Constructivism, a different approach, emphasises interpretive epistemology and rejects universal laws and rules of human behaviour. It is based on Lev Vygotsky's work, which suggests that knowledge develops from an individual's interactions with culture and society, making learning a collaborative process. The constructivist ID model has several characteristics, including a recursive, non-linear design process, organic, developmental, reflective, and collaborative planning, objective-driven design, the absence of general instructional designer experts, instruction emphasising meaningful contexts, formative evaluation, and subjective data. In this model, instructors encourage student autonomy, initiative, dialogue, inquiry, and the use of various materials. (Vygotsky, 1978; Tam, 2000).

In contemporary ID models like R2D2 (1999), constructivism is represented not only in traditional language learning environments but also in online contexts. The constructivist perspective supports collaboration and socially rich learning environments, with computer-mediated communication enhanced through email, messaging, and in-class discussions. Technology plays a central role in constructivism, with tools like Memrise for vocabulary learning and social networking sites for cohort groups. Instruction can also take place directly through software like multiplayer games and other entertainment and competitive scenarios (Chen et al., 2016; Goodwin-Jones, 2021).

Constructivist principles guide designers to increase emphasis on learning and make instruction personally relevant to the learner. They also support learner autonomy and promote skills that enable learners to assume increasing responsibility and engage in intentional learning processes (Tam, 2000). This principle is especially relevant in asynchronous, online classrooms, where students must work independently from other students and instructors. Online language learners must be able to take responsibility for their learning and engage in activities towards their language goals and communicative competence.

### ***ACTFL and Communicative Competence***

The success of language acquisition depends on a number of variables, including institutional objectives, instructional resources, learning activities, and the composition of the student body. Instructional design in language classrooms is therefore essential for

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student achievement. The asynchronous, online language classroom can impact course information delivery, interaction mediation, and communication performance. The American Council on the Teaching of Foreign Languages (ACTFL) has consistently advocated for language learning teaching techniques that prioritise communication, but strategies have evolved over time. The proficiency movement emerged in the 1980s, centred around a proficiency guideline published by ACTFL.

The ACTFL Performance Descriptors serve as a comprehensive framework for instruction and acquisition of foreign languages, categorising language performance based on different levels of performance. The communicative approach, advocated by ACTFL, incorporates four essential language abilities: reading, listening, speaking, and writing. This approach emphasises the practical use of these skills in three modes of communication: interpretative, interpersonal, and presentational. Intentionally crafted instructional exercises can enable students at a novice proficiency level to engage with language contexts typically encountered at the intermediate level within a framework that provides appropriate assistance and guidance. This intervention facilitates students in progressively showcasing their abilities independently, surpassing their existing performance boundaries.

However, there is a lack of consideration for instructional design as a guiding framework in the development of instructional experiences. A singular study did not demonstrate the comprehensive utilisation of a specific instructional design paradigm guided by a particular learning theory. Research on EFL education has also revealed practitioners' pre-existing knowledge regarding problems related to the implementation of instructional design principles and the selection of appropriate media techniques within the educational environment. Strategic decisions were made on the objectives of the instructional approach, particularly with regard to the development of communicative competence and the expectations placed on students' verbal production. The research that has been done so far shows that more research needs to be done on how to use instructional design strategies that are based on learning theories in English as a Foreign Language (EFL) education to improve students' ability to communicate.

This research endeavour incorporated instructional and educational practices for oral communication by incorporating the principles of the constructivist learning method and the R2D2 (1999) ID Model. The constructivist approach promotes the utilisation of discourse, inquiry, and relationships, fostering students' autonomy and initiative in their language acquisition process. The R2D2 model aligns most effectively with the principles of constructivism in terms of comprehensively recording students' speaking practices, their learning experiences, and their perceptions of speaking in the asynchronous, online English as a Foreign Language (EFL) classroom.

### ***Connected Speech and Speaking Skills***

Connected speech is a phenomenon that improves intelligibility by incorporating auditory elements of spoken words. It is common in native English speakers who speak

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rapidly and continuously, employing related speech elements like contraction, intrusion, elision, assimilation, and weak forms (Brown, 1990; Cauldwell, 2002; Field, 2003). This requires multifaceted cognitive abilities and multiple mechanisms to operate. Weinstein (2001) defines it as the influence of adjacent words or sounds during spontaneous speech at a normal pace. Connected speech is challenging for learners to acquire proficiency in. It is prevalent in spoken English and can be observed across all registers. Brown and Kondo-Brown (2006) describe connected speech as continuous chains in everyday spoken language and conversation, contrasting with the conventional examination of isolated phonemes. Related speech is present across various communication levels (e.g., Hagen, 2000; Weinstein, 2001).

In this study, connected speech is the free expression of well-thought-out ideas glibly produced in the course of integrated discourse, in which the interlocutor possesses the personal ability to get linguistically and intellectually organised. Connected speech skills are more appropriate for the proficiency categories of intermediate to advanced levels of students.

Phonological processes like reduction, elision, assimilation, and contraction are essential for creating coherent speech patterns in spoken language. In contrast to treating each word independently, Griffee (1995) defined connected speech as linking words and emphasising key syllables. This approach allows for smoother and more natural-sounding speech, as it mirrors the way native speakers communicate. By understanding and practicing connected speech, students can improve their overall fluency and comprehension in real-life conversations. Additionally, studying connected speech can help learners develop a better understanding of the rhythm and intonation patterns of the target language.

However, English language instruction often fails to incorporate connected speech patterns, limiting students' exposure to this linguistic phenomenon. Despite the widespread use of connected speech in native English speakers' discourse, the main focus is on delivering coherent and comprehensible oral communication to enhance comprehension. Rixon's (1986) findings suggest that many learners are familiar with attentive listening to carefully pronounced words, similar to native speakers emphasising their speech or enunciating syllables individually. This concentration can lead to a lack of comprehension of connected discourse, leading to challenges and dissatisfaction when conversing with native speakers.

The effectiveness of including instructional programmes in connected speech to enhance learners' comprehension of rapid speech has been widely acknowledged in the literature (Brown & Hilferty, 2006; Celce-Murcia et al., 1996; Matsuzawa, 2006). If a non-native speaker communicates by stringing words together without proper cohesion, their language may appear disjointed and unnatural, perhaps causing fatigue for the listener (Brown, 2001; Celce-Murcia et al., 1996). It is worth mentioning that according to Brown and Kondo-Brown (2006), regular practice of the fundamental aspects of connected speech

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in the target language is believed to assist non-native language learners in achieving a pronunciation that resembles that of native speakers and producing speech that is more comprehensible.

Instruction on connected speech characteristics can enhance language learners' recognition and proficiency in using the target language. Brown (2006) emphasises the need for learners to adapt their registers and styles to the target language. To achieve proficiency in connected speech and a delivery resembling that of a native speaker, a comprehensive understanding of speech aspects and techniques is crucial.

English university teachers in Egypt may use audio or video-based materials to improve EFL students' speaking skills, but no empirical studies have been conducted on teaching connected speech through video-based treatments, making connected speech an under-explored area in Egyptian academia.

Previous research on English as a Foreign Language (EFL) contexts has shown that students who receive explicit connected speech-focused instruction outperform those in other groups (Kuo et al., 2013; Hsu, 2015). Hsu's study also found that students who were taught about connected speech improved their listening abilities more than those who received no treatment. Both studies confirm the value of teaching connected speech instruction to EFL students, but more relevant studies are needed to understand the field, especially those using video-based treatment. This study aims to contribute to the knowledge of the field by addressing the pedagogical effects of asynchronous online teaching of speaking and conversation courses featuring connected speech instruction for Egyptian EFL college students.

### ***Research Questions***

This study was guided by the research questions that emerged from the existing gaps in research about the integration of instructional design (ID) in the asynchronous, online English as a Foreign Language (EFL) classroom. The main research question in this study is:

#### **What is the effect of an online speaking programme on students' connected speech skills in the EFL classroom?**

The following sub-questions emanate from the above main question:

1. What is the effect of including connected speech activities guided by an instructional design approach on students and instructors in the asynchronous, online English as a Foreign Language (EFL) classroom?
2. What are the connected speaking experiences of students in the asynchronous, online English as a Foreign Language (EFL) classroom?
3. What impact does the design of teaching and learning activities have on the development of connected speech in the asynchronous, online English as a Foreign Language (EFL) classroom?

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## **Method**

### *Design*

The study utilised a quasi-semi-experimental research method to examine the impact of an online teaching programme using the R2D2 ID model on EFL college students' connected speech skills, utilising various methods including speaking tests, observation cards, and open-ended questionnaires. This study uses mixed methods to investigate students' experiences in an online English as a Foreign Language classroom, focusing on purposeful activities to improve communicative skills for developing connected speech. Unlike a comprehensive curriculum design, the study adopted a pragmatic approach, prioritising individual experiences in the instructional design process. Using an instructional design (ID) paradigm, the study systematically implemented activities addressing students' experiences and perceptions of these activities in relation to their communicative competence.

### *Instruments and materials*

The instrument and material included a connected speech inventory, field notes, cards, a connected speech test, and the connected speech learning programme. The connected speech inventory was used to assess students' ability to produce fluent and natural speech. Field notes were taken during the activities to document students' reactions and observations. The cards were used as prompts for conversation and discussion, allowing students to practice their communicative skills in a structured way. The connected speech test provided a formal assessment of students' progress in their ability to produce connected speech. Finally, the connected speech learning programme was designed to provide targeted instruction and practice for improving students' connected speech abilities. Following will be a more elaborate description of these instruments and materials.

### *Participants*

The participants in this study included 25 EFL college students of both genders enrolled in their junior year at the Faculty of Education, Beni Suf University, with a mean age of 20.4 years. The participants were from a homogeneous socio-economic background around the upper-intermediate proficiency level based on ACTFL benchmarks.

### *Procedures*

The study at Beni Suf University investigated the impact of the R2D2 ID model on students' speaking practices, learning experiences, and perceptions in an online English as a Foreign Language (EFL) classroom. The research focused on an asynchronous undergraduate EFL course with eight weeks of content modules, discussions, exercises, and assignments. The study involved an instructor and participant observer, focusing on the impact of integrating R2D2 on linguistic outcomes, student experiences, and teaching strategies. The non-timed format included exercises, assignments, English audios, written scripts, and short video lessons. Reflexive awareness of biases and positionality was crucial. The study used a flexible framework, providing participants with exercises and tasks from



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the start of the course. The training material included English audio recordings, written transcripts, and concise video courses. The research enhances our understanding of learning and activity design in teaching English as a Foreign Language (TEFL) and its connection to language acquisition. The study offers valuable insights into the effects of the R2D2 ID model on students' speaking practices and experiences in online EFL courses.

### ***Instruments***

#### ***The Connected Speech Inventory***

An inventory of 14 connected speech sub-skills was developed in four dimensions or categories: 1) phonological skills (2 subskills); 2) linguistic skills (4 subskills); 3) thinking skills (4 subskills); and 4) paralinguistic skills (4 subskills). Edits to the inventory were done after a peer review by experts in the field (see Appendix 1).

#### ***Field notes cards***

A note card for connected speaking skills was constructed based on the final list of skills. Accordingly, there were four categories of connected speech skills: phonological, linguistic, paralinguistic, and thinking skills. The researcher-instructor had to check a mark in the appropriate box (poor, fair, good, or excellent) for evaluating students' performance during speaking. Jurors unanimously agreed that the field note card was thorough and accurate in measuring students' connected speech skills (see Appendix 2).

#### ***The Connected Speech Test***

The test aimed to measure the connected speaking skills of EFL students at an upper-intermediate proficiency level. It involved determining the skills it measures, writing test instructions, and formulating test items approved by peer reviewers. The test consisted of three questions, with the test-taker choosing two questions and discussing each topic for four minutes. A jury of experts reviewed the initial version, and content and language edits were made to ensure the test was valid and measured what it was designed to measure. The final version was test-retested for reliability, with a Pearson's correlation coefficient of  $R = 0.815$  indicating high reliability. The test time was 10 minutes, with two minutes for brainstorming ideas and eight minutes for connected speaking on two of the three topics presented. The examiner used a timer to ensure that each participant adhered to the time limits. Additionally, detailed scoring rubrics were developed to assess the participants' fluency, coherence, and vocabulary usage during their spoken responses.

#### ***The Connected Speech Skills Programme***

The programme was developed based on the Read, Reflect, Design, and Develop (R2D2) ID model (Hamilton, 2013; Kolb, 2017). The curriculum of the Speaking and Conversation course encompassed a total of eight weeks, during which several material modules were covered. Additionally, the course required students to complete one self-introduction, eight writing exercises, and three written assignments.

#### ***Content Modules***

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The Speaking and Conversation course is an interactive and personalised approach designed to help students develop conversational skills and connected speech. It combines English audios and written scripts, with EFL words, phrases, idiomatic expressions, and sentences provided. Each module contains audio recordings and 3–6 short video lessons. Weeks 1–7 introduce Practice Daily Topics, English Conversation Practise, and topics such as hobbies and free time, food, fashion, home, films, the natural world, crime and law, transport, sport, and music.

Students participate in various activities to develop conversational skills, including group discussions, role-plays, problem-solving tasks, listening and video-viewing exercises, idiom review, and pronunciation practice. The course aims to help students speak confidently and reach their goals.

### *Written Exercises*

A total of eight written assignments were assigned in the English language. On a weekly basis, the student was presented with the module material and tasked with completing a weekly exercise centred around discussing the daily subjects.

### *Listening Quizzes*

A total of eight listening quizzes were administered in the English language. During the first week, students were given the chance to complete the listening quiz in order to familiarise themselves with the quiz feature included in the language management system (LMS). During weeks 2–8 of the course, it was required for students to complete listening quizzes. Every listening quiz served as a means to assess the understanding of the material covered in the instructional modules. The students were provided with instructions to engage in active listening by listening to an uncomplicated audio recording and then responding to a set of five multiple-choice questions. Every student was given two opportunities to take a listening quiz in order to achieve the highest possible mark. The weight assigned to listening quizzes constituted 5% of the overall mark of the student.

### *Assignments*

Three written tasks in conversational English and connected speech were required in three weeks. The first task covered the first three weeks, the second covered weeks 1 to 6, and the final exam assessed the entire 8-week course. Students were required to compose short written talks, create words and idioms in conversational usage, analyse words, recognise terminology, and demonstrate proficiency in both elementary and advanced grammatical principles. The assignments accounted for 75% of the student's overall mark.

### *Discussions*

In this five-week English course, students were asked to discuss their hobbies and free time, their speaking goals, and their ranking of speaking importance compared to other language skills. This reflective practice continued until the end of the programme, with suggested topics and practices. In week 7, students were asked to maintain and use their new language skills, and all discussions were voluntary, with no word count requirements,

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peer responses, or grades associated with them. The course aimed to help students improve their spoken English language skills.

### *Speaking activities*

Given that no prior speaking tasks were mandated, the arrangement of the novel activities was deliberated with respect to the remaining language tasks. The encouragement of connected speech was supported from the very beginning to stimulate students to initiate debate and discussion.

The programme utilised educational foundations, including cooperative learning, group discussions, and self-evaluation, to develop learners' awareness of their mistakes and strengths. It emphasised collaborative work in groups and the use of discussion among cohorts and instructors.

Furthermore, the programme incorporated various interactive activities, such as role-playing and debates, to enhance learners' communication skills. These activities encouraged learners to actively engage in conversations and express their opinions, fostering a more dynamic learning environment. Additionally, regular feedback and guidance from instructors were provided to help learners identify areas for improvement and build upon their strengths in spoken language.

### ***The R2D2 Instructional Design Model***

The R2D2 ID model is used to integrate teaching and learning activities for speaking within an 8-week class period. The model involves a participatory process of reflection, recursion, design and development, and dissemination (Willis, 1995). The first iteration of testing involved the researcher-instructor observing the classroom and receiving feedback from students on the speaking activity, presentation tool, and their perception of their communicative competence. The second iteration involved students providing feedback on the speaking activity, the tool that was used to present the activity, and their perceptions of their communicative competence. This process helps to understand the integration of speaking activities within the R2D2 ID model.

### **Results**

In order to address the primary research inquiries, numerical data obtained from the Connected Speech Test was combined with qualitative data derived from field observations and open-ended questionnaires, which were then gathered and subjected to analysis.

The objective measurements of students' speaking proficiency were derived from the quantitative data obtained from the Connected Speech Test. On the other hand, the subjective experiences and perspectives of the students were captured through the qualitative data collected from field observations and open-ended questionnaires. By integrating these two forms of data, a holistic comprehension of the efficacy and influence of the speaking actions inside the R2D2 ID model may be attained.

A paired sample t-test was conducted to assess the performance of participants in the study before and after the testing phase. Mean differences were calculated for each of the

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four areas of the Connected Speech Test, namely phonological, linguistic, paralinguistic, and thinking skills, as shown in Table 1.

**Table 1**

*t-test Results Comparing pretesting and posttesting on the Connected Speech test*

Skill area	Test Data	Means	SD	t-value	P value
Phonological skills	Pretest	5.11	0.81	12.857	0.000
	Posttest	7.22	0.61		
Linguistic skills	Pretest	7.48	1.14	9.59	0.000
	Posttest	12.60	1.00		
Paralinguistic skills	Pretest	7.77	1.00	17.88	0.000
	Posttest	14.37	1.10		
Thinking skills	Pretest	9.01	0.77	12.11	0.000
	Posttest	13.88	1.01		
Total	Pretest	29.38	4.37	12.210	0.000
	Posttest	48.44	2.01		

The results presented in Table 1 demonstrate that the t-values for the differences between pretest and posttest scores are 12.857 for phonological skills, 9.59 for linguistic skills, 17.88 for paralinguistic skills, and 12.11 for thinking skills. These t-values are all statistically significant at the  $p < 0.01$  level. These t-values indicate that there are significant differences between the pretest and posttest scores in all four skill areas. This suggests that the intervention had a positive impact on the participants' skills in phonological, linguistic, paralinguistic, and thinking skills.

These findings suggest that the programme has an overall large impact on the development of connected speech skills. The t-value for the total differences between pretesting and posttesting is 12.210 ( $p < 0.01$ ), suggesting that there are statistically significant disparities in the mean scores of the students, favouring posttesting. This finding provides evidence of the effectiveness of the programme in enhancing connected speech skills.

Subsequently, the computation of the effect size was conducted. A large effect size is typically defined as 0.8, whereas effect sizes falling between the range of 0.5 and 0.7 are generally categorised as medium, and effect sizes below 0.5 are regarded as small. The programme's influence on connected speaking skills can be classified as substantial, as indicated by the effect size calculation. This implies that the programme has a substantial and impactful influence on enhancing students' proficiency in this domain. The effect size statistics are presented in Table 2, as depicted below:

**Table 2**

*Cohen's d: Effect size of the speaking programme*

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Test data	Means	SD	Effect size	Effect category
Pretest	29.38	4.37	4.47	Large
Posttest	48.44	2.01		

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According to Cohen's d classification, an effect size of 4.47 is considered substantial. This finding suggests that the programme has a significant and favourable influence on enhancing students' connected speech skills, as it exceeds the threshold for a meaningful effect size. Moreover, the obtained posttest mean score of 48.44 indicates a statistically significant enhancement in students' performance subsequent to their involvement in the programme.

**Qualitative data analysis**

The findings of this study indicate that the students in the research sample successfully achieved the course learning objectives in terms of their speaking proficiency. Specifically, their performance in the interpretative mode of communication during the provided speaking activities demonstrated an upper-intermediate level of proficiency. According to one participant, the programme helped them gain confidence in expressing their ideas and opinions in English. Another participant mentioned that they felt more comfortable engaging in conversations with native speakers after participating in the programme. These qualitative data suggest that the programme not only improved students' speaking proficiency but also had a positive impact on their overall language skills and confidence.

Despite encountering difficulties in communicating in the asynchronous setting, students demonstrated the ability to achieve upper-intermediate-level proficiency in English by effectively utilising robust visual aids in conjunction with written material. For example, students used PowerPoint presentations with clear visuals and concise bullet points to enhance their oral presentations. This not only helped them convey their ideas more effectively but also improved their overall presentation skills.

In addition, the programme provided opportunities for students to engage in interactive activities such as group discussions and debates, which further enhanced their speaking proficiency and critical thinking abilities. Further, they self-reported that the programme incorporated role-playing exercises, allowing them to practice real-life scenarios and develop their communication skills in a practical setting. These activities encouraged students to think on their feet and respond confidently, fostering their ability to express themselves articulately and persuasively in connected speech situations.

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Besides, the programme also included opportunities for students to engage in mock interviews and presentations, providing them with valuable experience in professional settings. This helped them build confidence in their ability to communicate effectively and adapt to different speaking situations. Overall, the programme's emphasis on interactive activities and practical exercises greatly contributed to the students' growth in both spoken communication and critical thinking. The students demonstrated their ability to generate communication in a creative manner by utilising suggested vocabulary lists and audio prompts.

Moreover, the students reported that they had ample opportunities to engage in group discussions and debates, allowing them to develop their persuasive speaking skills. This hands-on approach fostered a collaborative learning environment where students could exchange ideas and learn from each other's perspectives. As a result, the students became more comfortable expressing their thoughts and opinions, enhancing their overall communication abilities. Some students expressed that they felt more confident in expressing their thoughts and opinions after participating in the programme. They also mentioned that the programme helped them develop a better understanding of different perspectives and improved their ability to articulate their ideas clearly. In addition, the students found that participating in the programme expanded their knowledge on various topics as they were exposed to different viewpoints and experiences. This not only broadened their horizons but also fostered a sense of empathy and tolerance towards others' opinions. (↑ begins by "adding," which is considered redundancy; try to use transitions properly.)

Overall, the programme proved to be a valuable platform for enhancing both communication skills and fostering a more inclusive and open-minded learning environment. In other words, the programme had a positive impact on the students' communication skills and fostered a more dynamic and engaging learning environment. Additionally, exposure to different viewpoints and experiences allowed students to develop critical thinking skills as they were challenged to consider alternative perspectives. This not only enhanced their ability to articulate their own thoughts effectively but also encouraged them to approach discussions with an open mind. Consequently, the programme not only improved their communication skills but also instilled in them a lifelong appreciation for diverse opinions and the importance of respectful dialogue.

Furthermore, the manner in which the activity was presented played a crucial role in comprehending the students' experiences and perspectives, alongside the implementation of a method for introducing teaching and learning activity design focused on speaking. By incorporating interactive and engaging activities, such as group debates and role-playing exercises, the students reported that they were able to actively participate in discussions and develop their speaking skills. This approach not only made the learning process enjoyable but also allowed the students to gain a deeper understanding of different viewpoints and

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learn how to express their own opinions effectively. The students expressed their opinions regarding the impact of asynchronous online learning on their speaking skills, highlighting both the advantages and disadvantages associated with the use of online learning tools.

Students also said that they discussed the ease and complexities encountered while utilising these resources, as well as their own anxiety towards the technologies and the general efficacy of the tools, such as Google Video Meet, Telegram, and the other tools of Google Classroom. Furthermore, the students emphasised the importance of practicing speaking skills in a face-to-face setting and expressed concerns about the lack of real-time interaction and immediate feedback in asynchronous online learning.

They also mentioned that while online tools provide convenience and flexibility, they can sometimes be unreliable or challenging to navigate, leading to frustration and hindering their overall learning experience. Three techniques were created to facilitate the practice of spoken communication, particularly in the context of self-introduction. The initial technology employed was the Telegram conferencing tool, which was seamlessly integrated into the classroom setting. Many respondents stated that this enabled students to interact with one another and improve their speaking abilities in real-time.

However, some students found it difficult to adjust to the new technology and experienced technical difficulties that disrupted their learning process. As a result, the instructors decided to introduce additional techniques, such as pre-recorded video introductions and virtual group discussions, to provide alternative ways for students to practice spoken communication without solely relying on the Telegram conferencing tool.

In addition to the Telegram app, students were encouraged to use the Google Video Meet recording feature within a discussion thread that allows for audio and video interactions among students and with the instructor asynchronously. Although student users of this tool recognised that the Google Meet application was easily available within the discussion thread of the LMS of Google Classroom, many felt it was not useful and too cumbersome of a tool to meet the demands of a dynamic, asynchronous speaking exchange.

The incorporation of various technological tools, such as the Telegram conferencing programme, Google Video Meet, and VoiceThread in Google Apps, has been shown to have a positive impact on the development of speaking skills in educational settings. These technologies have been found to enhance motivation and promote learner autonomy in the context of speaking performance.

This study also demonstrated the significance of student goal-setting and persistence in fostering a sense of ownership in language learning. It revealed that the utilisation of new technologies motivated students to actively seek opportunities for practicing their language abilities beyond the confines of the classroom. The students actively pursued chances for oral communication, engaged in thoughtful self-reflection on their development, and acquired knowledge of novel technologies within the prescribed instructional framework of the classroom.

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Perhaps one of the reasons for developing connected speaking skills is video recording, which students were asked to do after mastering the topic of the talk. This recording was required to be performed as a homework assignment, provided that the speech is not written, nor is it rehearsed or reiterated. By recording themselves speaking, students were able to assess their own performance and identify areas for improvement. This practice also allowed them to become more comfortable with public speaking and gain confidence in their abilities. Additionally, the use of video technology provided a platform for students to showcase their speaking skills and share their ideas with a wider audience, fostering a sense of pride and accomplishment.

In addition to recognising their requirement for additional speaking practice, students also expressed contentment with the diverse range of speaking opportunities available inside the classroom. The students had a favourable response to the material and exercises, expressing agreement that they possessed the necessary language information and tools to fulfil the speaking criteria. The researcher observed the self-reported capacity of students to meet the speaking outcomes for the course.

Notwithstanding the difficulties posed by the 8-week duration of the course and the constraints on including several iterations of activity design, the students were able to attain practical proficiency in introducing themselves, engaging in brief interactions, and bidding farewell. The study participants demonstrated concise and pragmatic speaking abilities that effectively communicated their intended meaning and purpose, fulfilling the desired speaking outcomes.

Systematic documentation using field notes was always done, with a focus on the researcher's immediate observations of how the R2D2 instructional model activities were used, how students perceived them, and how they interacted with them in the classroom. The collection of instant thoughts and impressions allowed for the identification and examination of any biases held by both the researcher and the students in relation to course instruction, content, and interactions pertaining to speaking requirements. These field notes provided valuable insights into the effectiveness of the R2D2 instructional model in meeting the speaking requirements of the course.

Furthermore, they helped in identifying any potential areas of improvement or modifications needed to enhance student engagement and understanding. Furthermore, the use of field notes enabled the researcher to promptly document initial observations within the context of the learning environment as well as track any changes that occurred throughout the span of 8 weeks. These field notes also provided a comprehensive record of student progress and allowed for a more accurate analysis of the impact of the R2D2 instructional model over time. Moreover, the researcher was able to identify specific strategies or techniques that were particularly effective in promoting student engagement and understanding, which can inform future instructional practices.



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The utilisation of field notes helped the researcher acquire a comprehensive comprehension of the classroom environment, in addition to discerning the integration of speaking needs within the broader framework of the course and language acquisition. The field notes additionally offered valuable insights into the participants' longitudinal growth, enabling the researcher to monitor their advancement in oral communication abilities. The field notes additionally yielded valuable data regarding the participants' proficiency and ease in utilising the language, as well as any obstacles encountered during oral exercises.

Furthermore, the researcher had the opportunity to study the many strategies and techniques utilised by the participants in order to surmount these obstacles and enhance their oral communication abilities. Likewise, the data collected from the field notes facilitated the identification of potential obstacles and opportunities for enhancement within the pedagogical framework. Observing the manner in which students engaged with speaking requirements provided valuable insights into their language proficiency and comprehension of the subject matter. The act of observing also facilitated a deeper comprehension of classroom material and the use of media tactics for fulfilling speaking obligations.

In addition, instances occurred within the classroom setting where students engaged in interpersonal communication utilising English as a Foreign Language (EFL), affording the researcher the opportunity to closely watch and meticulously document these interactive exchanges. The use of audio recordings and field notes in the study offered supplementary understanding of students' language processing, topic comprehension, and speaking skills.

### **Discussion**

The R2D2 ID Model was used to promote reflective practices in oral communication, aiming to understand the impact of limited course duration on speaking outcomes. The study found that students achieved desired learning outcomes, particularly in upper-intermediate speaking competence, demonstrating proficiency in interpretative style during speaking activities.

The primary aim of this study was to examine the impact of a deliberately designed exercise on student language learning, particularly in the area of speaking, through integration, observation, and comprehension of student and instructor feedback.

Furthermore, the utilisation of technology in facilitating the activity and the subsequent management of the language classroom online played a substantial role in establishing an optimal learning environment for oral communication within the Learning Management System (LMS) of Google Classroom. This study's results align with previous research conducted by Blake and Guillen (2020), Czerkowski et al. (2017), and Vai and Sosulski (2016). This study is ideally positioned to provide implications for both practitioners and researchers by utilising tactics that are based on the reflective character of the R2D2 ID Model and combining activity design for English speaking (Bonk et al., 2006; Hamilton, 2013; Kolb, 2017).

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The R2D2 model is useful for EFL instructors to create innovative methods for integrating purposeful learning activities in an asynchronous online EFL classroom. The growth of online learning environments demands the adaptation of educational techniques to meet the increasing demand, a result commensurate with prior research findings (e.g., Money Penny & Simon, 2017). To ensure effective language teaching, well-structured and tailored methods are essential. A purposeful design approach is crucial, as indicated in prior research (Richards & Rodgers, 2014).

Speaking skill development is crucial in the asynchronous classroom. Instructors need a comprehensive understanding of efficient pedagogical approaches and technologies to overcome the lack of in-person interactions. Administrators and technologists should support teachers in developing courses that prioritise speaking as a crucial language skill in the asynchronous classroom. They must be familiar with emerging technologies and integrate them into the Learning Management System (LMS).

The integration of technology for asynchronous communication should be readily available in online learning platforms, such as Google Classroom, by incorporating fundamental ideas from modern instructional design models, like the R2D2 ID model, while creating asynchronous English as a Foreign Language (EFL) classrooms. An illustrative instance is the presence of a collection of prospective speaking engagements that are readily accessible, albeit not visible to students within the Learning Management System (LMS). This arrangement facilitates the expeditious creation of new activities, which may be promptly made available when the need arises. As students reflect upon their experiences in a particular activity, they possess the ability to provide ideas for modifying or adapting subsequent activities in order to enhance their speaking performance.

Subsequently, instructors are able to promptly and efficiently respond in order to introduce a fresh speaking activity during consecutive iterations of speaking practice or assessment. The implementation of flexibility and reflection principles in activity design, such as incorporating student reflections and creating new iterations of activities, can have a positive impact on students. This approach can enhance student awareness of their speaking abilities and challenges, as well as strengthen their commitment to the learning process (Bonk & Zhang, 2006).

### **Conclusions and recommendations**

Based on the findings, it can be concluded that incorporating speaking activities with flexibility and reflection principles can greatly benefit students in their language learning journey. It is recommended that educators regularly assess and adapt their speaking activities to ensure continuous improvement and engagement among students. Furthermore, providing opportunities for peer feedback and self-reflection can further enhance the effectiveness of these activities. Using timed connected speaking assessments can also help students develop their fluency and accuracy in real-time communication. Moreover, incorporating technology, such as video conferencing or speech recognition software, can

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provide students with more authentic speaking practice and immediate feedback on their pronunciation and intonation.

The presentation of activities and teaching methods, such as group debates and role-playing exercises, significantly influenced students' experiences and perspectives. These interactive activities helped students develop their speaking skills and gain a deeper understanding of different viewpoints. Students also discussed the impact of asynchronous online learning on their speaking skills, highlighting the complexities and concerns about the effectiveness of tools like Google Video Meet and Telegram. They found that while these tools provided opportunities for virtual communication, there were limitations in terms of connectivity issues and the inability to read non-verbal cues. Some students expressed the need for more interactive platforms that could simulate face-to-face interactions and foster a more engaging learning environment. Additionally, students emphasised the importance of incorporating a variety of activities and teaching methods to cater to different learning styles and enhance their overall language acquisition process.

These findings bore out some recommendations for improving online language learning experiences. Firstly, it is crucial to invest in stable and reliable internet connections to minimise connectivity issues that can disrupt the learning process. Secondly, incorporating video conferencing tools or virtual reality technology can help simulate face-to-face interactions and bridge the gap caused by the lack of non-verbal cues. Furthermore, educators should consider incorporating a diverse range of activities, such as group discussions, interactive quizzes, and multimedia resources, to cater to different learning styles and enhance engagement. By implementing these

### **Implications for Research**

Future research in this field will require a comprehensive evaluation of the present status of entirely online, asynchronous English as a Foreign Language (EFL) language courses. Numerous academic institutions frequently provide and endorse online English as a Foreign Language (EFL) courses, which, upon further examination, are typically hybrid in nature, necessitating regular face-to-face sessions with the instructor, either on a weekly or biweekly basis. With the increasing expansion of online English as a Foreign Language (EFL) language classes, it is imperative that research efforts be directed towards investigating and enhancing pedagogical techniques, instructional design, and technology integration within the virtual classroom setting.

Furthermore, it is imperative to establish a precise differentiation between the various forms of oral communication that are expected within the context of the virtual educational programme, given that English is a diglossic language; therefore, instructors must determine the needs of the students, goals for speaking, and future use of either the standard dialect or any other specific dialect.

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