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The Effect of Image Schema–Based Instruction on Enhancing EFL Students' Speaking Ability

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اثر نظرية النماذج الصورية في تحسين اداء الطلبة على الكلام

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Abstract

The purpose of this research was to evaluate how Image Schemas are used in the improvement of the speaking proficiency of students studying English as a foreign language (EFL). This study utilized a quasi-experimental design that had two groups of participants: an experimental group and a control group. The experimental group consisted of thirty first year university students who were randomly sampled from a population of 200 students who studied English as a foreign language. Both the experimental and control groups took a pre-test and post-test to measure the speaking proficiency of the students by measuring fluency, coherence, grammatical accuracy, vocabulary use and pronunciation.In comparison with the control group who were instructed through traditional methods, the experimental group, composed of EFL students, received speaking instruction using an image schema-based instructional model. The results of the post-test indicate that the experimental group experienced a greater statistically-significant improvement as compared to the control group for the total speaking score, and they also showed a larger effect size than the control group, supporting the claim that image-schematic speaking instruction can be an effective method for improving EFL learners' speaking skills. The authors conclude that when EFL instructors integrate Image Schemas into their speaking instruction it can provide meaningful cognitive scaffolding and ultimately lead to better oral performance by students.**Keywords:** Image Schema Theory, Speaking Ability, EFL Learners, Cognitive Linguistics, Oral Communication

الملخص

تتناول هذه الدراسة أثر التدريس القائم على المخططات التصويرية في تحسين مهارات التحدث لدى طلاب اللغة الإنجليزية كلغة أجنبية. باستخدام تصميم شبه تجريبي، شملت الدراسة مجموعتين: تجريبية وضابطة، ضمت كل منهما ٣٠ طالبًا من طلاب السنة الأولى الجامعية، تم اختيارهم من بين ٢٠٠ طالب. أُجري اختبار قبلي وبعدي لتقييم أداء الطلاب في الطلاقة، والترابط، والدقة النحوية، واستخدام المفردات، والنطق.تلقت المجموعة التجريبية تدريبًا قائمًا على أنشطة التحدث باستخدام المخططات التصويرية، بينما تلقت المجموعة الضابطة تدريبًا باستخدام أساليب التحدث التقليدية. أظهرت نتائج الاختبار البعدي تحسنًا ذا دلالة إحصائية لصالح المجموعة التجريبية، مع حجم تأثير كبير ، مما يدل على فعالية التدريس القائم على المخططات التصويرية في تطوير مهارات التحدث لدى الطلاب. وتخلص الدراسة إلى أن دمج المخططات التصويرية في تدريس التحدث باللغة الإنجليزية كلغة أجنبية يوفر دعمًا معرفيًا ذا مغزى ويؤدي إلى تحسين الأداء الشفهي.**الكلمات المفتاحية:** نظرية المخططات التصويرية، مهارات التحدث، متعلمو اللغة الإنجليزية كلغة أجنبية، اللغويات المعرفية، التواصل الشفهي.

Introduction

A major product skill in foreign language learning is speaking as it is an important measure for measuring learners' communicative competence (Ayvazova, 2022). Despite several decades of teaching English as a foreign language, many EFL learners, especially those studying at universities in Iraq, continue to encounter significant difficulties in producing coherent and fluent speech. Even though these learners have demonstrated some understanding of the grammar of the language and have developed sufficient vocabulary, they still find it difficult to generate spontaneous oral production in communicatively meaningful situations. The traditional methods of speaking instruction tend to focus on correct usage of grammar, rote memorization, and controlled speaking practice, thus limiting their ability to create organization of meaning and spontaneously speak in an authentic communication setting. Consequently, learners are unable to clearly articulate ideas and are unable to maintain coherence when communicating orally (Pavlovskaya et al., 2022).In recent years, there has been an increasing emphasis within the field of Cognitive Linguistics on the view that language acquisition is rooted in embodied experience and conceptual organization (Tyler, 2012)). As such, within this framework, Image Schema Theory posits that learners utilize recurring mental patterns developed through their bodily and spatial experiences to organize meaning. Thus, for speaking, these image schemas serve as cognitive organizers that aid learners in organizing ideas, maintaining coherence and facilitating more fluent expression of meaning (Holme, 2012). Therefore, by integrating image schema-based instructional methods into EFL speaking classes, learners may be provided with effective cognitive support which will assist them in producing better quality oral language (Gao & Fan, 2013).Therefore, the purpose of this research study is to examine the impact of image schema-based instruction upon improving the speaking ability of EFL University students through a quasi-experimental design. More specifically, the study seeks to determine if students who were instructed through image schema-based speaking activities performed better than those who were instructed using traditional speaking methods, with respect to fluency, coherence and total oral performance (Mandler & Cánovas, 201٤). For a considerable amount of time, the Iraq EFL environment has restricted students from developing their speaking skills through test preparation based instruction and limited access to actual language use. Additionally, within this same environment there is an emphasis placed on the accuracy of grammar over communication abilities; as such, university students are frequently unable to participate in interactive oral conversations (e.g., Azeez, 2025) with meaningful interactions for purposes of developing their fluency and confidence. As a result of these environmental barriers, it is necessary for instructors to utilize instructional methods that are cognitively-based and will assist students in constructing meaning and creating coherence in their spoken language.

1.1. **Importance of the Study**The research has great value to the field of English Language Teaching (ELT) as the first application of cognitive linguistics to pedagogical practices of developing EFL students' ability to speak, using Image Schema Theory as a theoretical basis for its pedagogical work and as such providing an innovative alternative to the well-known grammar-based methods of teaching speaking skills and emphasizing instead the organization of concepts through embodied cognition.In addition, the research provides practical results for EFL teachers and curricula developers/educators, especially for those working in the universities of Iraq, with some instructional methods for improving learners' oral fluency and coherence. In view of the fact that the EFL learners from Iraq have been having for years problems with their speaking proficiency, this research will provide empirical evidence which can be used for better teaching of speaking.

1.2. Aim This study is intended to evaluate how Image Schema-based instruction affects the spoken language abilities of university level EFL students. More specifically, it will assess whether such an educational method can improve fluency and coherence in spoken English for EFL students, as well as compare the speaking performances of students receiving Image Schema-based instruction with those receiving traditional speaking education methods using quasi-experimentation.

1.3.Hypotheses of the Study

The study will test the following null hypotheses:

1) Null Hypothesis (H0): There are no statistically significant differences in speaking fluency in the post-tests for students who were instructed using an image schema-based method and students who were instructed using a traditional speaking method.
2) Null Hypothesis (H0): There are no statistically significant differences in speaking coherence in the post-tests for students who were instructed as part of the experimental group versus the control group.
3) Null Hypothesis (H0): There are no statistically significant differences in the total speaking ability of students in the experimental group versus students in the control group in the post-test.

1.4.Value of the Study

This research has value because it is centered on speaking as a fundamental element in EFL teaching and in the development of communicative competence. In addition to demonstrating the usefulness of using image schema-based instruction to improve learner's conceptual organization and ability to speak orally, the effectiveness of this methodology is shown through a study of effectiveness.These results could be helpful for

EFL teachers, teacher trainers, supervisors and curriculum developers by offering empirical evidence about how to improve speaking instruction in classrooms.
1.5.**Limits** First year English for Foreign Language (EFL) learners in the Department of Basic Education at the College of Basic Education, Diyala University in the academic year 2024-2025 are the subject population of this research. This research has a restricted focus with regard to the type of language skill in question; that being said, it has an exclusive focus on speaking abilities and is theoretically bound by its use of Image Schema Theory within the context of EFL instruction.
1.6.**Definitions of the Basic Terms**For the purpose of clarity, the key terms used in the present study are defined as follows:
1.6.1.**Speaking** The productive oral skill of speaking is defined as the ability to create meaning through articulating sounds in a manner which produces an effective communication in a given communicative context. The definition of speaking ability for purposes of this research project are based on five aspects of student performance (fluency, coherence, grammar, vocabulary, and pronunciation) as assessed by the speaking test.
1.6.2.**Image Schema**Image Schemas are Recurring & Dynamic Embodied Experiences That Form The Structure Of Human Reasoning And Understanding (Johnson, 1987) . Image Schemas Function As Cognitive Frameworks To Organize Learners' Meaning During Spoken Language Production (In Context With This Study) .
1.7.**Problem Statement**Even though they have had a long time to learn English through instructional programs, many Iraqi EFL university students are still unable to speak English fluently, clearly, or with confidence. The inability to communicate orally continues even when learners have a base level of grammar and vocabulary. Speaking instruction has traditionally focused on rote memory and emphasis on accurate grammar use and controlled drills that do not activate the thinking processes required for free flowing and meaningful spoken communicationThis issue appears to be most prevalent in freshman college students who are unable to organize their thoughts and express them effectively in real-life communicative settings. Therefore, the objective of this current study was to see if image schema-based instruction (an embodied form of cognition) could greatly improve the ability of EFL learners to verbally communicate by assisting learners in organizing concepts and producing oral language.This study chooses image schema theory as its theoretical foundation because it focuses on embodied cognition and conceptual organization. Unlike traditional linguistic approaches that view language as a rule-based system, image schema theory explains how meaning arises from recurring embodied experiences. This theoretical approach is particularly important for oral language teaching because it helps learners construct concepts before verbal expression.
2.Theoretical Framework
2.1 Image Schema Theory: Origins and Foundations
The Image Schema Theory is based on the views of Cognitive Linguistics and Grounded Cognition (Lakoff, 2005; Tseng, 2007), that is, it emphasizes the role of the body’s interaction with the environment in developing human cognition and constructing meaning.Based on the above view, cognitive structures grow out of the repeated sensorimotor interactions humans have with the physical world and therefore they are foundational for the organization of the way people conceptualize their understanding (Tseng, 2007).Image schemas are recurring forms of thought and knowledge that originate in the embodied experiences that humans have with their environment, especially with respect to space, motion and forces (Gibbs, 2005).These schemas evolve during the course of cognitive development and form abstract representations that organize the way people reason and understand the meanings of language. The common schemas of CONTAINER, PATH, SOURCE-PATH-GOAL and SUPPORT underlie both concrete and abstract language use (Meade & Cubey, 2013).According to Oakley (2007), a picture schema is "a condensed description of perceptual experience used to map spatial structures onto conceptual structures" (p. 215). For ease of understanding, we can consider a picture schema as a compound word composed of the two separate words "picture" and "schema." A picture is a mental representation of our sensory perceptual experience (Croft & Cruse, 2004). For example, with our eyes closed, we can imagine a sweater; the resulting mental image typically contains detailed information about the object, such as its size, shape, color, and texture.Unlike pictures, which are based on personal experience and knowledge, a schema is a more generalized and abstract cognitive structure in mental space that can be triggered by the appearance of similar situations. Therefore, a picture schema can be understood as a schematic version of a picture. Picture schemas are both "pictorial" and "schematic" in some respects because they represent abstract generalizations of various sensory experiences of the world (Tay, 2021, p. 161). As Li (2007)

summarized, image schemas are abstract structures derived from the external world; they are based on embodied philosophy and organize seemingly unrelated experiences into certain common structures.

In language learning, image schemas represent the conceptual basis for how learners can structure their thinking about meaning and how they can develop a framework for developing their own discourse. When learners link the expressions of language to embodied cognitive patterns, they are able to better comprehend and produce language within a meaningful communication context. As shown in Figure (1), image schemas mediate the relationship between L1 and L2.

Image Schemas

L1 ………………… L2

Figure 1. Relationship between L1, L2 and image schema (Morimoto & Loewen, 2007).

2.2. Image-schema-based instruction (ISBI)

Image-schema-based instruction (ISBI) is defined as a kind of pedagogical method by which the process of vocabulary instruction is mediated by the use of image schema (Morimoto & Loewen, 2007). As is aforementioned, the types of image schema are limited; however, the events or experiences in the physical are various and infinite. Therefore, based on this prerequisite, instead of instructing the various meanings of words exhaustively, ISBI aims at providing learners with the basis (i.e., core meaning) on which they can grasp, process, and transmit what has been taught and comprehend the novel usages in different contexts. Many researchers have stated the benefits of ISBI from the theoretical perspective (Khodadady & Khaghaninizhad, 2012; Makni, 2014;Mitsugi, 2018; Morimoto & Loewen, 2007; Tyler & Evans, 2004), and its main rationale can be accounted for from the following aspects.First, the employment of image schemas can help learners understand the core meaning of the words and how the peripheral meanings are interconnected with the core meaning. By acquiring the underlying image schemas, learners can have a deeper understanding of the motivation of the meanings of words. Also, learners can understand how the metaphorical senses in the different contexts are derived from the prototype. If learners can become aware of the cognitive mechanisms of polysemous words' meaning formation, it is reasonable that they will learn and use these words easier than those who are not being taught (Csábi,٢٠٠٤)Second, with the instruction of underlying image schemas, more resources can be employed by learners to comprehend the word meanings other than overrelying on the equivalents in their first language. Traditional vocabulary teaching often applies translation-based instruction with which learners tend to connect the word meanings with their first language equivalents. However, it is often the case that the meanings of words in different languages are not strictly equal to each other and there often exist some nuances in the semantic ranges of the seemingly equivalent words. Figure shows the process of how image schema can help learners comprehend the word meanings of the second language without being constrained by their mother tongue Thirdly, since ISBI can receive more learners' attention for the similarities of the word meanings, therefore learners can gain a clearer understanding of their meanings by scrutinizing how they relate to and differ from each other. It is a valid point in that based on the levels-of-processing theory proposed by Craik and Lockhart (1972), ISBI involves the learning of vocabulary at a deeper cognitive level with more cognitive efforts, thus the word learning process and the retention over time can get enhanced.

2.٣ Characteristics of Image Schemas

There are several key features of image schemata that enable them to function as productive and useful cognitive instruments for the acquisition of second language skills. Firstly, as embodied, image schemata emerge from the body's interactions with the environment (for example, moving through space; interacting with physical objects), and secondly, they are repetitive (developing from repetition and evolving into stable cognitive patterns) image schemata occur repeatedly throughout an individual's lifetime. In addition to being embodied and repetitive, image schemata develop before language develops, thus providing a foundational concept for the development of linguistic meaning (Hedblom, 2020). Furthermore, as Hedblom (2019) has demonstrated, image schemata have the ability to be modified to fit many different contexts for communication, and finally, image schemata are both spatially/motorically based and represent basic concepts (such as direction, containment, force), that structure spoken discourse.

2.٤ Image Schema Theory and Language Learning

Language is not an independent, self-contained symbolic system; it is a way to express human experience and conceptually represent the world (Perlovsky, 2007).Image schemas support students as they learn language by enabling them to develop their own concepts of meaning, and to understand the underlying semantics For second-language learners, image schemas are instrumental in assisting students with developing a relationship among concepts, organizing information spatially and temporally, and creating a coherent body of discourse (Halliday & Matthiessen, 2006).Furthermore, the mental schemata that image schemas provide to students enable the sequencing of events, the organization of logical argumentation, and the expression of abstract ideas; therefore, students are able to generate meaningful and logically ordered language.

2.٥ Image Schemas and EFL Speaking Skill Development

To be able to speak effectively you need more than language skills; you also have to be able to organize your thinking and say it in a coherent manner. While many English as a foreign language (EFL) students have enough vocabulary and grammar to adequately express themselves, they often fail to structure their thoughts when speaking. This is where image schemas come into play. They provide cognitive aids for organizing ideas prior to speech (Bhagwani, 2023).Using the Path schema, for example, allows students to organize narratives and sequences of events logically. Students using Source-Path-Goal schemas are better able to articulate clear opinions and arguments. Spatial schemas aid students in maintaining coherence and in making smoother transitions between ideas in spoken discourse. Overall, teaching students how to use image schemas leads to increased fluency and overall communicative competence.(Williams, 2019).

2.٦ Factors Affecting EFL Speaking Performance

The EFL speaking performance is shaped by an array of linguistic (including grammar, vocabulary and pronunciation), cognitive (e.g., processing time, memory, organizing concepts) and affective (e.g., anxiety and confidence levels) and instructional (e.g., methodologies, classroom activities) factors. Instructional factors specifically have a direct effect on the way students develop their speaking skills as do instructional techniques and classroom activities. Image-schema based instruction attends to both the instructional and cognitive aspects of learning through the provision of organized mental models for students to create structure and organize their thinking related to meaning and spoken language production.(Dewi & Wilany, 2022).

2.7 Cognitive Load and Image Schema-Based Instruction

Cognitive Load Theory suggests that learners' performance is influenced by the amount of mental effort required to process information during learning tasks. When speaking in a foreign language, learners often experience high cognitive load due to the simultaneous demands of grammar, vocabulary retrieval, pronunciation, and idea organization(Jung & Kim , 20٢٢).Schema based instruction using image schemas will help to decrease cognitive load for students, because they have already been provided with an organized concept structure. The schemas are like "mental maps" that assist students to concentrate their thinking on expressing language, and not generating ideas. Consequently, students may develop a higher degree of fluency and coherence in their spontaneous speech, while reducing the cognitive processing requirements that accompany it; therefore enhancing their overall speaking performance (Blissett et al., 2015)Cognitive processes have been proven to affect how students process, retain and are able to apply knowledge about what they learn from instructional materials. In fact, numerous studies on today's instructional design field have demonstrated that effective instructional materials are created using the same cognitive frameworks that students use when processing instructional content. (Tindall-Ford et al., 2020)Additionally, the theory of Cognitive Load Theory (CLT) provides researchers with an appropriate cognitive framework for understanding limitations of working memory and how such limits can impact a student's ability to learn. Also, Image Schema-Based Instruction has also developed into a viable pedagogy that uses concepts related to Embodied Cognition to support students' learning in meaningful ways. Combining cognitive load theories with Image Schema-Based Instruction creates a comprehensive model for developing instructional designs that are both cognitively efficient and conceptually rich. (Van Meteris et al., 20٢٠)In this section we investigate the cognitive load/image schema connection; we also discuss how image schemas serve as cognitive tools that lessen the amount of mental effort required by learners, as well as promote better conceptual comprehension.The Cognitive Load Theory assumes that working memory of humans has an upper limit for both processing capacity and processing duration. The process of learning occurs when the learner's working memory is able to process new information and encode it from short-term memory into long-term memory in the form of organized schemata (Sweller, 2010). However, when instructional materials are placed upon a learner, requiring an excessive amount of processing power in order to be processed in working memory, learners will suffer from cognitive overload; thus, reducing the effectiveness of learning regardless of the learner's motivation, prior knowledge etc. (Meguerdichian et al., 20٢٠).Cognitive Load has been categorized as 3 different types, each are related to one another. Intrinsic Cognitive Load is determined by how difficult the learning subject is to understand (the amount of complex information and how much interaction there is between each piece) . Concepts that are complex with many parts that interact with one another have an Intrinsic Cognitive Load greater than those which are simple or stand alone. However, Intrinsic Cognitive Load can never be removed but it can be managed through sequencing, providing scaffolding, and gradually increasing the difficulty of tasks)Sweller, 2011.Unlike Intrinsic Cognitive Load, Extraneous Cognitive Load is the cognitive load created from the manner in which information is being displayed versus the information itself. Poor instructional design can create high amounts of extraneous cognitive load, i.e., redundant explanations, requiring learners to split their attention between two pieces of information at the same time, or including information that does not pertain to the topic. A major objective of effective instructional design is to reduce extraneous cognitive load)Sweller, 2011).The third type of cognitive load is Germane Cognitive Load, which is the mental effort required to build, refine, and automate schemata. Unlike Extraneous Cognitive Load, Germane Cognitive Load is beneficial and contributes directly to the learning process. Instructional designs that promote meaningful engagement, conceptual connections, and active processing increase Germane Cognitive Load and promote long term understanding. (Paas & Ayres , 20٢٢).

2.7.١. Image Schemas and Embodied Cognition

Image Schemas are general and dynamic cognitive (thought) structures based on a recurring pattern of experience of embodied humans. As such, Image Schemas arise from repeated interactions with our environment - both the physical world, and society. This provides us with basic patterns to organize how we perceive and interact with our world, as well as think about it) Sweller, 2011.Some common examples of Image Schemas are: Containment; Path; Balance; Force; Source–Path–Goal; Center–Periphery. Although these Image Schemas exist prior to language, and usually outside of conscious awareness, they help structure much of our abstract thinking) Kryshtaliuk, 2012. Embodied Cognition is the theory behind Image Schemas, which asserts that cognition is not exclusively abstract or symbolic, but is tied to the body and its experiences(Hedblom, 2019).For instance, abstract concepts are commonly understood by using more concrete, sensorimotor experiences through metaphors (e.g., "progress" is represented as moving along a path; "control" is represented as being in balance) because of their connection to image schema use in reasoning)Tay, 2021).As an educational tool, image schemas act as cognitive "bridges" that connect students' experiences with how they experience their world to the abstract academic concepts they need to learn. When instructional content either directly or indirectly accesses one of these relevant image schemas, students can use it to "anchor" their learning of new material to something they already understand and therefore, they can better comprehend the material and integrate it into their existing knowledge.

2.7.٢. Image Schema-Based Instruction and Cognitive Load Management

The Image Schemata based Instruction is very much aligned with the core tenets of Cognitive Load Theory, specifically in terms of its ability to control both extraneous and germane cognitive load. The presentation of information using learner's pre-existing embodied schemata enables learning to occur less as a product of complex mental operations, and therefore provides additional working memory resources to learners' meaningful processing needs instead of learners having to use those same working memory resources for decoding and interpreting rich (Szulewski et al., 2021).Based on a cognitive load framework, the image schema-based instruction reduces extraneous cognitive load by making representational formats more simplistic and more conceptually coherent. Rather than presenting abstract concepts as isolated entities or through lengthy and dense verbal descriptions, the instruction based on image schemata represents abstract concepts in an intuitively understandable format. Therefore, learners are able to devote their efforts to identifying the essential relationships and underlying principles of what they are studying.(Sweller, 2020)The instructional use of images, based on an image schema, promotes germane cognitive load, as it requires learners to take a concept and map it onto their prior image schemas or create a new one. This process of creating and refining schemas is much more than just memorization, it allows for more cognitively deep processing which aids understanding and application. Therefore, using image schemas changes how a learner uses their cognitive resources and from being non-productive, they become a resource used for meaningful learning. (Hanham et al., 20٢٣).

2.7.٣. Educational Implications and Instructional Design

Designing instruction using cognitive load principles and image-schemabased methods has a number of important implications for the practice of instructional design. Educational practitioners and educational developers should identify relevant cognitive patterns (schemas) within their learning material, and assess how they may be used to enhance the learner's understanding of the material as part of a broader assessment of the learning material's inherent difficulty. Once identified, these schemas can be activated through a variety of means including, but not limited to, images, analogies, spatial metaphors, and structured narratives (Ginns & Leppink, 2019)This method is especially useful when working with learners who are attempting to develop coherent mental models in abstract and/or complex domains. By teaching through the use of embodied schemas, educational practitioners can assist students in developing clear concepts, and reduce the possibility of cognitive overload associated with instructional material. Additionally, instructional designs that use image-schemabased instructional design support the development of transferable knowledge by allowing students to apply similar cognitive processes to new situations.(Sweller, 20١٦).Cognitive Load Theory and Image Schema-Based Instruction offer two interdependent ways to design and develop an effective, well-organized, and well-designed environment to support and facilitate successful learning and effective teaching. Cognitive Load Theory offers a way to understand how we process information from our working memory, as well as the need to control mental effort. Similarly, image schemas provide a method to conceptualize and teach abstract concepts by connecting them to students' embodied experiences. Combining the two theories creates a basis for developing educational models that are both cognitively efficient and pedagogically effective.Instructional strategies using image schema reduce unnecessary cognitive load, enhance the cognitive processes necessary for acquiring new knowledge (germane), and facilitate the development of schema which enhances the student's ability to retain, comprehend, and apply learned content. Therefore, this is a theoretically supported, practical, and effective strategy for designing, implementing and delivering successful educational programs in higher education, as well as other advanced academic settings, including research-based instruction and professional learning environments.

3.Literature Review

3.1 Studies on Schema Theory and Language Learning

While previous studies have highlighted the influence of Schema Theory with regard to how students process, and organize linguistic information when acquiring a second or foreign language, Crowley (2022) analyzed the limitations of organizing a linear syllabus in foreign language education and demonstrated that both retention and productive language usage will be negatively impacted in second language environments when using a linear approach. Crowley used schema theory and memory to create a "spiral" syllabus that would allow the learner to enhance their schematic networks and improve the process of acquiring a second language. In addition to the work of Crowley (2022), Nassaji (2007) identified the potential of using schema theory to further understand knowledge based processes and the role of schema theory in improving second language reading comprehension. While Nassaji's focus was on receptive skills, the implications of her findings are applicable to productive skills such as speaking, and she supported the idea that there is a relationship between the cognitive organization of language and successful language comprehension.

3.2 Studies on Speaking Skill Pedagogy

In addition to a large body of research on effective instructional practices for developing learner’s speaking abilities in both second and foreign language learning environments; El Majidi et al., (2024) studied debate based instruction as an approach to develop L2 speaking abilities. Their results showed that students who participated in interactive speaking tasks, improved their ability to communicate through increased fluency, accuracy, coherence and vocabulary use. These findings support the belief that to develop speaking skills, instruction should be cognitively engaging and should involve meaningful language use.

Abdurahmonova (2021) also supported the belief that interactive and learner centered instruction is essential for the improvement of student speaking performance and she highlighted the importance of instructional design to facilitate students' ability to engage in oral communication.

3.3 Studies Specifically on Image Schema in Language Teaching

Cognitive linguistic research has also shown how image schemas can be used to teach students language. Shaffer (2004), found that using image schemas and conceptual metaphors in EFL instruction was useful; he believed that if teachers incorporated cognitive linguistic ideas into coursebooks students would have a better chance to understand the abstract meanings of words.Morimoto and Loewen (2007), studied whether image schema based instruction was an effective way to teach students polysemous words; they concluded that there was no difference between the two ways to teach polysemous words (image schema or translation); however, when the context of the image schema was appropriate the image schema method was superior to the translation method. The studies above demonstrate the value of image schemas in language learning, but both studies were limited to vocabulary and semantics and did not address the student's ability to use productive skills, i.e., speak.

3.4 Research Gap While there has been a considerable amount of research related to schema theory and image schema–based instruction in second language acquisition, much of that research has been limited to vocabulary acquisition (polysemy, metaphors, etc.) and receptive skills (reading comprehension) rather than productive skills like speaking. In addition, while other research has explored how interactive teaching methods can influence speaking abilities, it has not typically relied on explicit applications of cognitive linguistic theory.

As a result, there is little direct empirical research evaluating the impact of image schema–based instruction on EFL students' speaking abilities, particularly within university settings. Moreover, there is an even smaller body of research concerning how image schemas may be used to enhance fluency, coherence, and general spoken proficiency. The current study addresses these limitations by providing evidence on whether or not image schema–based instruction positively influences EFL university students' speaking abilities.

3.5 Validity of the Speaking Test

To ensure content validity, the speaking test was carefully designed to reflect the objectives of the study and the key components of speaking ability. The test tasks were aligned with the instructional objectives and reviewed by specialists in English language teaching. This process ensured that the test accurately measured fluency, coherence, grammar, vocabulary, and pronunciation.

4. Methodology

4.1. Research Design

the quasi-experimental study employed a research design that allowed for the comparison of two groups (an experimental group & a control group) to assess the effects of image-schemata based EFL instruction on students' speaking abilities. the quasi-experimental research design was used because this type of research design would allow for controlled comparisons of both groups when randomization of subjects are not possible under classroom settings.

A speaking pretest was administered to both groups before the instructional intervention, then both groups received the speaking post test after the instructional intervention to be able to determine if the instructional treatment produced any change in speaking performance.

4.٢. Population and Sample

The population included 200 first-year English as a Foreign Language (EFL) students that attended The College of Basic Education, at Diyala University. Of these, a random selection of 60 students formed the basis for the sample with each of the 2 groups consisting of 30 students; an Experimental Group (the treatment group) and a Control Group (the comparison group). Both groups contained students who were similar in terms of their language skills ability and education background. This is evidenced by the findings from the speaking pre-test.

4.3. Instruments

4.3.1 Speaking Test

Speaking tests were used as the major tool for collecting data; it was given as both a pre-test and a post-test. It was made up of structured speaking activities that were designed to produce spontaneous speech by students (i.e., a series of short monologues and guided speaking topics)

The speaking performances of students were evaluated based on how well they produced the following characteristics of fluent and coherent speech: fluency, coherence, grammar, vocabulary and pronunciation.

4.3.2 Analytic Speaking Rubric

A comparative scoring rubric was used to evaluate how well students spoke on all of the criteria and components as a whole. The Rubric provided clear descriptors for each component to assist the rater(s) to be consistent and objective when they were rating the students' speaking performances. To increase the reliability of the scores from the speaking performances, two independent and trained raters scored the same performance and then averaged their ratings together to determine the final average score for each student.

4.4. Reliability of the Speaking Test

Reliability of the Speaking Test - Cronbach's Alpha Coefficient The reliability of the speaking test was assessed using Cronbach's Alpha coefficient to examine internal consistency. A reliability coefficient of $\alpha = .87$ was obtained in this assessment, which indicates a very high level of reliability and confirms that the speaking test is an appropriate measure of students' speaking ability.

4.5. Procedures

This experimental design method took place over eleven (11) weeks; each phase of the study was structured in a systematic manner. The first two (2) weeks involved administering a speaking pretest for all participants (experimental group and control group) to establish baseline equivalency. By administering a pretest before beginning the research, it provided participants a chance to get comfortable with the format of the test and therefore decrease testing anxiety; in addition, it established an accurate measurement of participant's performance.Weeks three (3) through ten (10) of the study were dedicated to providing instruction to the experimental group by implementing Image Schema based speaking activities. These Image Schema speaking activities included Visual Schema Charts, PATH and SOURCE–PATH–GOAL Schemas for organizing narratives, CONTAINER Schemas to express opinions and Kinesthetic Mapping Tasks to assist participants in developing their embodied learning.The Control Group also received speaking instruction but the Control Group received traditional speaking instruction that included teaching and instruction in areas of explicit grammar explanation, repetition, controlled dialogues and reading aloud activities.All participants received the Speaking Post-Test in the eleventh week of the study. The post-test used the same format as the pre-test. The data collected from the post-tests were analyzed statistically.

4.6 Statistical Assumptions

Prior to conducting statistical analyses, assumptions related to normality and homogeneity of variance were examined. Preliminary analysis indicated that the data met the assumptions required for the application of independent samples t-tests, ensuring the appropriateness of the selected statistical procedures.

5. Results

5.1. Results of the Pre-test

Before the instructional treatment was implemented, the speaking abilities of the experimental group and the control group were assessed through a speaking pre-test. The experimental and control groups' speaking ability were compared through an independent samples t-test using the pre-test scores for each group.There was no statistical significance found in the t-test comparing the average speaking score of the experimental group (M = 14.54; SD = 4.09) with the average speaking score of the control group (M = 13.85; SD = 4.56) at the .05 alpha level (t = 0.67), supporting the conclusion that the two groups exhibited similar speaking abilities prior to the use of Image Schema–Based Instruction.

Table (1) The Mean, Standard Deviation and T-value of the Students' Achievement on the Pretest

Group	No.	M	SD	Df	T-value	
					Calculated	Tabulated
EG	30	14.542	4.094	67	0.67	1.99
CG	30	13.852	4.557			

This result shows there was no statistical evidence of a difference between the experimental group and the control group at 0.05. The data supports that the two pre-test groups had comparable speaking ability when this study began implementing image-schema based instruction.

5.2. Results of the Post-testA Speaking Post-Test was conducted for both the control and experimental groups to assess if there is a statistical difference between the two groups' speaking abilities as a result of the image-schema based instructional method used by the researcher. The researcher calculated the mean and standard deviation for both the control and experimental groups' post-test scores. A T Test for Independent Samples was then calculated with a level of significance set at .05.The results indicated that the experimental group (Mean=20.14; Std Dev.=4.62) outperformed the control group (Mean=14.06; Std Dev.=4.93) by a margin of 6.08 points and that this difference is statistically significant (T = 5.29; P = .000). Thus, students receiving image-schema-based instruction produced better speaking performances than did their peers receiving traditional instructional methods.**Table (2) The Students' Results of the Post-test**

Test	Group	No. of Pupils	Mean	SD	df	Calculated t-value	Tabulated t-value

No.	EG	30	20.142	4.619	67	5.289	1.99
No.	CG	30	14.059	4.928			

Results indicate a statistical significance between the two treatment groups (experimental vs. control) with an advantage to the experimental treatment group indicating that the students receiving schema-image based instruction performed better than students who were instructed traditionally on total speaking performance.

5.3.Effect Size

The study applied the Cohen's d method of measurement in order to assess the instructional influence concerning the "practical" or "educational" worth of the instructional method for students' development of their ability to speak English. The findings showed an exceptionally large instructional effect (d = 1.27), indicating that the instructional method produced a significantly positive effect on students' ability to speak English. Consequently, along with the existence of a statistical difference among the two groups of students, the data indicate that this difference has some educational implications. In other words, the instructional method was both statistically significant and educationally effective.

6. Discussion

This research's findings show a positive correlation between using an image-schemas-based instructional methodology for teaching English as a foreign language (EFL) and improvements in the students' ability to speak English. The statistical significance of the experimental group's gains on the speaking measures supports the rejection of the null hypotheses for this study and clearly illustrates that the instructional method used was effective.The improvement in student's speaking performance is due in part to the use of image schemas as organizational structures for cognition which enabled learners to better structure their understanding of meaning prior to expressing it orally. Learners utilized the schemas (i.e., PATH, CONTAINER and SOURCE–PATH–GOAL), to make the organization of their thoughts clearer, to provide a framework for organizing the ideas in a logically sequenced manner, and to speak with greater fluidity and coherenceThe results from the current research support the literature from other researchers who have conducted similar research in cognitive linguistics. Specifically, research by Morimoto & Loewen (2007) and Shaffer (2004) identified the efficacy of using image-schema as a basis for developing comprehension in semantics; thus, the current study expands upon these researchers by identifying an additional function for image-schemas (i.e., the facilitation of productive language skills including speaking).Additionally, the results from the current study support the literature which emphasizes the value of both interactive and cognitively-oriented instructional methodologies in the teaching of speaking skills. The utilization of visual/kinesthetic schema-based activities may have decreased learners' cognitive load while producing speech thereby enabling learners to concentrate their attention to a greater degree on aspects of speech production such as fluency, coherence and vocabulary usageThe significant improvement observed in the experimental group can be attributed to the structured cognitive support provided by image schemas. These findings align with Cognitive Linguistics research emphasizing the role of embodied conceptualization in language production.Theoretically, this study extends the application of Image Schema Theory beyond vocabulary and comprehension to include productive language skills. By demonstrating its effectiveness in improving speaking performance, the study contributes to the growing body of research supporting the pedagogical relevance of cognitive linguistic theories in EFL contexts.

7. Conclusion

This study found that image schema-based teaching was more helpful than traditional approaches for improving students' ability to speak English as a foreign language (EFL) at the university level. Additionally, the study found that the students who were taught using an image schema approach had significantly better speaking skills than their peers who were taught with other methods.That is, the improvements in the students' speaking abilities indicate that the image-schemas based teaching method supported students in developing their conceptualization, facilitated coherent communication, and helped them develop more fluid spoken language. Therefore, this research provides support for the idea that by incorporating cognitive-linguistic theories into EFL speaking instruction, students are able to learn more meaningful and successful aspects of the language.

8. Limitations and Future Research

Although the findings of this study are promising, certain limitations should be acknowledged. The study was conducted with a relatively small sample size and within a single institutional context. Future research may replicate the study using larger samples, different educational levels, and extended instructional periods to validate and generalize the findings further.

9. Recommendations

The conclusions of this study can help guide a number of recommendations for future practice. In order to improve EFL student's ability to speak fluently and coherently, instructors should use an image schema approach in their speaking classes. Additionally, EFL curriculum developers can include various visual and conceptual schema-related activities that relate to the speaking section of the course in their speaking curricula.EFL educators would benefit from attending workshops or courses that provide them with the opportunity to learn how to apply image schema-related teaching approaches in the classroom. Researchers could continue to investigate whether the effects of schema-based instruction also impact other language skills (e.g., listening, writing) in the future; they could also explore using larger populations and longer time frames to confirm their findings.

References

• Ayvazova, E. R. (2022). COMMUNICATIVE SKILLS AS THE MAIN INDICATOR OF STUDENTS'LEARNING A FOREIGN LANGUAGE. In Охрана и защита прав и законных интересов в современном праве (pp. 785-791).

• Azeez, J. H. (2025). The Impact of Arabic Culture on English Language Learning: An Analysis of Iraqi Students. Journal of The Iraqi University, 72(2).

• Bhagwani Hemnani, B. M. (2023). The Development of Oral Interaction: The Use of Functional Language to Achieve Communicative Efficiency in the EFL Classroom.

• Blissett, S., Goldszmidt, M., & Sibbald, M. (2015). Do research findings on schema-based instruction translate to the classroom?. Perspectives on Medical Education, 4(6), 334-338.

• Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. Journal of Verbal Learning and Verbal Behavior, 11(6), 671–684.

• Croft, W., & Cruse, D. A. (2004). Cognitive linguistics. Cambridge University Press.

• Csábi, S. (2004). A cognitive linguistic view of polysemy in English prepositions. Cognitive Linguistics, 15(2), 233–252.

• Derakhshan, A., Khalili, A. N., & Beheshti, F. (2016). Developing EFL learner's speaking ability, accuracy and fluency. English Language and Literature Studies, 6(2), 177-186.

• Dewi, D. S., & Wilany, E. (2022). Factors Affecting Speaking Performance. Langua: Journal of Linguistics, Literature, and Language Education, 5(2), 112-122.

• GAO, Y., & FAN, Y. (2013). The Impact on Oral Communication Competence by Schemata—A Study on the Effectiveness of an Oral Teaching Model Based on Schema Theory. US-China Foreign Language, 11(9).

• Gibbs, R. W. (2005). The psychological status of image schemas. From perception to meaning: Image schemas in cognitive linguistics, 29, 113-136.

• Ginns, P., & Leppink, J. (2019). Special issue on cognitive load theory. Educational Psychology Review, 31(2), 255-259.

• Halliday, M. A. K., & Matthiessen, C. (2006). Construing experience through meaning: A language-based approach to cognition. A&C Black.

• Hanham, J., Castro-Alonso, J. C., & Chen, O. (2023). Integrating cognitive load theory with other theories, within and beyond educational psychology. British Journal of Educational Psychology, 93, 239-250.

• Hedblom, M. M. (2019). Image schemas and concept invention: cognitive, logical, and linguistic investigations (Doctoral dissertation).

• Hedblom, M. M. (2020). Image schemas and concept invention: cognitive, logical, and linguistic investigations. Springer Nature.

• Holme, R. (2012). Cognitive linguistics and the second language classroom. TESOL quarterly, 46(1), 6-29.

• Jensen, J. A., Head, D., & Mergy, C. (2020). Investigating sponsor decision.

• Jung, E., Lim, R., & Kim, D. (2022). A schema-based instructional design model for self-paced learning environments. Education Sciences, 12(4), 271.

• Khodadady, E., & Khaghaninizhad, M. S. (2012). Image schema-based instruction and vocabulary learning. Journal of Language Teaching and Research, 3(3), 490–499.

• Kryshtaliuk, A. (2012). The image-schematic dimension of English negation. Cognitive processes in language, 99-108.

- Lakoff, G. (2005). Image schemas: From linguistic analysis to neural grounding.
- Li, X. (2007). Image schemas in cognitive linguistics. Shanghai Foreign Language Education Press.
- Makni, H. (2014). The effect of image schema-based instruction on EFL learners' vocabulary acquisition. International Journal of English Linguistics, 4(3), 32–44.
- Mandler, J. M., & Cánovas, C. P. (2014). On defining image schemas. Language and cognition, 6(4), 510-532.
- Meade, A., & Cubey, P. (2008). Thinking Children: Learning About Schemas: Learning about Schemas. McGraw-Hill Education (UK).
- Meguerdichian, M., Walker, K., & Bajaj, K. (2016). Working memory is limited: improving knowledge transfer by optimising simulation through cognitive load theory. BMJ Simulation & Technology Enhanced Learning, 2(4), 131.
- Mitsugi, S. (2018). Teaching polysemous words through image schemas. Cognitive Linguistics in Second Language Acquisition, 9(1), 55–74.
- Morimoto, S., & Loewen, S. (2007). Image schema and second language vocabulary learning. Applied Cognitive Linguistics, 18(2), 347–367.
- Oakley, T. (2007). Image schemas. In D. Geeraerts & H. Cuyckens (Eds.), The Oxford handbook of cognitive linguistics(pp. 214–235). Oxford University Press.
- Paas, F., & Ayres, P. (2014). Cognitive load theory: A broader view on the role of memory in learning and education. Educational Psychology Review, 26(2), 191-195.
- Pavlovskaya, O., Nepshekueva, T., Kravchenko, E., & Minakova, P. (2022). The effectiveness of listening and speaking activities in developing students' communicative competence when learning a foreign language. sign, 1, 3.
- Perlovsky, L. I. (2007). Symbols: Integrated cognition and language. In Semiotics and intelligent systems development (pp. 121-151). IGI Global Scientific Publishing.
- Renandya, W. A. (2013). Essential factors affecting EFL learning outcomes. English teaching, 68(4), 23-41.
- Sweller, J. (2010). Cognitive load theory: Recent theoretical advances.
- Sweller, J. (2016). Cognitive load theory, evolutionary educational psychology, and instructional design. Evolutionary perspectives on child development and education, 291-306.
- Szulewski, A., Howes, D., van Merriënboer, J. J., & Sweller, J. (2021). From theory to practice: the application of cognitive load theory to the practice of medicine. Academic Medicine, 96(1), 24-30.
- Tay, D. (2021). Metaphor, thought, and experience. Cambridge University Press.
- Tindall-Ford, S., Agostinho, S., & Sweller, J. (2020). Advances in cognitive load theory. London: Routledge.
- Tseng, M. Y. (2007). Exploring image schemas as a critical concept: Toward a critical-cognitive linguistic account of image-schematic interactions. Journal of literary semantics, 36(2).
- Tyler, A. (2012). Cognitive linguistics and second language learning: Theoretical basics and experimental evidence. Routledge.
- Tyler, A., & Evans, V. (2004). The semantics of English prepositions. Cambridge University Press.
- Van Meteris, P., List, A., Lombardi, D., & Kendeou, P. (2020). Handbook of learning from multiple representations and perspectives. Routledge. https://doi. org/10.4324/9780429443961.
- Williams, R. F. (2019). The source-path-goal image schema in gestures for thinking and teaching. Review of Cognitive Linguistics, 17(2), 411-437.