



On the Effect of Content-Based Instruction over Iraqi Intermediate EFL High School Learners' Reading Comprehension and Vocabulary Learning

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Article Info	Abstract
Article History Received: 1 January 2024 Accepted: 1 March 2024	<i>Learning vocabulary is crucial to acquiring a second language. This study examined the effects of implicit and explicit vocabulary instruction on immediate and delayed memory of content words among Iraqi learners of English. The participants were 40 high school students, divided into experimental group (implicit guidance) and control group (explicit guidance). These treatments were conducted over 20 sessions in science classes. A pretest, immediate posttest, delayed posttest, and reading comprehension test were administered. Results showed that both implicit and explicit instruction resulted in significant vocabulary increases from pretest to posttest. However, the explicit group made larger immediate gains but also larger losses on the delayed test, whereas the implicit group retained more words in the long run. The experimental group also performed significantly better on a reading comprehension test. This study proposes a combination of implicit and explicit techniques, with implicit methods being more suitable for long-term storage.</i>
Keywords vocabulary learning, implicit instruction, explicit instruction, content-based instruction, reading comprehension, EFL learners	

Introduction

Vocabulary is considered a fundamental aspect of learning a foreign language and an important starting point for acquiring language skills (Sadeghi and Nobakht, 2014). However, the process of vocabulary learning involves a variety of complex skills, namely vocabulary acquisition, retention, and transfer (Schneider, Healy, & Bourne, 2002). It is generally believed that vocabulary teaching is very important in language teaching because it helps learners understand and express language (Stahl and Nagy, 2006). However, successful vocabulary learning has proven to be challenging because students must be motivated, actively participate in vocabulary instruction, and meet prescribed vocabulary learning standards (Stahl and Nagy, 2006).

Gass (1999) emphasizes the key role of vocabulary in language learning and states that the acquisition of a second language includes the acquisition of its vocabulary (p. 325). Similarly, Folse (2004) recognized the importance of vocabulary in language learning, a view supported by research and experience. Hunt and Beglar (2005) claim that dictionaries are central to language understanding and use (p. 24). McCarthy (1990, cited in Al-Hadlaq, 2003, p. 60) believes that without a wide range of words to express different words, no matter how well the grammar is learned or how well the pronunciation is learned, effective communication in a second language will not be possible impossible. is meaning.

Sadeghi and Nobakht (2014) suggested that a variety of strategies and techniques can be used to teach students new vocabulary and help them retain vocabulary (p. 66). Many studies (Brown & Perry, 1991; Avila & Sadoski, 1996; Zimmerman, 1997; Mora, 2000; Nation, 2001; Shapiro & Waters, 2005; Sagarra & Alba, 2006) have examined the effects of different methods on vocabulary learning. Zimmerman (1997) argued that combining reading and interactive vocabulary instruction can significantly improve vocabulary acquisition. Furthermore, at a certain level of language proficiency, most words are learned incidentally rather than through direct instruction. Nation (2001) emphasized the effectiveness of incidental vocabulary learning activities such as role-playing, ranking, and retelling.

An important area of vocabulary acquisition research is examining the effectiveness of implicit and explicit vocabulary learning, identifying effective strategies for implicit learning, and understanding the implications of research results for classroom vocabulary instruction. Although limited research (Souleyman, 2009; Alemi & Tayebi, 2011; Al-Darayesh, 2014) has explored this topic, this study aimed to explore the impact of two teaching models (implicit and explicit) on content-based teaching models effect in. Patterns of vocabulary retention among English language learners.

Several efforts have been made to find more practical and effective methods of teaching vocabulary (Alemi & Tayebi, 2011; Hassani, Zarei, & Sadeghpour, 2013; Demir, 2013). Although there are numerous studies on implicit and explicit vocabulary teaching, comprehension, retention, and the use of different types of annotations (Souleyman, 2009; Hashemzadeh, 2012; Marzban & Kamalian, 2013; Al-Darayesh, 2014), none compare A study of implicit and explicit vocabulary teaching, comprehension, retention, and use. Short- and long-term explicit instruction in a content-based environment to examine immediate and delayed

retention of content vocabulary among Iraqi English learners. The purpose of this study was to find out which type of instruction (implicit or explicit) leads to better and longer retention of content vocabulary in a content-based teaching environment.

In Iraq, teachers often use various methods and techniques in classroom activities to actively engage students in vocabulary learning. Teaching methods are very important in English classes. Researchers have recognized that vocabulary is an important foundation for language acquisition and reading comprehension. Typically, students need to learn and memorize vocabulary lists to expand their knowledge and apply them to understand passages (Al-Darayesh, 2014). Many Iraqi students have difficulty understanding passages that contain new words, resulting in comprehension difficulties. In this case, teachers should provide important instructions to help students decipher the meaning of unknown words (Shakouri, Mahdavi, Mousavi, & Pourteghali, 2014). Additionally, students often become frustrated because they forget vocabulary soon after learning it. Therefore, it is crucial to find effective strategies to help these students improve their classroom skills. The debate over whether implicit or explicit teaching promotes second language acquisition has been ongoing for a long time.

However, despite the many arguments in favor of content-based instruction, there is a lack of research on how foreign language teachers actually use and implement this teaching approach (cited in Pessoa, Hendry, Donato, Tucker, & Lee, 2007). Therefore, the purpose of this study was to explore the effects of explicit and implicit instruction on immediate and delayed vocabulary retention and reading comprehension performance of Iraqi English language learners in a content-based language teaching environment

Research questions

In order to achieve the purpose of this study, the researcher raised the following questions:

Q1. Does explicit instruction have a significant impact on immediate content vocabulary retention among Iraqi English learners?

Q2. Does implicit instruction have a significant impact on immediate content vocabulary retention among Iraqi English learners?

Q3. Does explicit instruction have a significant effect on delayed retention of content vocabulary among Iraqi English learners?

Q4. Does implicit instruction have a significant impact on delayed content vocabulary retention among Iraqi English language learners?

Q5. Does implicit and explicit teaching of content vocabulary have a significant impact on the reading comprehension performance of Iraqi English learners?

Review of Literature

A deep understanding of word meanings and the ability to access this knowledge effectively play a vital role in various language skills such as reading, listening, speaking, and writing (Blake, 2009). As McKeown (2002) emphasizes, vocabulary knowledge is considered fundamental to language understanding and use. Furthermore, Barra (2005) stated that students must have sufficient word knowledge to successfully understand text. In other words, understanding a language depends on the vocabulary the learner has mastered. Sufficient word knowledge is also crucial for understanding written text, as students cannot grasp the author's message until they understand the meaning of most words. Nation (2001) further stated that readers should be familiar with at least 97% of the vocabulary in a text to have a satisfactory understanding of it. Without adequate knowledge of key vocabulary, learners may experience significant difficulty in understanding information, highlighting the critical role that vocabulary knowledge plays in reading comprehension and the overall ability to comprehend written text. In addition, vocabulary acquisition can also improve students' language expression skills.

Curtis and Longo (2001) emphasized that vocabulary teaching is a key factor in improving students' reading, listening and speaking skills. However, they also recognize that achieving excellence can be a challenging task for teachers. It is important for teachers to consider not only what they teach, but also how they teach, taking into account students' developmental levels, interests, and experiences (Curtis and Longo, 2001). This understanding highlights the need for careful consideration of the methods used in vocabulary instruction. There are many variables to consider when making decisions about the teaching process and learning, and teachers can use method choices to create effective learning environments and define the types of activities that take place in the classroom. Therefore, teachers need to think about and implement effective and engaging vocabulary teaching strategies to promote an optimal learning environment (cited in Ahmadi et al., 2012).

Implicit and Explicit Instruction and Learning

Discussions about second language (L2) vocabulary development, teaching, and learning revolve around the ideas of direct learning, incidental learning, and the use of written materials for vocabulary acquisition (Souleyman, 2009). Ellis (2009) describes “mentoring” as an attempt to intervene in language development. He refers to language coaching as “indirect” or “direct” intervention (Ellis, 2005). Indirect intervention aims to create an environment in which an inexperienced person can learn how to speak a second language through experience (Ellis, 2009, p. 713). Direct intervention, on the other hand, determines what inexperienced individuals study in advance and regularly rely on established courses (Ellis, 2009, p. 16). Figure 1 shows the relationship between direct/indirect intervention and implicit/explicit imperatives of aid recommendations

Discussions about second language vocabulary learning focus mainly on different methods such as direct instruction, incidental learning, and the use of written materials. Direct instruction refers to conscious intervention in the learner's language development, while indirect intervention aims to create conditions for experiential learning. Direct intervention typically follows a structured curriculum that clearly specifies what learners need to learn. Ellis proposed a relationship between direct/indirect intervention and implicit/explicit teaching, as shown in Figure 1 . To sum up, there are many strategies and methods for second language vocabulary teaching, including explicit teaching methods and implicit teaching methods.

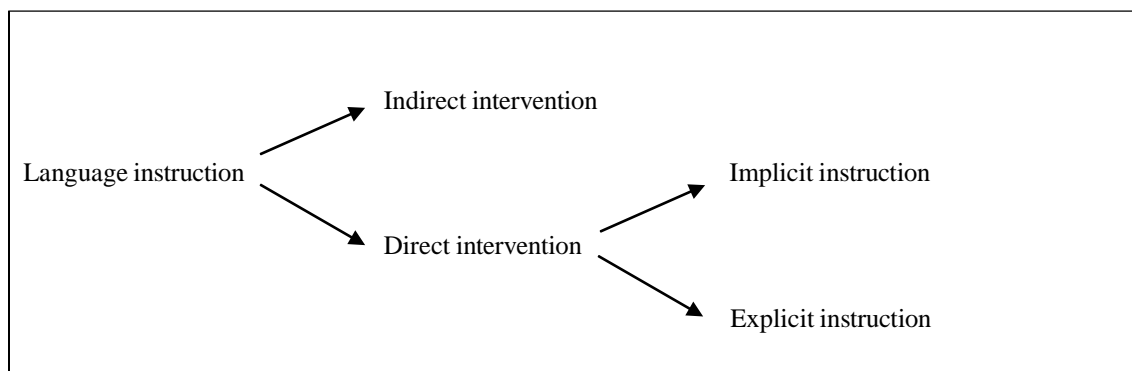


Figure 1. Types of language instruction (adopted from Ellis, 2009)

Research shows that vocabulary acquisition involves both implicit and explicit learning processes, and that these modes interact and influence each other (cited in Souleyman, 2009). According to Hulstijn (2003), learning a second language can be either conscious learning, where the learner consciously memorizes words and grammar, or it can happen incidentally by engaging in communicative activities such as reading and listening, where the focus is on meaning rather than content. form (e.g. citation). in Alemi and Tayebi, 2011).

Hunt and Beglar (2005) argued that explicit, direct vocabulary instruction is more effective for vocabulary development than relying solely on indirect methods. They argue that explicit associations of word form and meaning are best learned through direct instruction, whereas implicit learning of the phonetic and phonological features of new words is more effective (Hunt and Beglar, 2005).

However, some researchers object to treating implicit and explicit learning as completely separate approaches (MacWhinney, 1997). Instead, they suggest that the two modes of learning should be viewed as existing on a continuum and as complementary to each other (Sharwood Smith, 1981; Faerch et al., 1984, cited in Stern, 1992). It is beneficial for learners to have access to both modes and to be able to move from a more cognitive, explicit approach to more intuitive, implicit commands, and vice versa. Similarly, Schmidt (1993) argued that the interaction between the two modes has a positive impact on language acquisition and that each mode has its own advantages. In other words, the two modes should be viewed as complementary rather than separate and isolated, and a balanced combination of both modes is ideal for teaching (Berry, 1994, cited in Al-Darayesh, 2014).

Implicit Learning of Vocabulary

According to Huckin and Coady (1999, p. 183, cited in Souleyman, 2009), it is generally accepted that vocabulary acquisition, whether in a first, second or foreign language, usually occurs by accident. This means that vocabulary learning is a by-product of reading and listening activities rather than specifically targeted at vocabulary instruction. Ahmad (2011, cited in Demir, 2013) explains that incidental vocabulary learning involves learners being able to guess the meaning of new words based on contextual clues.

Hulstijn (2001) argued that even in second language (L2) learning, explicit vocabulary instruction alone cannot explain the acquisition of a large number of words. Instead, most words are learned gradually through repeated and extensive reading (p. 271). Therefore, it is recommended that foreign language learners take advantage of the contingency of vocabulary acquisition to expand vocabulary knowledge. Hulstijn (2003, cited in Souleyman, 2009) supports the idea of implicit learning, stating that learners can learn words and structures through incidental learning during various communicative activities such as reading and listening without bearing the burden of intentional learning. meaning rather than the form of language itself.

Similarly, Gass (1999) claims that explicit learning of aspects of a language is too laborious even for the most diligent learners, and therefore, language acquisition is mainly implicit, whether in first language (L1) or L2 . Stern (1992, cited in Souleyman, 2009) agrees with this view and believes that promoting unconscious language acquisition makes sense because most learning occurs unconsciously when language is used in daily life (p. 340) .

Explicit Learning of Vocabulary

Several studies highlight the benefits of explicit teaching versus implicit techniques. For example, Ellis (2001) argued that various forms of explicit instruction are more effective in accelerating the learning process. Similarly, Norris and Ortega (2000) conducted a meta-analysis of research from 1980 to 1998 and concluded that formal and explicit instruction can lead to lasting learning development. They also claim that direct instruction is more effective than indirect instruction.

Spada and Tornita (2010) recently reviewed 44 studies using explicit and implicit teaching techniques, and a meta-analysis found that direct instruction was more effective in extending and developing implicit knowledge compared to indirect instruction.

Hunt and Beglar (2005, cited in Souleyman, 2009) demonstrated that explicit, direct vocabulary instruction is more successful in vocabulary development than approaches based solely on indirect methods. They also believe that explicit learning is better for connecting word form and meaning, while implicit learning is more effective for mastering phonetic and phonological aspects and articulating new words. Additionally, direct instructions that vary context, careful planning, and clear emphasis on each word can promote automaticity.

Blake (2009) conducted a study that examined how explicit vocabulary instruction affected

the productive vocabulary skills of ESL kindergarten students. Fourteen English learners from various kindergarten classes participated in this study. The goal is to create a vocabulary-focused classroom environment through read-aloud activities, direct instruction, and vocabulary expansion exercises that increase students' ability to develop target vocabulary. The researcher used teacher observation journals, checklists, and authentic assessments to collect data. Results indicate that Beck, McKeown, and Kucan's (2002) vocabulary model is effective with ESL kindergarten students. However, the study also highlights the importance of teachers choosing target vocabulary carefully and providing meaningful, student-friendly definitions alongside the models.

Another study by Marzban and Kamalian (2013) aimed to examine the effectiveness of implicit and explicit vocabulary teaching methods. The researchers also looked at which explicit teaching methods were better for learning the meanings of target words. Thirty-five Iranian learners of English participated in three treatment sessions: implicit instruction, explicit instruction using dictionary references, and explicit instruction using a marginal vocabulary list. The results showed that there was a statistically significant difference between the mean scores of the three groups. Subjects who received explicit instruction (Methods 1 and 2) performed better than those who received implicit instruction. Furthermore, for both explicit vocabulary teaching methods, examining words in a dictionary resulted in better vocabulary learning than providing marginal vocabulary definitions.

Content-based Instruction

Although existing literature supports its potential benefits, there is a lack of comprehensive research on how foreign language teachers actually implement and understand content-based instruction. Content-based instruction as defined by Brinton, Snow, and Wesche (1989) refers to the integration of content and language teaching objectives. The aim is to link language and content, viewing language as a means of learning content and content as a resource for improving language skills (Stoller, 2002). Content-based instruction has many benefits, such as providing a context for language learning, engaging students in cognitively demanding tasks, and aligning with the school curriculum. In a content-based teaching environment, instructors are responsible not only for selecting relevant topics for English as a Foreign Language (EFL) students, but also for finding interesting and challenging resources to cover these content areas.

Additionally, it is critical to adapt or create assignments that capture the essence of authentic material to promote understanding and stimulate classroom discussion. According to Brinton et al. (1989), in a content-based approach, classroom language activities are specific to the subject being taught and are designed to encourage students to think and learn in the target language.

Content-based instruction (CBI) is an approach to second/foreign language teaching that focuses on content or information rather than form, function, context, or skills. Unlike traditional approaches, CBI does not impair language skills but instead emphasizes a dual commitment to language and content learning goals (Stryker & Leaver, 1997, cited in Hernández Herrero, 2005). The integration of content-based instruction and content and language integrated learning initiatives (CLIL) into English language teaching (ELT) has been extensively studied to assess its impact on learners (Heras & Lasagabaster, 2015; Lai & Aksornjarung, 2018 ; Ngan, 2011) ; Satılmış et al., 2015; Tseng, 2017).

Research conducted via de l. A. Cruz and Vázquez (2018) shows that students enrolled in Content-Based Instruction (CBI) applications demonstrate skillability in preserving communication within the target language. However, their degree of grammatical accuracy may not reach a targeted threshold. Genç (2021) highlights the demanding situations faced by means of application builders in phrases of function distribution, collaboration promotion, and finding the right stability among language and content material training inside CBI packages. These challenges can also get up due to limited content information amongst ELT educators, leading to an inclination toward prioritizing linguistic elements over content.

A current study conducted by Kışlal and Gezer (2021) investigated the perceptions of EFL instructors regarding the effectiveness of a CBI software in a personal number one college in Turkey. Interviews with three non-native EFL instructors revealed high-quality experiences and perceptions from both teachers and young learners, indicating the blessings of simultaneous language and content getting to know inside the CBI software.

Moreover, due to their restricted understanding inside the unique content place of the CBI software, ELT educators might prioritize linguistic components over content. Recent studies conducted by means of Kışlal and Gezer (2021) in a private number one college in Turkey tested the perceptions of EFL instructors concerning the effectiveness of a CBI application. Through interviews with 3 non-native EFL instructors, the take a look at revealed that the young learners

substantially benefited from the CBI approach, playing the simultaneous getting to know of language and content. The teachers expressed nice stories and perceptions regarding the a success implementation of CBI in their organization.

Method

Participants and Setting

The participants of this study were 40 Iraqi female students aged 15-16 studying at a private high school in Kufa, Iraq. They were selected through a proficiency test from a population of around 80 students. The participants were divided into an experimental group (n=20) that received implicit instruction and a control group (n=20) that received explicit instruction. The study was conducted in content-based science classes at the school over 20 sessions of 30-40 minutes each. The vocabulary targeted was chosen from the Basic Science 1 textbook, specifically the biology section.

Instrumentation

A variety of instruments were used in this study. A Nielsen aptitude test was administered to selected participants. A 60-item researcher-designed multiple-choice vocabulary test was created and used for pretest, immediate posttest, and delayed posttest. The test was validated by experts and its reliability was tested through a pilot test using Cronbach's alpha, which yielded a value of 0.92. Additionally, the researchers developed a 30-item multiple-choice reading comprehension test to examine whether content-based vocabulary instruction can improve student performance on reading comprehension tests. The reliability of the test was assessed using Cronbach's alpha which showed a high level of reliability with a value of 0.87.

Procedures

The procedure is as follows. First, participants completed the Nielsen Aptitude Test and a researcher-created pretest. The experimental group then received implicit vocabulary instruction through a task focused on meaning, while the control group received explicit instruction focused on learning words out of context. Treatment was delivered in 20 sessions, with each session teaching 10 target words. A posttest was administered immediately after treatment, followed by a delayed posttest 4 weeks later. An oral test was also conducted after the delayed posttest..

Table1 : Descriptive Statistics

Group		N	Minimum	Maximum	Mean	Std. Deviation
Experimental	PRE	20	0.00	10.00	3.45	3.65
	POST IMMEDIATE	20	18.00	55.00	40.55	11.00
	POST DELAYED	20	12.00	45.00	33.20	9.27
Control	PRE	20	0.00	10.00	3.45	3.47
	POST IMMEDIATE	20	29.00	59.00	44.00	8.70
	POST DELAYED	20	5.00	36.00	21.65	10.57

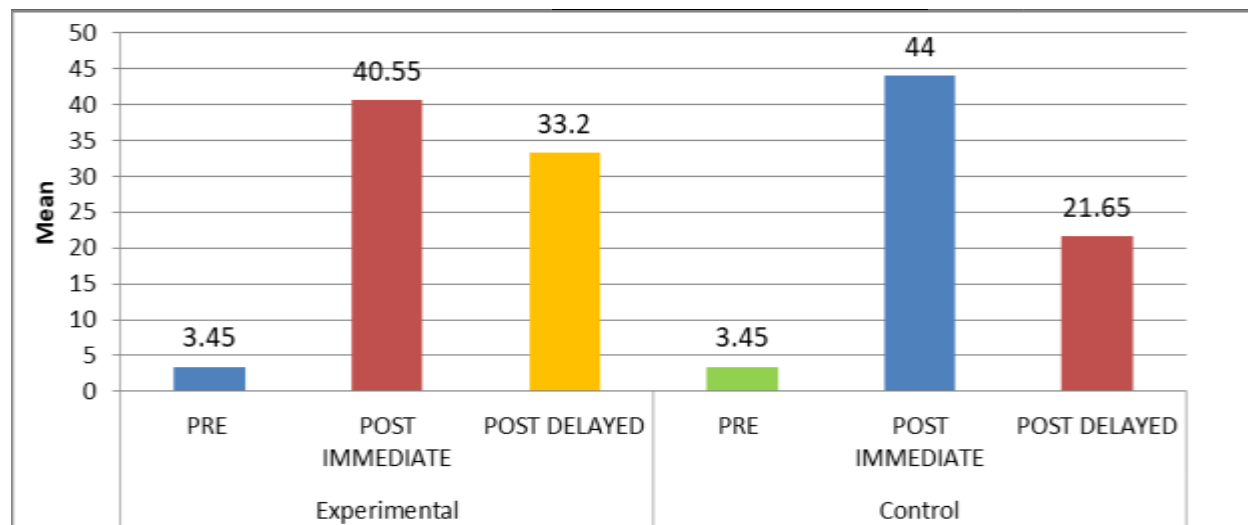


Figure 2. Bar plot for control and experimental groups

Inferential Statistics and Hypothesis Testing

This section tests the research hypotheses. Parametric paired t-test was used to test the hypothesis and normality of the data.

The First Hypothesis Analysis

The first research hypothesis investigated the effect of explicit instruction on Iraqi EFL learners' content vocabulary immediate retention in control group.

Q1. Does explicit instruction have a significant impact on immediate content vocabulary retention among Iraqi English learners?

To test this hypothesis, a paired t test was used. Conduct a paired t-test to compare the pre-test and post-test scores of students in the control group

Table 2: Paired Sample T Test - Control group

		Paired Differences								
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	
					Lower	Upper				
PRE	-	POST								
IMMEDIATE			-40.5	8.76	1.96	-44.65	-36.45	20.69	19	0.000

As shown in Table 3, before and immediately after the test, the t-value was -20.69 and the probability value was 0.000 (Sig = .000<0.05). The p-value is less than 0.05; therefore, the first null hypothesis is rejected with 95% confidence. It can be concluded that the use of explicit instruction has a statistically significant impact on immediate retention of content vocabulary among Iraqi English learners. As can be seen from the table, the average vocabulary learning scores of the control group before and after the test were 3.45 and 44 respectively. Comparing Significant Improvements in Mean Prediction Scores, Explicit Instruction Leads to Significant Improvements in Vocabulary Learning and Retention among Iraqi Female English Learners.

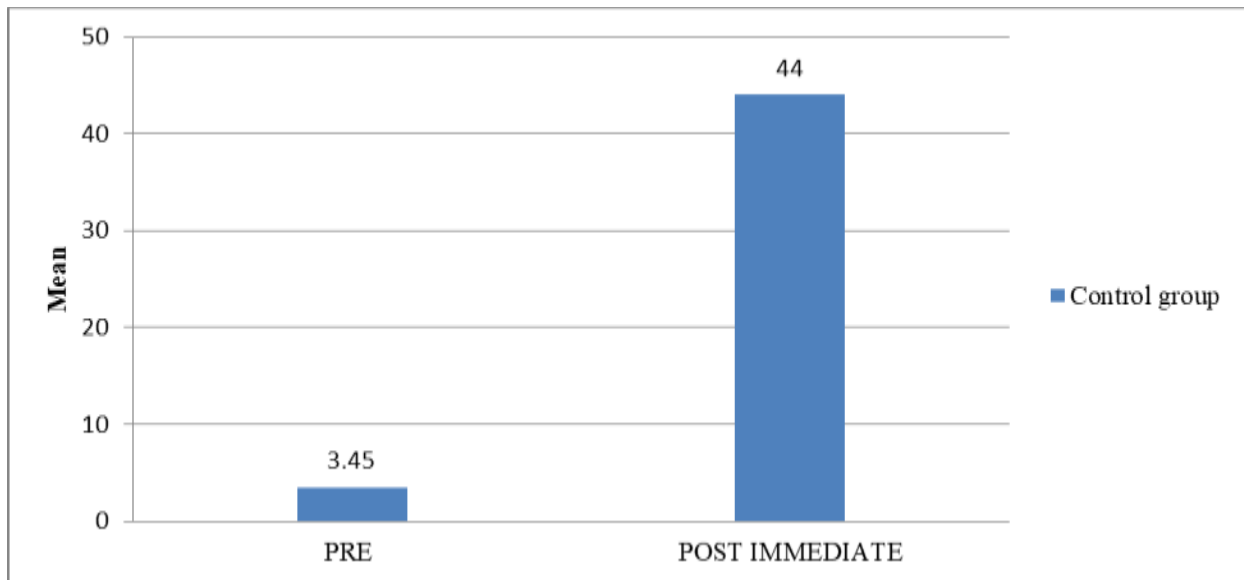


Figure 3. Bar plot for pre-test and immediate post-test in control group

The Second Hypothesis Analysis

The second research hypothesis investigated the effect of implicit instruction on Iraqi EFL learners' content vocabulary immediate retention in experimental group.

Q1. Does implicit instruction have any significant effect on Iraqi EFL learners' content vocabulary immediate retention?

Paired t-test was applied to investigate this hypothesis. Paired t-test was conducted to compare scores of the students in experimental group on pre-test and immediate post-test. The related hypotheses are as follow:

Table 3: Paired Sample T Test - Experimental group

Paired Differences						
Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df Sig. (2-tailed)
			Lower	Upper		

		Paired Differences						
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)
					Lower	Upper		
PRE	-	POST						
IMMEDIATE			-37.1	11.36	2.54	-42.41 -31.79	14.61	19 0.000

As shown in Table 4, before and immediately after the test, the t-value was -14.61 and the probability value was 0.000 (Sig = 0.000 < 0.05). The P value is less than 0.05; therefore, the null hypothesis is rejected with 95% confidence. We can conclude that the use of implicit instruction has a statistically significant impact on the immediate retention of content vocabulary among Iraqi English learners. As shown in the table, the average vocabulary learning scores of the experimental group before and after the test were 3/45 and 40.55 respectively. It can be concluded that in the experimental group, the average score of vocabulary learning after the test was significantly higher than the average score before the test, and implicit guidance led to a significant increase in vocabulary learning and retention rates among Iraqi female English learners.

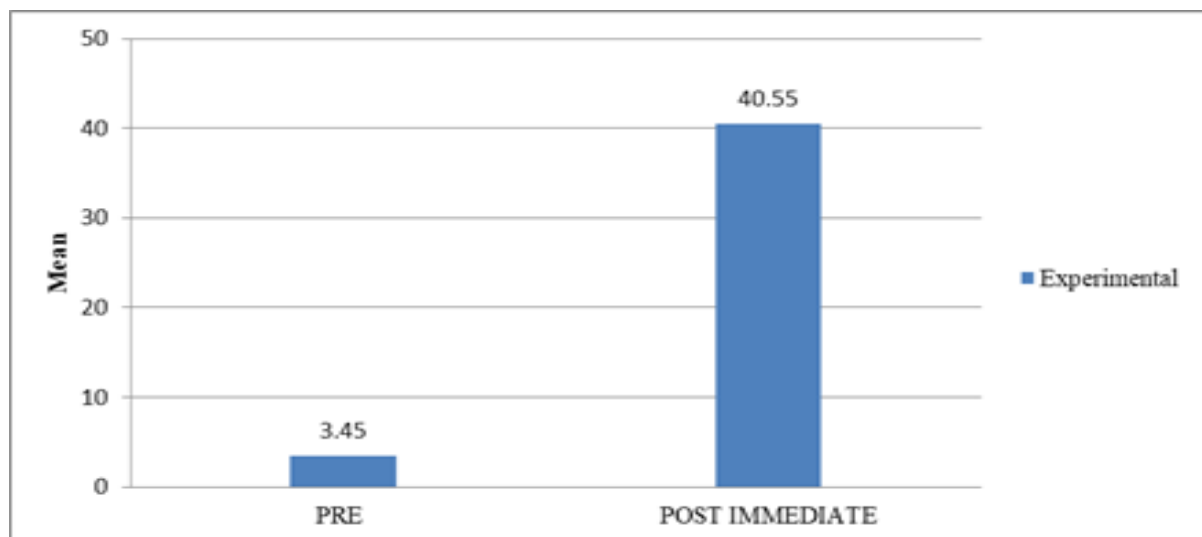


Figure 4. Bar plot for pre and immediate post-test in Experimental group

In this section, we conduct further analyzes to examine which type of instruction (implicit or explicit) has a greater impact on English learners' immediate vocabulary retention. To examine this issue, the mean score for each group was calculated before and immediately after the test. Differences in the means of the two groups were then analyzed using an independent t test. The analysis is shown in the table below:

Table 4 : Group Statistics and t-test for Equality of Means

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	Group	N	Mean	Std. Deviation	Mean Difference	t	Sig.
Equal variances assumed	1.790	.189	Experimental	20	37.10	11.35504	-3.45	-1.07	.289
Equal variances not assumed			Control	20	40.55	8.76281			

In this analysis, homogeneity of variances was first measured using Levene's test, and the results are presented in the table. Given that the significance level for equal variances is 0/289 and greater than 0/05, it is concluded that the variances are equal. Therefore, the rest of the analysis is based on the results of this Levene test.

According to Table 5, the average vocabulary learning scores of implicit teaching and explicit teaching are 37/10 and 40/55 respectively. The significance level of the test is 0/289 and is greater than 0/05 ($\text{sig} = 0.289 > 0.05$). Therefore, it is concluded with 95% confidence that there is no significant difference between the mean vocabulary learning scores of the two groups and that both instructions (implicit and explicit) have the same effect on vocabulary learning and immediate retention.

From the table below, considering that the average score of the two tests of the explicit teaching group is higher than the average score of the two tests of the implicit teaching group, it can be concluded that the explicit teaching of explicit teaching is significantly higher than that of the explicit teaching group . Effects on vocabulary learning and short-term retention of new vocabulary among Iraqi English learners..

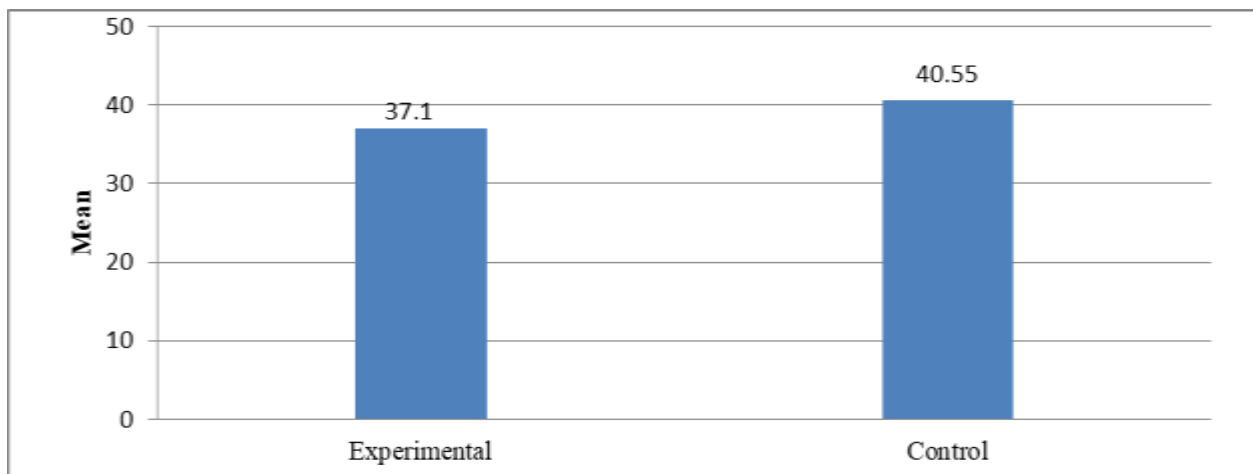


Figure 5. Mean scores of pre-test and immediate post-test in both groups

The Third Hypothesis Analysis

The third research hypothesis investigated the effect of explicit instruction on Iraqin EFL learners'' content vocabulary delayed retention in control group.

Q3. Does explicit instruction have any significant effect on Iraqi EFL learners'' content vocabulary delayed retention?

In order to evaluate this hypothesis paired t-test was applied. Paired t-test was conducted to compare scores of the students in control group on immediate post-test and delayed post-test. The related hypotheses are as follow:

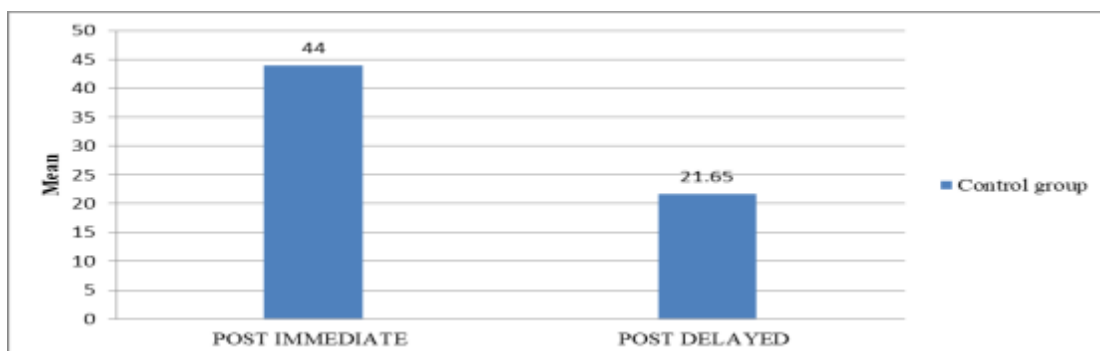
Table 5 :Paired Sample T Test - Control group

Paired Differences	t	df	Sig. (2-tailed)
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	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Sig.
				Lower	Upper		
POST IMMEDIATE -							
POST DELAYED	22.4	12.72	2.84	16.40	28.30	7.86	0.000

As shown in Table 6, on both the immediate posttest and delayed posttest occasions, the t value is 7.86 and the probability value is 0.000 (Sig = 0.000 < 0.05). The P value is less than 0.05; therefore, the null hypothesis is rejected with 95% confidence. We can conclude that the use of explicit instruction has a statistically significant effect on delayed retention of content vocabulary among Iraqi English learners. As shown, the mean vocabulary learning scores for the control group on the immediate posttest and delayed posttest were 44 and 21.65, respectively. It can be concluded that in the control group, the mean value of vocabulary learning immediately after the test was significantly higher than the mean value after the test. According to this result, while explicit instruction resulted in a significant increase in immediate post-test vocabulary retention among Iraqi female English learners, it negatively affected long-term vocabulary retention and resulted in a decrease in delayed post-test scores..

Figure 5. Bar plot for immediate post-test and delayed post-test in control group



The Fourth Hypothesis Analysis

The fourth research hypothesis investigated the effect of implicit instruction on Iraqi EFL learners' content vocabulary delayed retention in experimental group.

Q1. Does implicit instruction have any significant effect on Iraqi EFL learners' content vocabulary delayed retention?

In order to test this hypothesis paired t-test was applied. Paired t-test was conducted to compare scores of the students in experimental group on immediate post-test and delayed post-test. The related hypotheses are as follow:

Table 6 : Paired Sample T Test - Experimental group

	Paired Differences						t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
POST IMMEDIATE - POST DELAYED	7.35	13.59	3.04	0.99	13.71	2.42	19	0.026	

As shown in Table 7, on both the immediate posttest and delayed posttest occasions, the t value was 2.42 and the probability value was 0.026 (Sig = .000<0.05). The P value is less than 0.05; therefore, the null hypothesis is rejected with 95% confidence. We can conclude that the use of implicit instructions has a statistically significant effect on delayed retention of content vocabulary among Iraqi English learners. The average vocabulary learning scores of the experimental group in the immediate posttest and delayed posttest were 40.55 and 33.2 respectively. It can be seen that the mean vocabulary learning value of the experimental group immediately after the test was significantly higher than the mean vocabulary learning value after the test. According to this result, while implicit teaching resulted in significant increases in vocabulary retention among Iraqi female English learners immediately after the test, it had a

negative impact on long-term vocabulary retention and resulted in decreased scores after the delayed posttest.

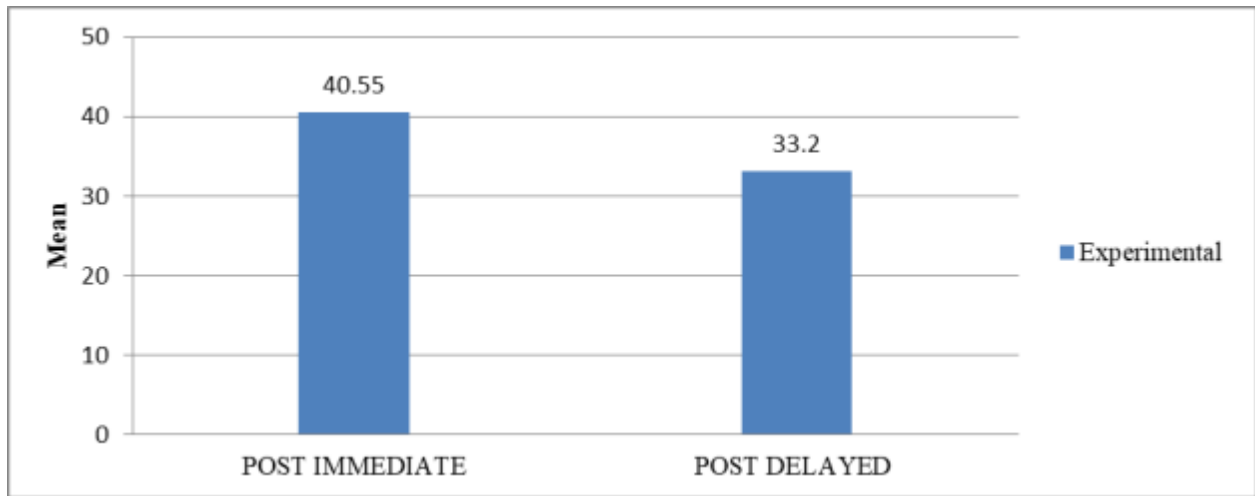


Figure 6. Bar plot for immediate post-test and delayed post-test in experimental group

In this section another analysis was conducted to examine which mode of instruction (implicit or explicit) had a more significant effect on the EFL learners' vocabulary delayed retention. To answer this question, the mean scores of each group in immediate post-test and delayed post-test were found. Then by applying independent sample t-test, the difference in the mean scores of the two groups was analyzed. This analysis was shown in the following table:

Table 7

Group Statistics and t-test for Equality of Means

Levene's Test for Equality of Variances		t-test for Equality of Means						
F	Sig.	group	N	Mean	Std. Deviation	Mean Difference	t	Sig.

Equal	0.147	.704	Experimental	2	7.35	13.588	-15.00	-	.0
variances				0				3.60	01
assumed								4	
Equal			Control	2	22.35	12.720			
variances not				0					
assumed									

In this analysis, homogeneity of variances was first measured using Levene's test, and the results are shown in Table 8 . Considering this fact, the significance level for equality of variances is 0/704 and higher than 0/05, concluding that variances are equal. Therefore, the rest of the analysis is based on the results of this Levene test.

According to Table 8, the average vocabulary learning scores of implicit teaching and explicit teaching are 7/35 and 22/35 respectively. The significance level of the test is 0/001, which is lower than 0/05 (sig = 0.001 > 0.05). Therefore, it is concluded with 95% confidence that there is a significant difference between the mean vocabulary learning scores of the two groups and that implicit instruction has a greater effect on vocabulary learning and delayed retention.

As shown in the table below, the mean vocabulary retention scores for the immediate and delayed posttests in the implicit group were lower than the similar mean scores in the explicit group. Based on this figure, it can be concluded that the explicit group learned more words immediately but also forgot more words on the delayed retention test.

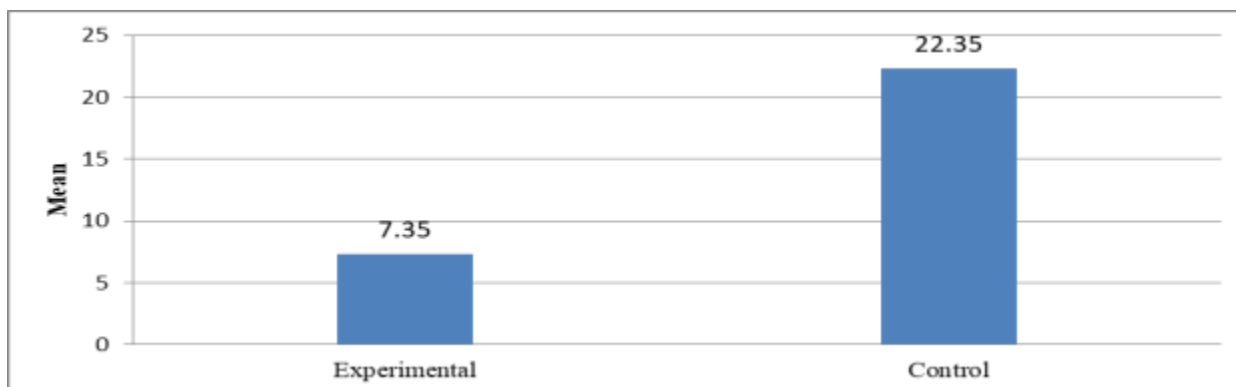


Figure 7. Mean scores of immediate post-test and delayed post-test in both groups

The Fifth Hypothesis Analysis

To answer the fifth research question, “Does implicit and explicit instruction of content vocabulary have any significant effect on Iraqi EFL learners’ reading comprehension performance?” the researcher-made reading comprehension test was administered to students. The results of reading comprehension test performance were as following:

Table 8 : Independent sample t-test

Group Statistics						
	Grouping	N	Mean	Std. Deviation	Std. Error Mean	
Reading performance	Experimental	20	16.85	1.424	.318	
	Control	20	15.20	1.507	.337	

Table 9: Independent sample t-test for experimental and control group

Independent Samples Test								
Levene's Test for Equality of Variance			t-test for Equality of Means					
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	

									Low	Upper
									er	er
Reading performance	Equal variances assumed	.073	.789	3.557	38	.001	1.650	.463	.711	2.58
	Equal variances not assumed			3.557	37.877	.001	1.650	.463	.710	2.58

According to the above tables, when equal variances were not assumed, the results of the t-test remained consistent ($t = 3.557$, $df = 37.877$, $p = 0.001$), indicating a significant difference in reading comprehension scores between the two groups. The mean difference, standard error difference, and confidence intervals were the same as in the case of equal variances assumed.

These findings suggest that the experimental group performed significantly better than the control group in terms of reading comprehension, as indicated by the t-test results.

Discussion

The first studies query examined the effect of specific guidance on immediate retention of content vocabulary for Iraqi lady EFL novices in a manage institution. A paired t-test was conducted to compare the scores of the experimental group on pre-test and immediate post-test. Results indicated that employing explicit training had a good sized effect on immediate retention ($p < 0.05$). The use of word lists in the course of practise aligned with findings from Nation (1995) and Meara (1995), suggesting its efficacy in L2 vocabulary acquisition. Furthermore, get entry to to dictionaries proved beneficial for vocabulary retention, steady with research by way of Cho and Krashen (1994), Hulstijn et al. (1996), Knight (1994), and Luppescu and Day (1993).

The 2nd research question centered on investigating the effect of implicit practise at the instantaneous retention of content vocabulary amongst Iraqi lady EFL learners within the experimental institution. A paired t-test was used to examine the scores of the scholars within the experimental organization on the pre-test and instantaneous post-check. The evaluation of the information indicated that using implicit instruction had a sizeable tremendous effect at the instantaneous retention of EFL learners' content vocabulary. The mean rating of the experimental organization on the pre-test was 3.45, even as it increased significantly to 4.55 on the instant post-test, demonstrating the effectiveness of implicit instruction in vocabulary retention.

In the experimental elegance, the students engaged in numerous vocabulary getting to know sporting activities. The fulfillment of the scholars in the implicit elegance might be attributed to the use of different physical games after studying every textual content.

Furthermore, inside the implicit class, students had been exposed to diverse analyzing texts containing the goal vocabularies. Nagy (1997) highlighted that a unlearned come upon with a word, whether or not in guidance or studying, does not result in profound word expertise. Pigada and Schmitt (2006) also supported the idea that sizable analyzing situations facilitate vocabulary acquisition (as noted in Hashemzadeh, 2012).

Additionally, the implicit group engaged in developing wall charts associated with the subject in small companies and mentioned and explained them. Goldenberg (2008) recommended for the usage of visual aids in coaching L2 vocabulary, emphasizing the effectiveness of visible representations, active student involvement, and the manipulation and analysis of phrase meanings (as referred to in Blake, 2009).

The 0.33 studies query of the look at examined the effect of specific coaching on the Iraqi female EFL learners „content material vocabulary delayed retention inside the control institution of the observe. Regarding this query, paired t-test became performed to evaluate rankings of the students on top of things group on immediate put up-test and behind schedule put up-check. The mean score of vocabulary gaining knowledge of in control organization for instant put up-test and behind schedule submit-test is 44 and 21.65 respectively. By evaluating the suggest rankings, it can be concluded that on top of things organization the suggest rating of

vocabulary mastering in immediately publish-take a look at is considerably better in comparison to intend rating of delayed submit-take a look at. The consequences have shown that the beginners within the explicit situation showed better ratings in instant submit-test.

Shakouri et al. (2014) determined that instantaneous success in learning vocabulary can be attributed to the use of a modality that offers maximum of the essential records, resulting in reduced intellectual effort all through memorization. The explicit studying organization found out more words first of all however also forgot extra of them via the not on time retention check. This aligns with the findings of Schmitt and Schmitt (1997), who suggested that words acquired with less attempt are more likely to be forgotten. Therefore, the observe highlights the impact of mastering techniques on each immediate and behind schedule retention of vocabulary.

The fourth studies speculation investigated the effect of implicit guidance on Iraqi EFL rookies" content material vocabulary behind schedule retention in experimental institution. In order to test this hypothesis paired t-take a look at changed into performed to examine ratings of the students in experimental institution on instantaneous post-check and behind schedule post-test. The suggest rating of vocabulary gaining knowledge of on this institution for instant submit-check and behind schedule put up-take a look at is forty.Fifty five and 33.2 respectively.

The findings of the have a look at performed via Shakouri et al. (2014) exhibit that the implicit organization of participants had a smaller immediately put up-take a look at vocabulary advantage in comparison to the specific organization. However, the implicit group members showed greater knowledge and retention of the goal vocabulary inside the long term. According to Shakouri et al. (2014), this shows that the topics inside the implicit institution engaged in a deeper degree of involvement and processing even as seeking to recognize the studying passages and the meanings of the goal phrases. This deeper stage of engagement created stronger reminiscence traces, which contributed to the longer retention of the vocabulary by way of the implicit group participants. These findings offer justification for the marginally longer retention of the goal information with the aid of the implicit group. Furthermore, the take a look at shows that the experimental group, which received express and implicit teaching of content material phrases, outperformed the control institution in terms of reading comprehension performance.

The sensible implications of this research are applicable to each language instructors and researchers, in particular in content-based instructions. The findings spotlight the significance of training and its impact on studying effects. Teachers can use these outcomes to structure their guidance in alignment with favored getting to know objectives.

Furthermore, the take a look at raises issues concerning the choice and edition of materials, the establishment of affective situations in language teaching and getting to know, and the general mastering environment. Based on the findings, it is cautioned that tasks aiming to facilitate unconscious learning ought to be designed in a way that captures the learner's attention and encourages them to observe the key features of each challenge.

Overall, those insights can inform pedagogical practices and contribute to the development of teaching and getting to know techniques in language training. The observe's findings emphasize the advantages of using each implicit and specific educational activities to decorate vocabulary retention in young grownup beginners. Explicit education is effective for instant retention, even as implicit instruction promotes lengthy-term retention. Combining the 2 tactics offers novices additional strategies and possibilities to deeply technique the records. This method aligns with the advice of mixing implicit and explicit coaching strategies proposed by way of Hunt and Beglar (2005). Balancing each implicit and explicit modalities is critical in vocabulary instruction and teaching in fashionable.

The statistics from this look at indicates that, through the years, the implicit education organization retained slightly extra in their immediately gains in vocabulary in comparison to the specific instruction organization. Therefore, combining each modalities is a more effective option for facilitating the studying of new objects and selling longer retention. These findings improve exciting research questions for further research. Future research ought to discover the relationship between implicit and explicit practise over an extended period, related to fewer goal items and a bigger and greater various participant pool from various backgrounds.

It is worth noting that the prevailing observe was carried out with a small pattern of Iraqi girl excessive school students who were comparable in age. To decorate the informativeness and generalizability of the mission, it'd be beneficial to include members from a extra heterogeneous

population, encompassing special age agencies, genders, proficiency ranges, and academic settings.

Conclusion

This have a look at investigated the outcomes of implicit and explicit vocabulary guidance on the on the spot and behind schedule retention of content vocabulary by means of Iraqi EFL high school newbies in a content-based instruction context. The findings cautioned that each educational modes brought about great vocabulary profits from pre-take a look at to immediate post-take a look at, confirming their effectiveness. However, the specific practise group validated higher instant profits however experienced more losses by the delayed post-check, at the same time as the implicit institution retained extra phrases inside the long-term.

The consequences align with preceding research indicating that explicitly discovered vocabulary is greater susceptible to being forgotten over time compared to implicitly found out vocabulary, which has a tendency to be retained better in the end. This highlights the deeper degree of processing and engagement concerned in implicit gaining knowledge of, creating more potent reminiscence traces.

The experimental organization that received a combination of implicit and express guidance outperformed the specific-only control group at the reading comprehension check. This suggests that a tutorial approach integrating both implicit and specific strategies can be beneficial for reinforcing now not only vocabulary retention however additionally studying comprehension skills.

Overall, the study underscores the significance of thinking about both on the spot and delayed retention desires when choosing vocabulary educational strategies. While express coaching is advantageous for quick-time period vocabulary gains, implicit strategies facilitated longer-term retention. Employing a balanced mixture of both modalities may want to provide newcomers complementary techniques to deeply method new vocabulary gadgets, promoting acquisition and retention.

However, it's miles important to interpret these findings in light of the look at's boundaries, inclusive of the small pattern length of Iraqi college students from a selected age institution and

educational context. Future studies with large and more numerous player swimming pools across unique backgrounds is recommended to decorate the generalizability of the consequences. Despite its obstacles, this examine contributes precious insights to the sphere of vocabulary practise and second language acquisition, highlighting the potential merits of an incorporated implicit-specific instructional method, specially inside content-based language teaching contexts.

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