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The Effect of Remodeling Various Structures on Improvement of the Knowledge of Grammar and Vocabulary of High School Students

Hamed Badpa

Department of English Language and Literature, Faculty of Literature and Languages, Arak University, Arak, Iran

Hooshang Yazdani*

Associate Professor, Department of English Language and Literature, Faculty of Literature and Languages, Arak University, Arak, Iran

Abstract

The teaching and learning of grammar have continuously been core areas of discussion among practitioners of TEFL. Despite significant investment in creating optimal conditions for grammar learning, it remains essential to explore innovative instructional methods that enable learners to engage meaningfully with grammatical structures, thereby enhancing the effectiveness of grammar acquisition. Learners may reconstruct various grammatical structures by interpreting grammar from their textbooks while drawing upon their own experiences, resources, and events from life. This is called a learning-oriented approach that involves hypothesis testing and conceptualization that, in turn, incubates awareness of one's limitations and needs. This study investigates whether the remodeling method of grammar instruction, where learners reconstruct grammatical structures based on personal experiences, significantly enhances Iranian EFL learners' grammatical and vocabulary proficiency. The research employed an experimental research design where a pretest was administered, and a posttest was administered. The study involved forty high school EFL students aged 15 to 16 from Imam Khomeini Technical High School in Shahreza, situated in the southern part of Isfahan province in Iran. While the performance of learners in the experimental group subjected to remodeling method interventions was obtained, their control group, which was not subjected to such intervention, was measured for comparison. The findings revealed that the experimental group recorded a higher improvement in grammatical knowledge due to the remodeling approach. Furthermore, the results indicated that engaging in the remodeling of various structures allowed learners to communicate more effectively in oral interactions and to enhance their understanding of grammar and vocabulary. Statistically significant differences were observed between the experimental and control groups. This study underscores the value of incorporating the strategy of having students remodel various structures based on their concepts in English language instruction to foster greater proficiency in the language. Based on the findings, the researcher recommends utilizing, activating, and implementing this strategy on the other skills of the English language.

Keywords: Remodeling, Structures, Vocabulary, Grammar Knowledge

* *Corresponding author:* Department of English Language and Literature, Faculty of Literature and Languages, Arak University, Arak, Iran. *Email Address*: yazdani@araku.ac.ir

1. Introduction

The development of grammar and vocabulary is fundamental to language acquisition, serving as the cornerstone for effective communication and academic achievement among high school students (Richards & Renandya, 2002). Grammar, often regarded as the science of language, provides the structural framework that enables learners to construct meaningful and accurate sentences, while a robust vocabulary enhances their ability to express ideas precisely (Jasmina & Farmonovna, 2023; Taghizadeh et al., 2020). In the context of Teaching English as a Foreign Language (TEFL), particularly in Iranian high schools, grammar instruction is a critical component of the curriculum, yet it remains a challenging area for both students and educators (Badpa, 2024). Recent educational research emphasizes innovative pedagogical approaches to enhance language learning outcomes, including the integration of technology, collaborative learning strategies, and modifications to the physical learning environment (Barrett et al., 2015; Hwang & Chen, 2017; Baleghzadeh, & Saeedi, 2021; Duran et al., 2016). These approaches aim to foster student engagement, improve motivation, and facilitate deeper understanding of linguistic structures, ultimately leading to greater proficiency in grammar and vocabulary. (Barrett et al., 2015; Duran et al., 2016; Hwang & Chen, 2017).

Despite the recognized importance of grammar instruction and the adoption of various teaching methodologies, such as inductive and deductive approaches, Iranian EFL learners continue to face significant challenges in mastering English grammar and expanding their vocabulary (Mahdi & Ismail, 2023). Traditional teacher-centered and exam-oriented methods, prevalent in Iranian high schools, often prioritize rote memorization and form-focused instruction, limiting opportunities for meaningful interaction with language structures (Hinkel & Fotos, 2001). While technologies like interactive whiteboards and language learning apps have shown promise in enhancing vocabulary retention and grammar understanding (Fadel & Lemke, 2015), these tools are underutilized in many Iranian classrooms. Moreover, there is a lack of empirical research exploring innovative, student-centered strategies that integrate personal experiences and real-life contexts into grammar instruction. This gap highlights the need for novel approaches that bridge form and meaning, enabling learners to internalize

grammatical rules and vocabulary more effectively while fostering creative and spontaneous language use.

This study addresses the identified gap by investigating the effectiveness of a remodeling approach to grammar instruction, where high school EFL learners reconstruct grammatical structures from their textbooks using their own words and real-life experiences. Unlike traditional methods, remodeling encourages students to engage actively with grammar by rephrasing structures in meaningful contexts, aligning with communicative language teaching principles (Lightbown & Spada, 2010). By employing an experimental research design, this study examines whether remodeling significantly improves the grammar and vocabulary proficiency of Iranian high school students aged 15–16 at Imam Khomeini Technical High School in Shahreza, Iran. The research compares an experimental group receiving remodeling interventions with a control group following a standard curriculum, aiming to provide empirical evidence on the efficacy of this approach in enhancing language skills and addressing persistent challenges in EFL grammar instruction.

2. Literature Review

2.1 Grammar Instruction in EFL Contexts

Grammar instruction is a cornerstone of English as a Foreign Language (EFL) education, providing learners with the structural foundation necessary for effective communication (Richards & Renandya, 2002). Traditional approaches to grammar teaching, such as deductive methods, involve explicit presentation of rules followed by practice, while inductive methods encourage learners to infer rules from examples (Mahdi & Ismail, 2023). Both approaches have distinct functions: deductive methods offer clarity and structure, whereas inductive methods promote discovery and engagement (Blašković, 2022). However, research highlights that over-reliance on form-focused instruction, common in many EFL settings, can limit learners' ability to use grammar communicatively, leading to fossilization—a state where learners persistently use incorrect or simplified forms (Hinkel & Fotos, 2001). According to Ellis (2002), effective grammar instruction should balance form and meaning, fostering awareness of grammatical structures while encouraging their creative application in real-world contexts.

In the Iranian EFL context, grammar instruction often follows a teacher-centered, exam-oriented approach, prioritizing rote memorization over communicative competence (Badpa, 2024). Studies

indicate that Iranian high school students struggle with grammar due to the predominance of lecture-based methods and a heavy reliance on textbooks, which limits opportunities for interactive learning (Akbari, 2015). International studies, such as those by Nassaji and Fotos (2011), suggest that integrating communicative tasks with explicit grammar instruction can enhance learners' grammatical accuracy and fluency. This gap in the Iranian context underscores the need for innovative strategies that move beyond traditional methods to address learners' challenges in mastering grammar.

2.2 The Concept of Remodeling in Language Learning

Remodeling, as a pedagogical approach, involves learners reconstructing grammatical structures using their own words and real-life experiences, thereby linking form with meaning in authentic contexts (Lightbown & Spada, 2010). This approach aligns with communicative language teaching (CLT), which emphasizes the integration of linguistic forms with their functional and communicative purposes (Richards, 2006). Remodeling encourages learners to actively manipulate grammatical structures, fostering deeper semantic and syntactic understanding. For instance, by rephrasing textbook sentences based on personal experiences, learners engage in hypothesis testing and conceptualization, which Schmidt's (1990) noticing hypothesis posits as critical for second language acquisition. This process enhances learners' awareness of their linguistic limitations and promotes conscious attention to grammatical forms.

Empirical studies on remodeling are limited, particularly in the Iranian context, but related approaches, such as task-based language teaching (TBLT), have shown promise. For example, Shehadeh (2011) found that tasks requiring learners to reformulate language structures in meaningful contexts improved both grammatical accuracy and vocabulary retention among Arab EFL learners. In Iran, a study by Ghaedsharafi and Bagheri (2012) explored the use of contextualized grammar tasks, finding that activities incorporating students' personal experiences led to significant improvements in grammar knowledge compared to traditional methods. These findings suggest that remodeling could be an effective strategy for Iranian EFL learners, though further research is needed to validate its impact in high school settings.

2.3 Theoretical Framework

The remodeling approach to grammar instruction in this study is grounded in several key theoretical frameworks that emphasize the integration of form, meaning, and context in second language acquisition (SLA). Central to this study is Jackendoff's (2002) conceptual semantics, which posits that language learning involves conceptual structures that mediate between syntactic forms and their perceptual meanings. These structures enable learners to connect grammatical rules with real-world experiences, facilitating a deeper understanding of syntax and semantics. In the context of remodeling, learners reconstruct grammatical structures using personal experiences, aligning with Jackendoff's theory by creating meaningful connections between linguistic forms and conceptual representations.

Another foundational framework is Long's (1991) focus-on-form approach, which advocates for drawing learners' attention to grammatical structures within communicative contexts, rather than isolating form from meaning. This approach supports remodeling by encouraging students to manipulate grammatical patterns in ways that reflect authentic usage, thereby enhancing both accuracy and fluency. Similarly, Schmidt's (1990) noticing hypothesis underscores the importance of conscious attention to linguistic input for effective SLA. Remodeling activities, which require learners to actively rephrase structures, promote noticing by highlighting gaps in their grammatical and lexical knowledge, thus fostering cognitive engagement with language forms.

Additionally, Vygotsky's (1978) sociocultural theory provides a lens for understanding the collaborative and contextual aspects of remodeling. By engaging in group-based remodeling tasks, learners interact with peers and instructors, leveraging social interaction to scaffold their understanding of grammar and vocabulary. This aligns with the study's emphasis on incorporating real-life experiences, as students draw on shared cultural and personal contexts to reconstruct language structures, enhancing both motivation and retention.

These theoretical perspectives collectively support the remodeling approach by emphasizing the interplay of form, meaning, and social context in language learning. They provide a robust foundation for investigating how remodeling grammatical structures can enhance the grammar and vocabulary proficiency of Iranian EFL learners, addressing the limitations of traditional form-focused instruction.

2.4 Learning-Oriented Approaches and Theoretical Frameworks

Learning-oriented approaches emphasize student-centered, active engagement with language, drawing on learners' experiences and cognitive processes to enhance acquisition (Lightbown & Spada, 2010). These approaches are grounded in theoretical frameworks such as Jackendoff's (2002) conceptual semantics, which posits that conceptual structures mediate between syntactic forms and their meanings, facilitating the integration of linguistic, sensory, and experiential information. Similarly, Long's (1991) focus-on-form approach advocates for drawing learners' attention to grammatical structures within meaningful communicative contexts, balancing explicit instruction with practical application. These frameworks support remodeling by emphasizing the interplay between form and meaning, encouraging learners to reconstruct language structures in ways that reflect their personal and cultural realities.

Empirical evidence supports the efficacy of learning-oriented approaches in EFL settings. For instance, Willis and Willis (2007) demonstrated that task-based activities, which encourage learners to manipulate language forms in context, improve both grammar and vocabulary acquisition among secondary school students. In the Iranian context, studies like those by Rahimi and Azhegh (2016) have shown that student-centered methods, such as collaborative tasks, enhance motivation and linguistic proficiency compared to traditional teacher-centered approaches. However, the application of such approaches in Iranian high schools remains limited due to syllabus constraints and exam-oriented curricula, highlighting a gap that remodeling could address.

2.5 Iranian High School EFL Curriculum

The Iranian high school EFL curriculum, particularly for Grade Two students aged 14–15, is designed to build on foundational skills from Grade One, aiming for intermediate proficiency in the four language skills: listening, speaking, reading, and writing (Iranian Ministry of Education, 2018). The Grade Two English textbook comprises seven units, each incorporating grammatical exercises, vocabulary practice, and integrated skills tasks aligned with national educational objectives. However, the instructional approach is predominantly teacher-centered, relying on lecture-based methods and textbook-driven exercises (Akbari, 2015). This approach prioritizes syllabus completion and exam performance, often at

the expense of communicative competence, resulting in limited opportunities for students to engage actively with language structures (Ghorbani, 2019).

The emphasis on form-focused instruction and exam preparation in Iranian high schools reflects a broader teacher-oriented and syllabus-driven pedagogy. Teachers often dictate the curriculum based on their preferences, with minimal consideration for students' interests or needs (Pishghadam & Mirzaee, 2016). This context underscores the potential of remodeling as a strategy to introduce student-centered, communicative elements into the curriculum, addressing the shortcomings of traditional methods and fostering greater engagement with grammar and vocabulary.

2.6 Research Gap and Current Study

While international research highlights the benefits of communicative and student-centered approaches, such as TBLT and focus-on-form, their application in the Iranian EFL context remains underexplored, particularly for high school learners. The reliance on traditional, form-focused methods in Iran limits students' ability to develop communicative competence and creative language use. Moreover, while remodeling has been conceptually linked to learning-oriented approaches, empirical studies on its effectiveness in enhancing grammar and vocabulary knowledge among Iranian EFL learners are scarce. This study aims to fill this gap by investigating the impact of remodeling grammatical structures, using students' real-life experiences, on the grammar and vocabulary proficiency of Grade Two high school students in Iran. By integrating theoretical insights from conceptual semantics and focus-on-form with empirical evidence, this research seeks to provide a robust framework for improving EFL instruction in the Iranian context. This study is an attempt to answer the following research questions:

RQ1: *Does remodeling structures significantly improve high school students' grammar knowledge?*
RQ2: *Does remodeling structures significantly improve high school students' vocabulary knowledge?*

3. Methodology

3.1 Method and Design

This experimental study was designed to collect data and evaluate the impact of remodeling grammatical structures on enhancing grammar and vocabulary knowledge among high school learners. A classroom

research framework was selected here to examine the research questions related to the learning processes within an EFL setting. The study was conducted on 40 male students in their second year of high school, aged between 15 to 16. They were randomly assigned to experimental and control groups, with each group getting twenty students. The two groups would be subjected to the pre-tests as far as vocabulary and grammar are concerned. Given the fact that the subjects are high school students, the researcher set a particular syllabus and used a specific textbook. These grammatical structures were taught through the syllabus to both groups. However, the experimental group was tasked with remodeling grammar based on the vocabulary and meanings derived from their personal experiences, including those related to their families, significant moments, influential individuals, and their environment. This remodeling of structures happened both in the classroom and at home, while the control group followed a standard curriculum. After the intervention, both groups underwent grammar and vocabulary post-tests. The data analysis was conducted with Statistical Package for the Social Sciences (SPSS) software to check for significant differences in pre-tests and post-test outcomes within each group and between experimental and control groups. This research is purely quantitative, where remodeling structures are the independent variable and grammar and vocabulary knowledge of students are the dependent variables.

3.2 Participants

The study involved 40 male students in the second grade at Imam Khomeini Technical High School, located in Shahreza, a town in southern Isfahan province, Iran. The participants, aged between 15 and 16 years, were chosen based on their availability. Specifically, students from two intact classes were selected for inclusion in the study. These classes were then randomly designated as either the experimental group or the control group, with each group consisting of 20 students. Since all the students are exposed to the same English course and receive similar education through almost the same materials and methodology, they are supposed to be homogeneous in terms of educational background. Moreover, as almost all the participants of this study are from the same town, they are supposed to be homogeneous in terms of cultural background and other related variables.

3.3 Instrumentation

Five different instruments were used: the Oxford Placement Test, a grammar pretest, a vocabulary pretest, a grammar posttest, and a vocabulary posttest.

3.3.1 Grammar and Vocabulary Pretests

A grammar assessment was created by the researcher to evaluate the uniformity of the participants and their baseline knowledge of grammar. This assessment comprised 30 multiple-choice questions within a single section. Additionally, the researcher developed a vocabulary assessment to ascertain the participants' homogeneity and their initial vocabulary knowledge. This test also included 30 multiple-choice questions in one section.

3.3.2 Grammar and Vocabulary Posttests

The researcher created a grammar posttest to measure possible changes in the participants' scores indicative of their grammar knowledge from the beginning to the end of the course. The same posttest would serve the purpose of comparing grammar knowledge from the experimental and control groups at the end of the program. The tool had one section of 30 multiple-choice questions. It was designed to be similar to a grammar pretest in terms of content and difficulty. The researcher also formulated a vocabulary posttest to check any variation in participant vocabulary knowledge that would include comparisons of the experimental and control post-vocabulary knowledge at the end of the program. Similar to the grammar posttest, it comprised 30 multiple-choice items in one section, reflecting the format, contents, and level of the vocabulary pretest. Two university professors evaluated the equivalence of the pretests and posttests based on their content and difficulty.

3.3.3 The Oxford Placement Test

The Oxford Placement Test was employed to assess the proficiency levels of the participants. Additionally, it served as a benchmark for validating the instruments utilized in this research. As a recognized standard, this test is presumed to possess an adequate level of reliability and validity.

3. 3.4 Reliability and Validity of the Instruments

The attributes of the instruments employed in any research can significantly influence the outcomes of that study; therefore, the reliability and validity of all tests created for this research were assessed.

3. 3.5 Reliability of the Grammar and Vocabulary Tests

The consistency of the tests was calculated using the Kuder-Richardson Formula. Although the K-R 21 formula is not as robust as K-R20, it appears to provide a reasonably accurate estimate of reliability for MC-type tests (Brown, 2002). The reliability index for each of the instruments was as follows: grammar pretest (K-R 21=.74), vocabulary pretest (K-R 21=.69), grammar posttest (K-R 21=.78), and vocabulary posttest (K-R 21=.75).

3. 3.6 Validity of the Grammar and Vocabulary Tests

The criterion-related validity of all the pretests and posttests was calculated by correlating the participants' scores on these tests with their scores on the Oxford Placement Test. The validity index for each of the instruments was as follows: grammar pretest (r=.68), vocabulary pretest (r=.67), grammar posttest (r=.76), and vocabulary posttest (r=.73). Also, both the grammar and vocabulary pretests and posttests were examined by two university professors for content validity.

3.4 Data Collection Procedure

Before the commencement of the study, participants were administered the Oxford placement test to assess their proficiency levels and to evaluate the criterion validity of the primary instruments utilized in this research. This was achieved by correlating the participants' scores on the placement test with the results from four pretests and posttests. The control and experimental groups were randomly assigned to participate in the study. The students are all high school sophomores who have received the same treatment in language learning activities with materials and methods that are almost identical. Thus, it can be assumed that they had similar schooling backgrounds.

At the start of the study, a comparison was conducted between the control and experimental groups using two pretests: one for grammar knowledge and the other for vocabulary knowledge. The pretests were administered to both groups so that they could be seen as equivalent in their vocabulary and grammar understanding. Finally, the results of grammar and vocabulary pretests were statistically analyzed to ascertain whether the two groups qualified to participate in the study and were equivalent in grammatical and vocabulary knowledge levels. The pretests were based on 28 classroom sessions (four months, 16 weeks, 90-minute sessions a week) that would be done on grammatical points and vocabulary,

which the students were going to be taught. The significance of the differences between the two groups was tested against the means of the two groups in pre-tests using independent t statistics: comparing the mean scores of the experimental and control groups on the grammar pre-test and comparing the mean scores of the experimental and control groups on the vocabulary pre-test. The same materials were utilized for both the experimental and control groups, with each group receiving an equal amount of instructional time during classroom sessions. However, the experimental group benefited from targeted interventions (remodeling) during every session. This group engaged in remodeling various structures pertinent to the grammatical topics addressed in each lesson, as outlined in the course book.

The activities for the experimental group were structured as follows: (a) the instructor delivered instructions regarding each structure in Persian; (b) the learners were briefed on the methods they would employ to complete the tasks; (c) the students were trained in turn-taking, fostering collaboration and enjoyment in their learning process while enhancing their knowledge and skills; (d) the remodeling activities were designed to manipulate the grammatical patterns or topics taught in each session, aligning with the corresponding units from the course book; (e) the participation of learners in classroom activities was acknowledged, and the teacher provided necessary feedback to each student, offering new insights in return. This approach gradually facilitated the learners' progress in foreign language acquisition.

Conversely, the control group followed a conventional classroom program, where grammar topics were taught both implicitly and explicitly throughout the course book, with explicit grammar experiences also incorporated into the lessons. Both groups engaged in listening exercises, dialogue practice, analysis of short texts from the book, discussions of new concepts, participation in Question-and-Answer sessions, individual and group writing tasks, and the development of conversations based on new topics introduced in each section of the course book. Students from both groups engaged in grammar exercises from their course materials. The instructional program comprised 28 sessions spread over sixteen weeks. Each session lasted 90 minutes and was conducted twice a week. Both groups received instruction from the same researchers. After a four-month intervention, which included 28 sessions utilizing remodeling activities, post-tests assessing grammar and vocabulary were conducted. The outcomes of the pre-tests and post-tests were analyzed and compared using SPSS version 22.

3.5 Data Analysis

The data were processed with the aid of SPSS for analysis in this study. The analyses were both descriptive and inferential, and were done in three distinct phases. The first phase concerned itself with ascertaining participants' initial knowledge of grammar and vocabulary while ascertaining the equivalence of the experimental and control groups. This was conducted by calculating the mean and standard deviation (SD) of grammar pretest scores individually for each group, although the two groups were not significantly different. An independent t-test was then carried out for the grammar pre-test mean scores of the control and experimental groups to ensure neither group differed significantly in their grammar. The same procedure is followed to summarize scores on vocabulary pre-test data and derive the mean and SD for each group. Another independent t-test was performed to compare the mean scores of the two groups on the vocabulary pre-test, confirming their homogeneity in vocabulary knowledge.

In the second phase, the attention shifted to measuring change. More specifically, it looked into assessing the difference in participants' scores on the pre-tests and the post-tests. This necessitated calculating the mean and the SD of the grammar post-test scores for the experimental group. A paired t-test was then applied to examine this group concerning its mean scores for the grammar pre-test and post-test, and ascertain the degree of improvement. That procedure was also followed to assess the progress of the experimental group concerning vocabulary as well. The means and standard deviations were calculated for the data obtained from the grammar post-test for the control group in the first place. Paired t-test was then conducted to compare the mean scores of the control group in both the grammar pre-test and the post-test. This would measure the extent to which possible changes occurred. This method was also adopted to measure the score variation in the control group on the pre-test and post-test of vocabulary.

The third phase entailed the verification of whether there were significant differences in performance between the control and experimental groups in the post-tests. For this purpose, the independent t-test was first used to compare the mean scores of the control and experimental groups on the grammar post-test with the hope of identifying significant differences in their grammatical knowledge. Then, an independent t-test was carried out to compare the mean scores of both groups on the vocabulary post-test to ascertain any significant differences in their vocabulary knowledge.

4. Results

This section outlines the findings of the study about the pertinent research questions. Utilizing SPSS software, the results were derived from the analysis of quantitative data gathered through two pre-tests and two post-tests. By the research questions, the outcomes of the pre-tests and post-tests for both a control group and an experimental group are detailed.

4.1 Comparing the Groups to Justify the Homogeneity of Groups

At first, the control and experiment groups were compared on a grammar and vocabulary test to make sure they were homogeneous before treatment. Findings of the study based on the pretests, before the implementation, revealed that there was no significant mean difference in pretest scores between the control and experiment groups. The statistical findings for the first pair of grammar pretests were [t = -688, sig = .386, df = 38] at the significant level of .05 with a mean score of 11.45 for the experimental group and a mean score of 12.10 for the control group, which are shown in Table 2. The group and independent sample test results of pre-tests are presented in Tables 1 and 2, respectively.

Table 1.

Group statistics for the performance of control and experimental groups on grammar pretests

	V1	N	Mean	Std. Deviation	Std. Error Mean
Grammar pretests	EG	20	11.45	2.76	.61
	CG	20	12.10	3.19	.71

The comparison between the experimental and control groups, as illustrated in Table 1, indicates that the mean scores of the grammar pretests are quite similar, with a mean difference of (.65). The significance value of (.386), which exceeds .05, suggests that the variability between the two conditions is approximately equal.

Table 2.

T-test results for comparison of the control and experimental groups on grammar pretests

Independent sample-test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	
Grammar pretests	Equal variances assumed	.386	-.688	38	
	Equal variances not assumed		-.688	37.226	

	T-Test for Equality of Means			
	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
				Lower
Grammar pretests Equal variances assumed	.495	-.65000	.94416	-2.56136
equal variances not assumed	.495	-.65000	.94416	-2.56267

The pretest scores for grammar in the experimental group do not differ significantly from those in the control group. Furthermore, the findings presented in Table 3 demonstrate that the observed t-value of (.495) is notably greater than the t-critical value at .05. Based on this information, along with the descriptive statistics in Table 1, it can be concluded that there is no significant difference between the experimental and control groups regarding the pretest results, indicating that both groups were homogeneous in their prior knowledge of grammar before the experimental treatment was applied.

Table 3.

Independent T-test of pretests for both groups (experiment and control) on vocabulary knowledge

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	
Equal variances assumed	.001	.973	-1.224	38	
Equal variances not assumed			-1.224	37.323	
	t-test for Equality of Means				
	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
				Lower	
Equal variances assumed	.228	-1.200	.980	-3.185	
Equal variances not assumed	.229	-1.200	.980	-3.186	
Assumed				.785	
Not assumed				.786	

For the second pair of groups, that is, experimental and control pretests of vocabulary [t=1.224, sig =.973, DF =38] at the significant level of .05, as shown in Table 3

Table 4.

Comparison of both groups of experiment and control pretests on vocabulary knowledge

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*	Std. Error Mean
exper PREV	*20*	*7*	*17*	*11.00*	*2.884*	.645
controlPREV	*20*	*6*	*21*	*12.20*	*3.302*	.738
Valid N (listwise)	*40*					

Descriptive statistics are shown in Table 4. Considering the sig value (.973) >.05 reveals that the variability in the two conditions is about the same. The scores in the experimental pretest of vocabulary do not vary much more than the scores in the control pretest of vocabulary. The result in Table 4 showed that the observed t value (. 228) is significantly higher than the t-critical value. 05. It can be claimed that there is no meaningful difference between the experimental and control group on the pretest and the two groups were homogeneous regarding their vocabulary knowledge, as is seen observing descriptive statistics results in Table 4, there is no significant difference between experimental (mean =11) and control (mean = 12.20) pretests of vocabulary. So, they are homogeneous.

4.2 Comparing Pretest and Posttest in Experimental and Control Groups

After the treatment, to determine the extent of attainment for both control and experimental groups, the performance of each group on grammar and vocabulary pre-tests and post-tests was compared separately using two paired t-tests. The results of t-tests as well as related descriptive statistics for the control group and the experimental group are presented in Tables 5 and 6 and the following. Descriptive statistics obtained for experimental vocabulary pretest as [range=10, mean=11, std. error=.645, std. deviation 2.884, variance=8.316]. The descriptive statistical findings for the experimental vocabulary posttest are [range=10, mean=15.70, std. error=.677, std. deviation=3.028, variance=9.168]. The result shows there is a significant difference between the mean scores of the vocabulary pretest (mean=11) and posttest (mean=15.70) in the experimental group.

Table 5.

Comparison of pretests and posttests of both groups on vocabulary and grammar knowledge: Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
controlpostG	20	18	7	25	15.10	4.494	20.200
Valid N (listwise)	20						
CONTROLPREG	20	11	7	18	12.10	3.194	10.200
CONTROLPREV	20	15	6	21	12.20	3.302	10.905
CONTROLPOSTV	20	16	8	24	16.30	4.143	17.168
EXPERPREG	20	11	7	18	11.45	2.762	7.629
EXPERPOSTG	20	15	11	26	18.10	4.154	17.253
EXPERPREV	20	10	7	17	11.00	2.884	8.316
EXPERPOSV	20	10	10	20	15.70	3.028	9.168
Valid N (listwise)	20						

Range, the mean score, standard error of measurement, standard deviation and variance for the control grammar pretest, are [range=11, mean=12.10, std. error=.714, std. deviation= 3.194, and variance=10.200] respectively. For the control grammar posttest [range=18, mean =15.10, std. error =1.005., std. deviation=4.494 and variance =20.200] respectively. For the experimental grammar pretest, descriptive statistics show the results as [range=11, mean=11.45, std. error= .618, standard deviation=2.762, and variance= 7.629]. The finding for the experimental grammar posttest is [range=15, mean=18.10, std. error=.929, standard deviation=4.154, variance=17.253**].** The results show there is a

significant difference between mean scores for the pretest (mean=11.45) and posttest (mean=18.10) of grammar in the experimental group. The descriptive statistics for the control vocabulary pretest are [range=15, mean=12.2, std. error=.738, standard deviation=3.302, and variance =10.905]. For the controlled vocabulary, posttest is [range=16, mean=16.30, std. error=.927, std. deviation=4.143].

Table 6.

Paired samples t-test for pretest and posttest of grammar in the control group

Paired Samples Statistics					
CONTROL/G	Mean	N	Std. Deviation	Std. Error Mean	
Pair1	12.10 15.10	20 20	3.194 4.494	.714 1.005	
N		Correlation	Sig.		
20		.322	.166		

In Table 6 paired sample statistics revealed paired differences, sig. (2-tailed) as .009, with lower and upper differences at -5.153 and -.847, respectively.

Paired Differences				
			95% Confidence Interval of the Differences	
Mean	Std. Deviation	Std. Error Mean	Lower	Upper
-3.000	4.600	1.029	-5.153	-.847
t	df	Sig. (2-tailed)		
-2.917	19	.009		

In Table 7 results from paired samples t-test for pretest and posttest on vocabulary in the control group were compared. As is shown mean score is 4.100, the SD is 3.339, the standard error mean is .747, and the 95% confidence interval of the difference is lower- 5.663, and upper- 2.537, respectively.

Table 7.

Paired samples t-test for pretest and posttest on vocabulary in the control group

CONVOCAB PRE-POST	Mean	N	Std. Deviation	Std. Error Mean
Pair 2 16	12.20	20	3.302	.738
18	16.30	20	4.143	.927

Table 8.

Paired Samples Correlations on vocabulary pretest and posttest in the control group

CONVOCAB PRE-POST	N	Correlation	Sig.		
Pair 2 16&18	20	.619	.004		
	Paired Differences				
VOCAB	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
				Lower	Upper
Pair 2 16-18	-4.100	3.339	.747	-5.663	-2.537

Table 9.

Paired t-test on vocabulary for pretest and posttest in the control group

Pretest and posttest in the control group on vocabulary	t	df	Sig. (2-tailed)
VOCABULARY	-5.492	19	.000

Table 10 depicts the statistical findings of paired sample tests for four pairs, consisting of experimental and control grammar and vocabulary tests are listed as follows. The first pair is the t-test for the pretest and post-test of grammar in the control group obtained [t=-2.917, sig (2-tailed) =.009, DF =19], the second pair is the t-test for the pretest and post-test of vocabulary in the control group gained [t=-5.492, sig (2-tailed) = .000, DF =19].

Table 10.

Pair t-tests on grammar and vocabulary in experimental and control groups

	Paired Differences	t	Df	Sig. (2-tailed)
	95% Confidence Interval of the Difference			
	Upper			
Pretest and Posttest in control PREG-Control control POSTG group	-847	2.917	19	.009
Pretest and Posttest in control PREV-Control control POSTV Group	-2.537	-5.492	19	.000
Pretest and Posttest in exper PREG – exper POSTG Control Group	-5.055	-8.729	19	.000
Pretest and Posttest in control PREV-Control control POSTV Group	-3.494	-8.156	19	.000

The third pair is the paired sample test of experimental grammar pretest and posttest that resulted in [t=-8.729, sig (2-tailed) = .000, DF=19]; therefore, there is a level of significance (p = 0.000) because it is smaller than (*p =0.05*), so the test is meaningful. In other words, there is a significant difference between the mean scores of students before and after receiving treatment. With these results, it can be concluded that remodeling has a great effect on improving students' grammar knowledge. Finally, the fourth pair is a paired sample t-test for experimental pretest and posttest of vocabulary reveals as [t= -8.156, sig (2-tailed) = .000, df=19]. These statistical findings are shown in Table 10, illustrated above. Similarly, in this pair, there is a level of significance (p =0.000) < (p =0.05), comparing the results indicates that there is a significant difference between the mean scores of students before and after treatment. That is remodeling has a considerable effect on students' vocabulary knowledge.

4.3 Research Question 1

Does remodeling various structures have any effect on the improvement of high school students' grammar knowledge?

Table11.

Paired sample statistics for experimental pre- and post-test on grammar

Experiment Pre-post Grammar		Mean	N	Std. Deviation	Std. Error Mean
Pair 3	8	11.45	20	2.762	.618
	12	18.10	20	4.154	.929

Table 11.

Continued paired sample statistics on grammar in the control

Control Pre-post grammar		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	8	12.10	20	3.194	.714
	12	15.10	20	4.494	1.005

As shown in this Table the t- the value of pre- and post-grammar tests in the control group is -2.917, df= 19 and sig(2-tailed) is.009

Table 11.

Continued the Paired Samples Test

Control pre-post grammar	t	df	Sig. (2-tailed)
Pair 1	-2.917	19	.009

Experiment pre-post grammar	t	df	Sig. (2-tailed)
Pair 3	8.729	19	.000

As it is shown in Table 11, detailed data shows the descriptive and inferential statistics. The mean score of the control group on the post-test is 15.10 for grammar their performance to the experimental group, which is 18.10 for grammar. paired samples test shows as sig(2-tailed) =.000, which is smaller than (p=.05); therefore, according to this and the descriptive result, we can conclude that there exists a high relationship between remodeling various structures and improvement of grammar knowledge from pretest to posttest in favor of the experimental group.

Table 12.

Independent sample test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Data grammar	Equal variances assumed	.035	3.00000	1.36844
	Equal variances not assumed	.035	3.00000	1.36844

Regarding Table 12, the independent t-test results (p=.035) <.05; the level of significance is smaller than (p=.05); there is a meaningful difference between experimental and control group mean scores on the post-test.

Table12.

Continued Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Data grammar	Equal variances assumed	.22974	5.77026
	Equal variances not assumed	.22917	5.77083

4.4 Research Question 2

Does remodeling various structures have any effect on the improvement of high school students' vocabulary knowledge?

As shown in Table 13, the mean difference score of the control group from the pretest to the posttest is (-4.700) for vocabulary against their performance in the experimental group, which is (-6.650). We can conclude based on the results that there exists some relationship between remodeling various structures and improvement of vocabulary knowledge on the posttest in comparison to the control group in favor of the experimental group, but according to Table 14, the result shows (p=.604) the level of significance is larger than (p=.05).

Table 13.

Pre-post grammar and vocabulary sample tests in the experimental group

		Mean difference			
Pair 3	experPREG – experPOSTG	-6.650	3.407	.762	-8.245
Pair 4	experPREV - experPOSV	-4.700	2.577	.576	-5.906

Table 14.

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
VOCABEXCONPOST	Equal variances assumed	.604	-.60000	1.14754
	Equal variances assumed	.604	-.60000	1.14754

5. Discussion

This study investigated the impact of remodeling grammatical structures, where second-year high school students rephrased textbook grammar using their own words and real-life experiences, on their grammar and vocabulary proficiency. The results demonstrated that the experimental group, which engaged in remodeling activities in both spoken and written formats, significantly outperformed the control group, which followed standard instructional methods. The experimental group achieved a higher mean grammar posttest score (M=18.10) compared to the control group (M=15.10), with a statistically

significant difference (p=.035). For vocabulary, the experimental group showed improvement from a pretest mean of 11.00 to a posttest mean of 15.70, while the control group improved from 12.20 to 16.30, though the difference between groups was not statistically significant (p=.604). These findings suggest that remodeling is a promising strategy for enhancing grammar knowledge, with a less pronounced but still notable impact on vocabulary acquisition.

The significant improvement in grammar proficiency aligns with theoretical frameworks underpinning the study. Jackendoff's (2002) conceptual semantics posits that learners construct meaning by linking syntactic structures with conceptual representations derived from personal experiences. Remodeling activities, which required students to rephrase grammar in the context of their lives, facilitated this linkage, enhancing their understanding of syntactic forms and their communicative functions. Similarly, Long's (1991) focus-on-form approach supports the study's findings, as remodeling directed students' attention to grammatical structures within meaningful contexts, promoting both accuracy and fluency. Schmidt's (1990) noticing hypothesis further explains the results, as the act of remodeling likely heightened students' conscious attention to grammatical forms, enabling them to identify and address gaps in their knowledge. The collaborative nature of some remodeling tasks also resonates with Vygotsky's (1978) sociocultural theory, where peer interactions and teacher feedback scaffolded learners' understanding, fostering deeper engagement with language structures.

The findings are consistent with international empirical research on communicative and student-centered approaches. For instance, Shehadeh (2011) found that tasks requiring learners to reformulate language structures in meaningful contexts improved grammatical accuracy among Arab EFL learners, mirroring the grammar gains observed in this study's experimental group. Similarly, Willis and Willis (2007) demonstrated that task-based activities, which encourage manipulation of language forms, enhance both grammar and vocabulary acquisition, supporting the effectiveness of remodeling as a task-based strategy. However, the lack of statistical significance in vocabulary improvement was unexpected, given prior evidence from Ghaedsharafi and Bagheri (2012), who reported significant vocabulary gains through contextualized grammar tasks in an Iranian context. This discrepancy may be attributed to the study's primary focus on grammatical structures, with vocabulary acquisition occurring as a secondary outcome through exposure to contextualized language rather than targeted vocabulary instruction.

In the Iranian context, the results align with studies highlighting the limitations of traditional, form-focused instruction. Akbari (2015) noted that teacher-centered methods in Iranian high schools restrict opportunities for communicative practice, leading to persistent grammar challenges. The success of remodeling in this study suggests it addresses this gap by introducing a student-centered, meaning-focused approach, as advocated by Rahimi and Azhegh (2016), who found that collaborative tasks enhance motivation and linguistic proficiency among Iranian EFL learners. However, the modest vocabulary gains compared to grammar improvements were unexpected, given Lightbown and Spada's (2010) assertion that meaning-focused instruction supplemented by form-focused activities enhances overall communicative skills. This suggests that remodeling, as implemented, may have prioritized syntactic restructuring over lexical expansion, potentially due to the design of the tasks or the limited duration of the intervention (28 sessions over four months).

The significant improvement in grammar knowledge was expected, as remodeling aligns with communicative language teaching (CLT) principles, which emphasize the integration of form and meaning (Richards, 2006). By rephrasing grammatical structures based on personal experiences, students engaged in active hypothesis testing, which Nassaji and Fotos (2011) argue enhances grammatical accuracy. The collaborative and interactive nature of remodeling tasks likely further supported these gains by fostering motivation and engagement, as noted by Duran et al. (2016). However, the lack of significant vocabulary improvement between groups was unexpected, particularly since remodeling involved using vocabulary in context. This could be due to the study's focus on grammar manipulation, which may have overshadowed explicit vocabulary development. Additionally, the control group's vocabulary improvement (M=12.20 to M=16.30) suggests that standard instruction, which included textbook-based exercises, was also effective for vocabulary, potentially diluting the comparative impact of remodeling.

The findings have significant implications for EFL instruction in Iran, where teacher-centered and exam-oriented approaches dominate (Ghorbani, 2019). Remodeling offers a practical strategy to shift toward student-centered, communicative methods, addressing the limitations of traditional instruction highlighted by Pishghadam and Mirzaee (2016). By incorporating real-life experiences, remodeling stimulates interest and provides a purposeful context for learning, enabling students to connect grammatical forms with their meanings. This approach can help mitigate fossilization, as described by Hinkel and Fotos (2001), by encouraging creative and accurate language use. Educators should consider

integrating remodeling into curriculum design, particularly for grammar instruction, while supplementing it with targeted vocabulary activities to maximize lexical gains.

The study also underscores the need for teacher training to implement innovative strategies like remodeling effectively. Many Iranian educators, as noted by Badpa (2024), lack familiarity with communicative approaches, which limits their ability to foster interactive learning environments. Professional development programs could bridge this gap, equipping teachers with the skills to design and facilitate remodeling tasks. Furthermore, the findings suggest that material developers should create resources that encourage contextualized grammar practice, aligning with the Iranian Ministry of Education's (2018) goals for integrated skills development.

While the study provides robust evidence for the efficacy of remodeling in grammar instruction, its focus on a single high school and male participants limits generalizability. The modest vocabulary gains also warrant further investigation into how remodeling tasks can be designed to enhance lexical acquisition more effectively. Future research should explore remodeling across diverse contexts, including female and mixed-gender classrooms, and incorporate longer intervention periods to assess sustained effects. Additionally, qualitative data, such as student and teacher perceptions of remodeling, could provide deeper insights into its motivational and cognitive impacts, complementing the quantitative findings.

In conclusion, this study demonstrates that remodeling grammatical structures is an effective strategy for improving grammar proficiency among Iranian EFL learners, with potential benefits for vocabulary acquisition. By aligning with theoretical frameworks and empirical evidence, the findings advocate for a shift toward communicative, student-centered approaches in Iranian EFL education, offering a pathway to address longstanding challenges in grammar instruction.

6. Conclusion

This study investigated the impact of remodeling grammatical structures, where second-year high school students rephrased textbook grammar using their personal experiences, concepts, and everyday events, on their grammar and vocabulary proficiency. The findings revealed that the experimental group, which

engaged in remodeling activities, demonstrated significant improvements in grammar knowledge (posttest M=18.10 vs. control M=15.10, p=.035) and modest gains in vocabulary knowledge (posttest M=15.70 vs. control M=16.30, p=.604) compared to the control group, which followed standard instructional methods. These results suggest that remodeling, by connecting grammatical forms to meaningful real-life contexts, enhances students' ability to internalize and apply linguistic structures effectively, aligning with communicative language teaching principles (Lightbown & Spada, 2010; Richards, 2006).

The significant grammar improvement supports the theoretical frameworks of Jackendoff's (2002) conceptual semantics and Schmidt's (1990) noticing hypothesis, which emphasize the importance of linking form with meaning and conscious attention in language acquisition. However, the less pronounced vocabulary gains suggest that remodeling, as implemented, primarily targeted grammatical structures, with vocabulary acquisition occurring indirectly through contextual exposure. This finding indicates a need for more explicit vocabulary-focused strategies within remodeling activities to maximize lexical development, as suggested by Ghaedsharafi and Bagheri (2012). The variation in outcomes among students, with those showing greater engagement in written and oral remodeling tasks achieving higher gains, highlights the role of motivation and active participation, consistent with Vygotsky's (1978) sociocultural theory.

The study employed a rigorous experimental design, with 40 second-year high school students at Imam Khomeini Technical High School in Shahreza, Iran, randomly assigned to experimental and control groups. Both groups were pre-tested and post-tested on grammar and vocabulary knowledge using validated instruments, with data analyzed via SPSS version 22 through independent and paired sample t-tests. These analyses confirmed the homogeneity of the groups at the outset and revealed statistically significant improvements in the experimental group's grammar performance, underscoring the efficacy of remodeling as a pedagogical strategy.

These findings have important implications for EFL instruction, particularly in the Iranian context, where traditional, teacher-centered methods often limit communicative competence (Akbari, 2015). Remodeling offers a student-centered approach that fosters engagement and contextual understanding, addressing challenges highlighted by Ghorbani (2019). The researchers encourage other educators and scholars to adopt and further investigate remodeling techniques, exploring their

applicability across diverse age groups, proficiency levels, and educational settings. Future studies could examine the integration of remodeling with explicit vocabulary instruction, incorporate qualitative data to capture student perceptions, and extend the intervention duration to assess long-term effects. Such research could further validate and refine this approach, contributing to more effective EFL pedagogy and curriculum development globally.

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