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Investigating Explicit and Implicit Teaching Strategies of Formulaic Sequences and Their Influence on Writing Accuracy and Complexity

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Abstract: Although the positive impact of formulaic sequences on learners' writing ability has been widely acknowledged, limited empirical research has rigorously explored the comparative effects of implicit and explicit instruction in this area. To address this gap, the present study investigated how explicit versus implicit teaching of formulaic sequences influences Iranian EFL learners' writing accuracy and complexity. Employing a quasi-experimental design, the study examined 45 students (22 males and 28 females) aged between 14 and 20, recruited from a private language institute in Isfahan. Participants were divided into two experimental groups and one control group. One experimental group received implicit instruction of formulaic sequences, while the other was taught explicitly prior to completing writing tasks. Pre-tests and post-tests were administered across all groups, and learners' writing accuracy and complexity were assessed through their task scores. Results from ANCOVA analyses demonstrated that both explicit and implicit instruction significantly enhanced learners' writing performance. Specifically, both approaches improved accuracy, leading to more precise written outputs, and both experimental groups surpassed the control group in terms of complexity. These findings highlight the pedagogical value of integrating explicit and implicit teaching of formulaic sequences into EFL writing instruction, suggesting that mastery of such sequences can contribute meaningfully to the development of learners' writing skills.

Keyword : Explicit teaching, Formulaic Sequences, Implicit teaching, Writing Accuracy, Writing Complexity.

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INTRODUCTION

Corpus-based studies suggest that language is predominantly formulaic in nature (Fordyce, 2014; Sinclair, 2003). Scholars argue that language is not entirely novel or rule-generated each time it is produced (AlHassan & Wood, 2015; Wong, 2005). Formulaic sequences have become central in second language acquisition research, with numerous studies confirming their role in strengthening learners' linguistic abilities (O'Donnell, Romer, & Ellis, 2013; Wong, 2005). Evidence further shows that language relies heavily on formulaic patterns, and thus, attaining phraseological competence is essential for achieving native-like fluency and idiomatic expression (Tang, 2012; Wray & Perkins, 2000). Additionally, mastery of a substantial

repertoire of frequently occurring formulaic sequences is vital for fluent comprehension and production (Haung, 2015; Peters & Pauwels, 2015). In terms of writing, formulaic sequences are particularly significant in improving L2 writing performance, as the frequent use of common lexical bundles is a defining feature of academic discourse (O'Donnell et al., 2013).

Although numerous methods have been employed to enhance EFL learners' writing proficiency, acquiring strong writing skills continues to be one of the most demanding aspects of language learning for both EFL and ESL students, owing to various contributing factors (Kara, 2013). Consequently, the development of L2 learners' writing ability remains a persistent challenge for teachers and learners alike. One effective strategy to address this issue is the incorporation of formulaic sequences and prefabricated lexical chunks into instruction (O'Donnell et al., 2013; Wong, 2005). Recognizing the importance of formulaic sequences, numerous scholars argue that they should be integrated into L2 classroom instruction (Lukácsi, 2021). Such sequences hold particular implications for learners in enhancing their writing proficiency and for teachers in determining effective pedagogical approaches. Nevertheless, existing scholarship indicates that investigations into the effects of formulaic sequences on writing accuracy and complexity within the Iranian EFL context remain limited. In addition, there is a notable scarcity of studies examining the relative effectiveness of explicit versus implicit instruction of formulaic sequences on learners' overall writing performance (Polio, 2012).

Jones and Haywood (2004) argue that, given the centrality of precise information transfer in academic writing, the use of lexical chunks and collocations is essential for effective communication. Moreover, Erman (2009) suggests that the likelihood of internalizing and employing formulaic sequences increases through systematic investigation. Despite this, limited attention has been devoted to examining the pedagogical value of teaching such sequences explicitly versus implicitly. To bridge this gap, the present study seeks to investigate the impact of explicit and implicit instruction of formulaic sequences on the writing performance of Iranian EFL learners. Grounded in a solid theoretical framework, this research aims to address the following questions through a quantitative approach.

1. RQ1: To what degree does explicit versus implicit instruction of formulaic sequences enhance the overall writing proficiency of Iranian EFL learners?
2. RQ2: Does explicit and implicit teaching of formulaic sequences lead to significant improvements in the writing accuracy of EFL students?
3. RQ3: Does explicit and implicit instruction of formulaic sequences contribute significantly to the development of writing complexity among EFL learners?

Review of the Literature

1. Implicit and Explicit Instruction

Ellis (2009) points out that while implicit and explicit learning are related to implicit and explicit instruction, they should be treated as distinct concepts. Implicit versus explicit learning is primarily viewed from the learner's perspective, whereas implicit and explicit instruction are defined externally. Importantly, instruction does not necessarily determine the type of learning that occurs; implicit teaching may not always result in implicit learning, and explicit instruction does not exclusively lead to explicit learning. Learners often adopt strategies that align with their preferences rather than strictly following the instructional method provided. In explicit instruction, learners are presented with rules and guided to develop metalinguistic awareness of these rules. Their attention is deliberately directed toward the specific language features being taught (Chan, 2018).

Polio (2012) found that learners draw on both explicit and implicit knowledge when engaging in writing tasks. Cancino and Iturrieta (2022) further note that L2 learners may accurately employ certain grammatical structures based on their implicit linguistic knowledge, even without being able to articulate the underlying rules. DeKeyser (2009) highlights the difficulty of articulating explicit knowledge, though learners are aware of such information and use it to refine their output and select appropriate forms. Explicit knowledge, however, requires deliberate and time-intensive processing to be acquired. Brown (2007) equates these notions with intentional and incidental learning.

2. Formulaic Sequences

A growing body of research highlights the crucial role of prefabricated chunks and multiword clusters in language acquisition and use. Consequently, the acknowledged significance of formulaic sequences (FSs) has directed the attention of second and foreign language learners toward standardized multiword expressions, commonly referred to in the literature as lexical phrases, multiword units, formulas, prefabricated chunks, or ready-made utterances. Moreover, fluent language production in real-time contexts is believed to be facilitated by the holistic retrieval of FSs from memory (Nergis, 2021).

The crucial role of phraseology in foreign language learning and teaching has become increasingly recognized (Nattinger & DeCarrico, 2015). Research further indicates that mastery of a substantial number of frequently occurring formulaic sequences is a key determinant of fluent comprehension and production (Pérez-Llantada, 2014; Peters & Pauwels, 2015). Scholars argue that formulaic sequences constitute a significant portion of L2 learners' linguistic repertoire, making them indispensable for achieving speech fluency and enhancing other dimensions of language proficiency (Erman, 2009).

Also, several scholars maintain that they should be included in L2 classroom practice (e.g., Nattinger & Decarrio, 2015; AlHassan & Wood, 2015). According to Wang (2021), formulaic sequences are prevalent in the writing of successful L1 students and expert writers. The fact that academic discourse is replete with formulaic sequences suggests that writing skills include the mastery of lexicon and syntax and the execution of formulaic sequences, which are regarded as the essential elements of academic discourse (Ellis, 2016; Martinez & Schmitt, 2012).

3. Writing Complexity, Accuracy, and Fluency

Developing strong writing skills is a challenge for many individuals, even in their native language, and achieving proficiency in a second or foreign language is often considered even more demanding. Within the Iranian EFL context, several scholars (Lee, 2018; Spada & Tomita, 2010) have observed that the writing performance of Iranian L2 learners is relatively weak. Consequently, greater attention has been directed toward enhancing writing skills as a critical component of language learning.

Scholars in the field of second and foreign language learning generally agree that L2 proficiency, particularly writing proficiency, is a multi-faceted construct. The framework of complexity, accuracy, and fluency (CAF) is widely considered to provide a comprehensive account of its core components. Mastery of writing skills is regarded as one of the most demanding aspects of language learning due to its inherent complexity (Mazgutova & Kormos, 2015). Shintani (2013) further emphasizes that writing is typically recognized as the most challenging of the four language skills. Skehan (1996) conceptualized complexity as the expansion of the interlanguage system through the use of more elaborate and structured forms. Similarly, Ellis and Barkhuizen (2005) defined complexity as the presence of a wide variety of structures in learners' writing, many of which may not yet be fully internalized. At advanced stages of language development, complexity is characterized by the frequent use of conjunctions and subordination (Ellis, 2009; Skehan, 2009).

Besides, writing accuracy has been defined as the extent to which learners' language production conforms to the norms of the target language (Skehan & Foster, 1999). Accuracy is further understood as the degree of alignment between the grammatical system of the target language and the learners' interlanguage. In this sense, it reflects the learners' ability to employ complex interlanguage structures without producing errors (Ellis & Barkhuizen, 2005; Skehan, 2009). Fluency, on the other hand, refers to the quantity of words produced within a given time frame, accompanied by lexical frequency, and is characterized by the ease with which the writer's intended meaning can be understood, independent of spelling or content considerations (Mitchel & Myles, 2004).

METHODOLOGY

Participants and Context

Using a convenience sampling method, the study initially recruited 50 participants (N=50), consisting of English language learners aged between 14 and 20 (22 males and 28 females). One participant aged 42 was excluded from one of the experimental groups on the grounds that her age deviation could potentially bias the results, reducing the sample to 49 learners (N=49). Following the administration of the Oxford Placement Test (OPT), four additional students were removed as statistical outliers, being two standard deviations above or below the mean, resulting in a final sample of 45 learners (N=45; 17 males, 28 females). These participants were drawn from three classes at Omid Javan Institute, a private language school in Esfahan, Iran. They were randomly assigned to two experimental groups (15 learners each) and one control group (15 learners). In terms of demographics, all participants were native speakers of Persian, their proficiency level was assessed as pre-intermediate, and none had prior experience living abroad.

Instruments & Materials

The study utilized two categories of instruments. The first category comprised quantitative tools designed to collect numerical data, while the second included pedagogical materials employed during instruction. Prior to administering the pre-test, the Oxford Placement Test (OPT) was conducted to ensure the homogeneity of the participants.

To evaluate participants' overall writing performance, the study employed a checklist developed by Lukacsi (2020) based on the Writing Skill Measurement Scales. The checklist comprised five criteria: grammatical structure, spelling, word order, punctuation, and error frequency, each rated on a scale from 0 to 5. For data collection, Microsoft Word 2007 was used to analyze textual elements, as its readability function provides detailed information regarding word count, sentence count, and average word and sentence length within a given text.

In this study, complexity was assessed by calculating the number of subordinate clauses per T-unit (Mehnert, 1998). The underlying assumption was that learners attempt to convey more complex ideas through increased use of subordination. Accordingly, sentences were segmented into independent and subordinate clauses for analysis.

Complexity = subordinate clauses / sentences

Accuracy in writing was assessed using holistic scales (Polio, 2012) alongside global measures such as error-free clauses. More precisely, accuracy was calculated as the percentage of grammatically correct clauses, determined by dividing the number

of error-free clauses by the total number of sentences and multiplying the result by 100% (Skehan & Foster, 1999).

% Accurate sentences = Error-free clauses / (n) sentences Ï100

For instructional purposes, *Longman's Academic Writing Series, Book 2* (Hogue, 2014) was employed to select the formulaic sequences explicitly taught during the treatment phase. In particular, sequences related to expressing opinions were chosen, as they aligned with the writing task also drawn from the same textbook. The assigned task required learners to compose an essay on the topic of video games and violence, providing an opportunity for them to apply the targeted formulaic sequences in presenting their arguments. This essay functioned both as the pre-test and the post-test in the study.

Procedure

Three intact classes were selected for the study, and the Oxford Placement Test (OPT) was administered to all students. Based on the test results, outlier scores were excluded from the data analysis. The remaining students were then assigned to two experimental groups and one control group. All three groups followed a similar English course using *Four Corners, Book 2*. To ensure comparability, participants were homogenized, and a pre-test was administered to both experimental and control groups to assess their overall writing performance, accuracy, and complexity.

To establish inter-rater reliability, the writing tests were evaluated by two experienced teachers using a standardized rubric. The two experimental groups received approximately 400 minutes of instruction focused on formulaic sequences, while the control group continued with conventional teaching methods. In the explicit experimental group, predetermined formulaic sequences were taught directly; they were presented on the board and via Google Docs during online sessions, with explanations of their functions and two illustrative examples provided for each structure. In contrast, the implicit experimental group was exposed to texts containing formulaic sequences, which students were asked to read and review at the end of each session. Finally, a post-test was administered to all groups, and overall writing performance was again evaluated by two established teachers using the same measurement criteria.

The experimental phase was conducted over five non-consecutive sessions for each of the experimental groups during weeks 2 to 5 of the course, held in the spring of 2021. In total, the treatment amounted to approximately seven hours of instruction, combining in-person and online classes. Specifically, two sessions were delivered face-to-face, while the remaining three were conducted online. Week 1 was allocated to

participant homogenization and the administration of the pre-test, whereas week 6 was reserved for the post-test.

Data Analysis

This study employed a quasi-experimental design to examine learners' writing skills using quantitative measures, with data collected and analyzed through SPSS. To explore the within-group effects of the two treatments involving formulaic sequences, pre-test and post-test scores were subjected to ANCOVA. Subsequently, differences between implicit and explicit instruction were investigated by computing scores for writing accuracy and complexity, thereby determining the statistical significance of group differences in the post-tests. Descriptive statistics, including means and frequencies, were also used to analyze the data. The Statistical Package for Social Sciences (SPSS, version 25) was applied to calculate both descriptive and inferential statistics. Inferential analyses included paired-samples t-tests to examine accuracy and complexity in participants' pre-test writing performance. Descriptive statistics comprised means and standard deviations. To verify the assumption of equal variances prior to instruction, Levene's test was conducted across the three groups. Finally, three independent-samples t-tests were performed to compare mean scores of complexity and accuracy between the two experimental groups and the control group, treating these measures as dependent variables of writing performance.

RESULTS AND DISCUSSION

Checking the Assumptions

The Shapiro–Wilk test was employed to statistically examine the assumption of normality. In addition, Levene's test of equality of variances was conducted to ensure that the scores demonstrated homogeneity of variance. The results indicated that none of the assumptions were violated, thereby allowing the application of the intended statistical analyses to test the research hypotheses. Furthermore, the relationship between the independent variables (implicit and explicit teaching methods) and the dependent variables (overall writing performance, complexity, and accuracy) was found to be non-significant at the level of $p > 0.05$. This confirmed the assumption of homogeneity of regression slopes across the dependent variables.

Analysis of the Research Questions

The comparison of the mean and standard deviation values for the pre-test and post-test across the three groups is summarized in Table 1.

Table 1.
Comparison of Mean and Standard Deviation of Pre-Test and Post-Test in Three Groups

Groups		Pre-test		Post-test	
		Mean	**SD**	**Mean**	**SD**
Overall writing	Control	9.86	2.25	9.00	2.37
	Implicit	9.56	2.75	12.30	2.51
	Explicit	9.16	2.24	14.00	1.96
Accuracy	Control	9.93	2.18	9.73	2.28
	Implicit	9.80	3.18	13.00	3.07
	Explicit	8.80	1.82	13.00	1.77
Complexity	Control	9.93	2.98	9.66	2.22
	Implicit	9.40	2.74	12.60	2.61
	Explicit	9.60	3.01	12.80	2.75

As illustrated in Table 1, the mean post-test scores for overall writing, accuracy, and complexity in the implicit group were higher than those observed in the control group.

The first research hypothesis examined whether implicit and explicit instruction of formulaic sequences produced differential effects on the overall writing skills of Iranian EFL learners. To evaluate the effectiveness of these instructional approaches in enhancing general writing ability, the pre-test and post-test scores of the experimental and control groups were analyzed using ANCOVA to identify between-group differences at the post-test stage. Table 2 presents the descriptive statistics comparing the outcomes of implicit and explicit formulaic sequence instruction in the experimental groups with conventional teaching methods in the control group. The results indicate that mean scores increased across both the control and experimental groups in the post-test.

Table 2.
Descriptive Statistics of the Pretest

	Mean	**Std. Deviation**	**N**
Control	9.0000	2.37547	15
Implicit	12.3000	2.51992	15
Explicit	14.0000	1.96396	15
Total	11.7667	3.07409	45

Table 3.
One-Way ANCOVA on the Mean Scores of Post-Tests Overall Writing in Two Groups (Control and Experiment) with Pre-Test Control

Source	Sum of Squares	df	F	p-value	Eta squared	Sig.
Pre-test	100.252	1	29.37	.001	.412	1.00
Group	197.451	1	57.86	.001	.579	1.00
Error	143.323	42				

As shown in Table 3, controlling for the pre-test, a statistically significant difference was found between the control and experimental groups in terms of overall writing achievement (p = 0.001, F = 57.51). The effect size was calculated at 0.579, indicating that approximately 57% of the variance in overall writing scores could be attributed to learning. Accordingly, the first research hypothesis was confirmed.

As displayed in Table 4, the Bonferroni pairwise comparison test revealed significant differences between the explicit and implicit teaching groups as well as between these groups and the control group across both pre-test and post-test intervals (p < 0.05). This table presents the descriptive statistics related to writing complexity measured at two testing points (pre-test and post-test) under implicit and explicit instruction of formulaic sequences in the experimental groups, compared with conventional instruction in the control group. The results demonstrate that mean scores increased in both the control and experimental groups at the post-test stage, reflecting improvements in the complexity of Iranian EFL learners' writing performance.

Table 4.
Results of Pairwise Comparisons (post-test 1)

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Control	Implicit	-3.496*	.611	.000	-4.731	-2.262
	Explicit	-5.458*	.615	.000	-6.700	-4.216
Implicit	Control	3.496*	.611	.000	2.262	4.731
	Explicit	-1.962*	.612	.003	-3.198	-.726
Explicit	Control	5.458*	.615	.000	4.216	6.700
	Implicit	1.962*	.612	.003	.726	3.198
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						

In a further analysis, the researcher examined the impact of implicit and explicit instruction of formulaic sequences on the complexity of EFL learners' writing performance. The findings were derived from the comparison of pre-test and post-test scores across the experimental and control groups (Table 5).

Table 5.
One-Way ANCOVA on the Mean Scores of Post-Test Complexity in Two Groups (Control and Experimental) with Pre-Test Control

Source	Sum of Squares	df	F	P-value	Eta squared	Sig.
Pre-test	20138.1	1	52.419	.001	.555	1.00
Group	136.715	1	51.85	.001	.553	1.00
Error	110.732	42				

The ANCOVA results, presented in Table 4.5, demonstrated that after controlling for pre-test scores, statistically significant differences emerged among the three groups in terms of writing complexity (p = 0.001, F = 51.85). The effect size was calculated at 0.553, indicating that approximately 55% of the variance in complexity scores could be attributed to the instructional treatment. Consequently, the research hypothesis was confirmed. The outcomes of the pairwise comparisons conducted at the post-test stage are displayed in Table 6, further supporting these findings.

Table 6.
Results of Pairwise Comparisons (post-test2)

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Control	Implicit	-3.366*	.589	.000	-4.556	-2.176
	Explicit	-4.112*	.600	.000	-5.324	-2.900
Implicit	Control	3.366*	.589	.000	2.176	4.556
	Explicit	-.746	.598	.219	-1.953	.461
Explicit	Control	4.112*	.600	.000	2.900	5.324
	Implicit	.746	.598	.219	-.461	1.953

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

In a subsequent analysis, the researcher investigated the impact of implicit and explicit instruction of formulaic sequences on the accuracy of EFL learners' writing performance. Table 7 presents the descriptive statistics related to writing accuracy,

based on the two testing intervals (pre-test and post-test), comparing the outcomes of implicit and explicit teaching in the experimental groups with those of conventional instruction in the control group.

Table 7.
Descriptive Statistics of the post-test

group	Mean	Std. Deviation	N
Control	9.6667	2.22539	15
Implicit	12.6000	2.61315	15
Explicit	12.8000	2.75681	15
Total	11.6889	2.87483	45

The ANCOVA results, as presented in Table 4.8, indicated that after controlling for pre-test scores, statistically significant differences were observed among the three groups in terms of writing accuracy ($p = 0.001$, $F = 63.53$). The effect size was calculated at 0.561, suggesting that approximately 56% of the variance in accuracy scores could be attributed to the instructional treatment. Consequently, the research hypothesis was confirmed.

Table 8
One-Way ANCOVA on the Mean Scores of Post-Test Accuracy in Two Groups (Control and Experimental) with Pre-Test Control

Source	Sum of Squares	df	F	P-value	Eta squared	Sig.
Pre-test	184.510	1	88.94	.001	.679	1.00
Group	111.256	1	53.63	.001	.561	1.00
Error	87.132	42				

As shown in Table 9, after controlling for pre-test scores, a statistically significant difference was observed between the control group and the implicit and explicit groups in terms of overall writing achievement ($p = 0.001$, $F = 40.46$). The effect size was calculated at 0.664, indicating that approximately 66% of the variance in overall writing scores could be attributed to the instructional treatment. Accordingly, the research hypothesis was confirmed.

Table 9.
One-Way ANCOVA on the Mean Scores of Post-Tests Overall Writing Achievement in Three Groups (Control, Implicit and Explicit) with Pre-Test Control

Source	Sum of Squares	df	F	P-value	Eta squared	Sig.
Pre-test	107.304	1	38.39	.001	.484	1.00
Group	226.178	2	40.46	.001	.664	1.00
Error	114.596	41				

As presented in Table 10, after controlling for pre-test scores, a statistically significant difference was observed between the control group and the implicit and explicit groups in terms of writing complexity (p = 0.001, F = 27.05). The effect size was calculated at 0.569, indicating that approximately 56% of the variance in complexity scores could be attributed to instructional treatment. Consequently, the research hypothesis was confirmed.

Table 10.
One-Way ANCOVA on the Mean Scores of Complexity Post-Test in Three Groups (Control, Implicit and Explicit) with Pre-Test Control

Source	Sum of Squares	df	F	P-value	Eta squared	Sig.
Pre-test	142.254	1	54.67	.001	.571	1.00
Group	140.768	2	27.05	.001	.569	1.00
Error	106.679	41				

As indicated in Table 11, after controlling for pre-test scores, a statistically significant difference was observed between the control group and the implicit and explicit experimental groups in terms of writing accuracy (p = 0.001, F = 26.19). The effect size was calculated at 0.561, suggesting that approximately 56% of the variance in accuracy scores could be attributed to instructional treatment. Therefore, the research hypothesis was confirmed.

Table 11.
One-Way Analysis of Covariance on the Mean Scores of Accuracy Post-Test in Three Groups (Control, Implicit and Explicit) with Pre-Test Control

Source	Sum of Squares	df	F	p-value	Eta squared	Sig.
Pre-test	184.234	1	86.72	.001	.679	1.00
Group	111.280	2	26.19	.001	.561	1.00
Error	84.099	41				

With respect to the impact of implicit and explicit instruction of formulaic sequences, the findings indicated that both approaches significantly enhanced students' writing accuracy and complexity. The improved post-test performance of the participants demonstrated the positive influence of these instructional methods on the development of writing skills, as summarized in Table 12.

Table 12.
Pairwise Comparison

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Control	Implicit	-3.316*	.534	.000	-4.394	-2.238
	Explicit	-3.372*	.533	.000	-4.448	-2.296
Implicit	Control	3.316*	.534	.000	2.238	4.394
	Explicit	-.057	.532	.916	-1.132	1.019
Explicit	Control	3.372*	.533	.000	2.296	4.448
	Implicit	.057	.532	.916	-1.019	1.132

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Discussion

The first research hypothesis investigated whether implicit and explicit instruction of formulaic sequences would yield differences in the overall writing skills of Iranian EFL learners. The results demonstrated that both instructional approaches had a positive and statistically significant effect on enhancing general writing performance. Overall, learners' writing skills can be improved through the teaching of formulaic sequences, regardless of whether the method is implicit or explicit.

With respect to differences between the two experimental groups, both benefited considerably from the positive impact of formulaic sequence instruction. A

comparison of post-test and pre-test scores revealed that explicit instruction contributed significantly to improvements in writing complexity and accuracy. Similarly, the notable increase in the overall writing performance of the other experimental group was attributable to implicit instruction of formulaic sequences.

To put the findings in a nutshell, the findings suggest that at the pre-intermediate level, increased exposure to formulaic sequences—whether through implicit or explicit instruction—leads to improved writing performance. These results are consistent with AlHassan and Wood (2015), who examined the effects of focused instruction of formulaic sequences on twelve L2 learners' academic writing skills. Their study demonstrated that explicit teaching of formulaic sequences facilitated acquisition and promoted their use in writing. They further emphasized that formulaic sequences can serve as structural frames upon which learners rely when approaching writing tasks.

The present study also aligns with Liou and Chen (2018), who investigated the impact of explicit instruction on academic formulaic sequences among EFL college learners. Their findings confirmed that explicit teaching produced positive outcomes in both testing and writing tasks when instructional considerations were carefully applied. Similarly, Akkoc, Qin, and Karabacak (2018) reported that explicit instruction of formulaic language significantly improved the argumentative writing quality of EFL learners, with post-test scores of the experimental group increasing markedly compared to the stability observed in the control group.

However, the results diverge from those of Čolović-Marković (2012), who found no significant differences between groups in learners' ability to generate academic formulaic sequences under uncontrolled conditions or in improving writing quality. Such discrepancies may be attributed to the difficulty level of the formulaic sequences employed or to the type and topic of the writing tasks used in that study.

The second research hypothesis posited that both explicit and implicit instruction of formulaic sequences would enhance the accuracy of learners' written production. The results confirmed that explicit teaching had a positive and statistically significant effect on improving writing accuracy. Similarly, implicit instruction also contributed substantially to learners' accuracy levels. As anticipated, no significant differences were observed in the control group's writing accuracy.

These findings are consistent with Grami and Alkazemi (2016), who argued that learners' ability to select appropriate collocations in context can be improved through the use of formulaic sequence check programs in writing classes. The present study also aligns with Peters and Pauwels (2015), who demonstrated that a vocabulary-focused approach to academic formulaic sequences can lead to significant learning gains, both in cued output and in spontaneous use, with improvements transferring to students' end-of-year assignments.

However, the results diverge from those reported by Haung (2015), who found that although Chinese EFL learners increased their use of formulaic sequences, they did not achieve notable progress in accuracy over four years of English learning. This discrepancy may be attributed to the instructional focus, which in Haung's study may have emphasized the quantity of lexical bundles rather than their accurate and functional use. It is therefore suggested that instruction should not only encourage the production of a greater variety of phraseological sequences but also emphasize their grammatical correctness and functional appropriateness.

Finally, the third hypothesis focused on the impact of explicit and implicit instruction of formulaic sequences on writing complexity. The findings revealed that both treatments significantly improved learners' writing complexity, while no notable changes were observed in the control group. These results are consistent with the study conducted by El-Dakhs, Prue, and Ijaz (2017), who examined the effectiveness of explicit instruction of formulaic sequences in pre-writing vocabulary activities for foreign language learners. Their analysis showed that learners' use of formulaic sequences in writing improved as a result of explicit instruction. Moreover, their study partially confirmed the usefulness of explicit teaching of formulaic sequences in enhancing learners' lexical choices and overall writing quality.

The findings of the present study are also consistent with those reported by Akkoç and Karabacak (2018), who demonstrated that learners' overall writing scores improved significantly following explicit instruction of formulaic sequences. Their study further revealed a positive correlation between the overall quality scores of learners' essays and the frequency of formulaic sequence usage, underscoring the role of explicit teaching in enhancing both writing performance and the effective application of formulaic language.

It is noteworthy that the difference between the mean scores of the explicit and implicit groups was not statistically significant. In other words, both implicit and explicit instruction of formulaic sequences contributed to improvements in the overall writing performance of EFL learners, without a significant distinction between the two approaches. Nevertheless, explicit instruction can be considered more practical and acceptable than implicit teaching. One of the challenges associated with implicit learning of formulaic sequences is its time-consuming nature. As Umeda, Snape, Yusa, and Wiltshier (2019) pointed out, learners may require exposure to single words at least eight times before acquiring the vocabulary items. Furthermore, explicit instruction may foster greater confidence in learners when using formulaic sequences, as they might not fully grasp their functions through implicit teaching alone.

CONCLUSION

This study primarily sought to examine the effects of explicit and implicit instruction of formulaic sequences on the overall writing skills of EFL learners. In

addition, it aimed to explore the impact of these treatments on writing accuracy and complexity. A key contribution of this research to the existing literature is the finding that formulaic sequences play a significant role in enhancing L2 writing performance, particularly when taught through explicit or implicit methods.

The results of the study carry important pedagogical implications for the EFL context. They highlight the potential of supplementing language classes with instruction in formulaic sequences to improve learners' writing performance. These implications are relevant to multiple stakeholders, including teachers, syllabus designers, teacher trainers, and language institutes.

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