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Student Teachers' Vocabulary Enhancement: Effects of Literature-based Collaborative and Collaborative-Cooperative Input-Output Instruction

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ABSTRACT

Applied linguistics is replete with research on either input- or output-based vocabulary instruction. However, the controversy over what input to select and how to process the emerging output to simultaneously arouse learners' interest, maintain authenticity, and maximize lexical mastery remains open to debate. The dilemma is more serious for pre-service English teachers in EFL contexts who may suffer from lapses in their lexical competence. The current study, hence, set out to explore the effect of literature-based input-output collaborative and collaborative-cooperative instruction on Iranian student teachers' vocabulary learning. To this end, a total of 49 student teachers, whose homogeneity in terms of English proficiency was initially verified, were selected through convenience sampling and divided into three groups. The groups were randomly assigned to a control and two experimental condition(s), receiving a conventional, a collaborative input-output, and a collaborative-cooperative input-output instruction respectively while working on the same literary texts. Based on a quasi-experimental pretest-posttest control group design, the research data were collected through two researcher-made pre- and post-treatment vocabulary measures. Although the statistical analysis of the data revealed a substantial improvement in all the groups' knowledge of the target vocabulary, the impact of the two modes of literature-based interactive input-output instruction was found to be more significant than that of the literature-based conventional one. Nonetheless, no significant distinction was found between the two interactive modes affecting vocabulary learning.

KEYWORDS: Collaboration, Comprehensible input, Cooperation, Language output, Literature-based vocabulary learning

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INTRODUCTION

Being recognized as the chief agents of communication as well as the very epitome of a competent person standing at the center of a second/foreign language (L2/FL) educational landscape, language teachers should inevitably shoulder the heavy burden of acquiring a native-like command of the target language, in terms of both communicative and linguistic competence. An area of predominant importance that serves as a key component in language proficiency and a crucial element of communicative competence is the knowledge of vocabulary (Schmitt, 2000). Hence, the detrimental effects of lexical insecurity on the part of L2/FL teachers are twofold: first, it can cast a shadow over the impression they intend to leave on their students and second, it prevents them from steering their teaching beyond the prescribed curriculums.

As far as the specific context of English as a foreign language (EFL) teaching/learning is concerned, what has compounded teachers' vocabulary-oriented problems is a disequilibrium between their active and passive lexical repertoire. Active and passive vocabulary, known also as productive and receptive vocabulary knowledge (Laufer, 1998; Nation, 2001), are defined by Harmer (1991) as the words used and realized by language learners respectively. As claimed by several scholars (e.g., Laufer, Elder, Hill, & Congdon, 2004; Laufer & Goldstein 2004; Schmitt, 2010), EFL users' receptive vocabulary knowledge far outweighs their productive vocabulary knowledge. To prevent such imbalance, every vocabulary enhancement program needs to take account of both sorts of knowledge.

One practical way to put a balanced emphasis on receptive and productive vocabulary is by providing learners with adequate exposure to the language used in real-life communications (Carter & Nunan, 2001; Nunan, 1999). Literature, as a rich type of linguistic input that closely reflects the language used by native speakers, could set the groundwork for ample exposure to the choices of lexical chunks made by native speakers in a variety of contexts (Al-Azri & Al-Rashdi, 2014; Keshavarzi, 2012). Such exposure not only propels learners to take cognizance of those choices in identical everyday contexts (Padurean, 2015) but also accelerates and facilitates the process of language acquisition (Keshavarzi, 2012). Through exposure to literature and gaining a profound insight into the cultural and social values of the target language, learners could enrich their repertoire of lexical and structural patterns and further familiarize themselves with various features of written texts (Hishmanoglu, 2005).

Therefore, although trainee instructors possess a wide range of English vocabulary, their proficiency in utilizing it for effective spoken or written communication is limited. On one hand, mastering English vocabulary can pose a challenge in EFL contexts such as Iran, where access to authentic English resources is inadequate. Teachers, on the other hand, require a strong understanding of productive vocabulary to effectively manage language-learning classrooms. While a literature-based approach to language teaching appears to satisfy the demand for authentic instructional content (comprehensible input), the teaching methodology ideally suited to the specific features and requirements of this elaborate sort of material has long been a matter for debate. This study used several theoretical models to come up with a useful way to improve vocabulary through literature. These included Krashen's (1977) input hypothesis, Rosenblatt's (1978) transactional theory of literary works, Long's (1981) interaction hypothesis, and Swain's (1985) comprehensible output hypothesis. Thus, the study focused on the differential impact of collaborative and cooperative classroom interactions on vocabulary learning and retention of EFL student teachers, selected for their proper competency level concerning English literary works.

LITERATURE REVIEW

VOCABULARY LEARNING

Putting a broad concept in a short sentence, Linse and Nunan (2005) defined vocabulary as "the collection of words that an individual knows" (p. 121). As Neuman and Dwyer (2009) believe, vocabulary is the words that are necessary for effective communication. Assuming that vocabulary is far beyond the simple recognition of word form and meaning, Diamond and Gutlohn (2006) presumed it to be the knowledge of words and word meanings required to

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communicate ideas within a specific community. This knowledge entails a thorough understanding of many features relevant to a word/phrase such as meaning, pronunciation, connotation, register, spelling, and grammatical behavior (Qian, 2002; Rahmani & Maleki, 2023).

Vocabulary learning, in Laufer's (1997) terms, is central to the acquisition and use of language. Acting as the building blocks of any successful communication, vocabulary, and the knowledge thereof, take on special significance for L2 learners (Zimmerman, 1997). Such significance is specifically appreciated by Schmitt (2000), who believed that having strong lexical knowledge is required for effective communication and learning a new language. As pinpointed by Nation (2001), vocabulary learning is the fruit of going through three successive processes: (a) noticing, which entails the detection of an unknown word; (b) retrieval, which leads learners to grasp the meaning of the unknown word; and (c) creative (generative) use, which deals with learners' encounter (either use or meet) with the word.

INPUT-BASED VERSUS OUTPUT-BASED LANGUAGE TEACHING/LEARNING

One of the persisting dichotomies in the realm of second language acquisition (SLA) which has been under debate since the early 1980s is an input- vs. output-based account of language acquisition (Shintani, Li, & Ellis, 2013). Input, defined by Carroll (2001) as the communicatively intended language data heard/read by language learners, has played a significant role in developing different input-based L2/FL instructions. An input-based instruction is grounded in Krashen's (1982) speculation that an innate mental structure, called a language acquisition device (LAD), could be put into action only when a sufficient quantity of comprehensible input (i+1) is provided for learners. Krashen's (1982) view on input offered strong grounds for a major reform of the language education system, reinforcing a shift of attention from rule-based approaches to meaning-based ones (Lightbown & Spada, 2006).

Notwithstanding the broad consensus on input as a vital ingredient in SLA, the input-based instructional methods of L2/FL teaching fueled controversies among scholars in the field. White (1987) was one of the critics of input-based instructions who underlined the importance of comprehension difficulties or input incomprehensibility in enhancing the process of SLA. Additionally, the one-dimensional view on input provoked severe criticism from Swain (1985) who argued that acquisition required comprehensible output, regardless of input. This view, labeled as the comprehensible output hypothesis (Swain, 1985) is characterized by the emphasis placed on language production (output).

Despite the abundance of scholars who corroborated Swain's (1985) view on the significant role of output in SLA (e.g., Benati, 2017; Skehan, 1996; VanPatten, 2003), there is no evidence that a language pedagogy focusing on output without due consideration for the reciprocal relationship between input and output can accelerate SLA. The deficiency of approaches that confine learners' attention to output per se can easily be verified admitting to Van Patten (2003) that there are little to no experimental data that demonstrates the dependency of acquisition on output. Benati (2017) suggests that output causes changes in input, with feedback acting as an intermediary signal that helps learners comprehend language better. This creates an indirect link between output and acquisition, with input remaining a critical factor.

INTERACTIVE LANGUAGE TEACHING/LEARNING

Another plausible argument against the sufficiency of comprehensible input for acquisition was put forward by Long's (1981) interaction hypothesis. Expanding upon Krashen' (1977) input hypothesis, Long (1981) argued that comprehensible input alone may not suffice for SLA. Long's (1981) hypothesis states that modifying the conversational structure during communication problem negotiations improves L2/FL learners' comprehension of input.

Interactive learning, according to DelliCarpini (2009), offers ample opportunities for comprehensible input and output. What is more, interactive learning gives learners a shared responsibility over several shared goals including a) thinking and talking about language, b) assessing new input, and c) pooling their resources to help them solve the linguistic problems they may come across (Dobao, 2014). Through collaboration, learners can leverage their unique

strengths to achieve a level of performance beyond their competence (Ohta, 2001). Furthermore, learners can benefit from interactive learning as it can lower the fear of failure (Gillies, Millis, & Davidson, 2023; Wills, 2007) and boost self-confidence (McDonough, 2004).

Coyne, McCoach, and Kapp (2007) suggest that effective vocabulary instruction should involve both teacher-learner and learner-learner interactions, as well as interactive activities that focus on acquiring new words. Both teacher-learner and learner-learner interaction, regarded respectively as collaborative and cooperative learning in the present study, provide learners with scaffolded assistance that helps them solve their language-related problems, co-construct new language knowledge, and reach a level of performance that is beyond their level of competence (Swain, 2000).

EMPIRICAL BACKGROUND OF THE STUDY

The acquisition of a second language, particularly English, poses significant challenges in terms of vocabulary mastery for both non-native speakers and English teachers. The prevalent misconception among students of equating English teachers with proficient English speakers exacerbates linguistic insecurity and places undue pressure on educators to possess comprehensive language knowledge. Iranian EFL teachers, like their counterparts, struggle with inadequate exposure to real-life language usage, leading to a disparity between their receptive and productive vocabulary knowledge. This imbalance hinders effective teaching and necessitates a focus on expanding teachers' active vocabulary through interactive activities.

The potential contribution of input-based and output-based instructions to vocabulary enhancement has been deeply delved into by recently conducted research (e.g., Benati, 2005; Fazeli & Bagheri, 2015; Gholami & Farvardin, 2017; Hashemi Shahraki & Kassaian, 2011; Lee & Benati, 2009; Mamabetovna, 2024; Shintani, 2011; Shirzad, Eslami Raekh, & Dabaghi, 2017; Soleimani & Mahmoudabadi, 2014). Although many of these studies confirm the positive role of either output production (e.g., Hashemi & Kassaian, 2011; Rastegar & Safari, 2017; Salimi & Shams, 2016) or input processing (e.g., Shintani, 2011) in the development of learners' vocabulary knowledge, there are some others (e.g., Fazeli & Bagheri, 2015; Shirzad et al., 2017) showing that integrating input- and output-based instructions can yield more fruitful results in terms of vocabulary enhancement. There is also enough empirical evidence (e.g., Afghari & Khayatan, 2017; Afini, Suratni, Kumalasari, Novia, & Purwanto, 2023; Dalogu & Duzan, 2010; Dobao, 2014; Duong, Perez, Nguyen, Desmet, & Peters, 2023; Kim, 2008; Lin, 2018; Motaei, Ahanghari, & Hadidi Tamjid, 2019; Shafiee & Khavaran, 2017; Shokouhi & Pishkar, 2015; Yang, 2023) that classroom interaction, in the form of either collaboration or cooperation, facilitates vocabulary learning.

The cited works are significant as a basis for subsequent investigations that compare input-based and output-based models in terms of vocabulary training and retention. However, our research provides further contributions to the literature. Primarily, despite the abundance of research on the role of input/output and interaction in honing vocabulary knowledge, few attempts, if any, have been made to simultaneously reap the benefits of using literary texts as a rich source of lexical input and output-based vocabulary instruction infused with classroom interaction. Its significance lies in the fact that it utilizes output to enhance language development through a combination of input-based activities and interactive output-based activities. These activities which include cooperative chunking, paraphrasing, grouping, and framing are deemed to improve the students' vocabulary knowledge. By engaging in these activities, learners can process and rehearse the input, as well as recycle, refine, and fine-tune it.

Hence, as a novel scientific experiment, the present study attempted to propose a workable literature-based approach to vocabulary enhancement. This approach was developed with the foresight to address the limitations of input/output-only methods. The study sought to examine the effectiveness of using literature-based interactive instruction in enhancing vocabulary acquisition among Iranian student teachers. Specifically, it focused on incorporating collaborative and collaborative-cooperative interaction into an input-output processing cycle among EFL student teachers, as an appropriate audience for English literary texts.

Journal of Applied Linguistics Studies, Vol.4, No.2, 2024: 214-231
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To achieve the research purpose, the following questions were framed:

1. Does literature-based collaborative input-output instruction significantly affect Iranian EFL student teachers' vocabulary learning?
2. Does literature-based collaborative-cooperative input-output instruction significantly affect Iranian EFL student teachers' vocabulary learning?
3. Do literature-based collaborative input-output and collaborative-cooperative input-output instruction affect Iranian EFL student teachers' vocabulary learning differently?

METHODOLOGY

PARTICIPANTS OF THE STUDY

The participants included 54 student teachers teaching intermediate-level students in three different language schools in Tabriz, Iran, who were initially recruited to take part in the current quasi-experimental pretest-posttest control group study. The inclusion of subjects from multiple institutes contributed to the improvement of external validity or the generalizability of the study findings. Focusing on pre-service English teachers preparing to become language educators, was due to their prominent contributions to language education practices and the possible challenges they may encounter in promoting their lexical competence. This selection provided useful insights that may be used to enhance teaching strategies for this specific group. Additionally, it offers information that can be used in teacher training programs and curriculum development. Having been selected through the convenience sampling method, the student teachers were examined in terms of general proficiency in English, taking a paper-based test of English as a foreign language (PBT TOEFL). Their scores fell within the range typically associated with upper-intermediate proficiency levels on standardized language proficiency scales. To make sure of their homogeneity, those whose scores fell more than one standard above or below the average score were excluded from the study. Accordingly, the main sample of the study included 49 (28 female and 21 male) teachers ranging in age from 19 to 37. Based on their performance on the PBT TOEFL measure, the participants were then assigned into three homogeneous groups: two experimental groups (collaborative and collaborative-cooperative groups) and one control group.

INSTRUMENTS AND MATERIALS

LITERARY TEXTS

English language training via literature provides genuine exposure to a variety of lexical chunks and cultural perspectives, which improves learners' language acquisition, as well as their oral and written communication abilities. It assists instructors in enhancing their language proficiency, implicitly internalizing grammatical principles, and broadening their linguistic knowledge. In addition, literature aids in the acquisition of vocabulary within a specific context, decreases the need for rote memorization of dictionary definitions, and improves the ability to remember words by providing repeated opportunities for exposure, thereby serving as a valuable and efficient substitute for conventional course materials (Hishmanoglu, 2005; Keshavarzi, 2012).

In this regard, Rowling's (1997) debut novel, entitled *Harry Potter and the Sorcerer's Stone*, constituted the core of instructional material throughout the study course. Being a chronicle of a young wizard's life, the novel falls into the genre of fantasy literature. The fantasy genre, which is a subgenre of speculative fiction, is a type of literature set in an imaginary theme. Given the fact that the novel chronicles a variety of events in the daily lives of some teenage students (i.e., Harry Potter and his friends), the instructional content of the course reflected authentic language use by native speakers, thereby increasing the lexical density of the participants' language production. The book embraced 14 chapters, each concerning a particular segment of the events.

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ISSN: 2820-9974

PBT TOEFL

As the first testing instrument, a PBT TOEFL practice test, extracted from the *Longman Preparation Course for the TOEFL test*, was used to ensure the homogeneity of the participants and split the sample into three homogeneous groups. The test included 140 multiple-choice items (50 listening comprehension, 40 structure and written expression, and 50 reading comprehension items).

RESEARCHER-MADE VOCABULARY PRETEST AND POSTEST

To gauge the participants' lexical knowledge of the instructional content, before and after receiving the study treatment, two equivalent versions of a researcher-made test of vocabulary were designed. To devise the measures, the content of the book *A Resource Guide to Use with Harry Potter and the Sorcerer's Stone* was consulted. Each of the two counterbalanced versions contained 40 items including 20 multiple-choice, 10 fill-in-the-blank, and 10 text-reconstruction tasks in the form of a cloze test. To guarantee the comparability of the two measures in terms of lexical difficulty, Brown Corpus, as a widely-used frequency index, was utilized. Having been validated by two experts in teaching English as a foreign language (TEFL) in terms of construct, the instruments were piloted on 15 student-teachers to determine their reliability and appropriateness for the main study. To achieve this objective, the tests were given to a group of student-teachers who had comparable attributes (such as age, gender, competence level, etc.) to the participants in this research. The reliability results (see Appendix A) indicated that the two measures enjoyed an acceptable level of internal consistency. Additionally, the two measures were found to be significantly equivalent.

PROCEDURE

The training phase of the study lasted for a total of 16 sessions. In the first session, the vocabulary pretest was given to the three groups to assess their initial knowledge of the target words. The three groups then received over 20 hours of vocabulary instruction, working on the same literary texts. Every instructional session commenced with randomly asking the participants to summarize the chapter they were required to read before coming to the class. Notwithstanding the similarity among the three groups in receiving literature-based instructional content (comprehensible input) and putting special emphasis on summary telling (output production), they differed in terms of the kinds of instruction whereby the summaries were processed.

In the control group, the process of summarizing was followed by conventional vocabulary instruction. Accordingly, once summary telling was fully rounded off, the instructor embarked on asking several comprehension-check questions to measure the participants' ability to perceive and recollect what they read in the text. In cases in which a new word/phrase incidentally emerged while summarizing or answering the comprehension questions, the instructor sought to expand the learners' knowledge of the word, introducing its synonym(s), antonym(s), and collocation(s). The instructor's corrective feedback on the target vocabulary was provided only when the need arose.

In the collaborative experimental group, the process of summarizing was followed by an active interaction between the instructor and every individual learner. To this end, the summaries provided by the participants played a dual role acting as not only the content-oriented output but also the comprehensible input required for further word processing. Accordingly, after asking several comprehension-check questions, the instructor asked some vocabulary reinforcement questions carefully devised to target the new words, phrases, and expressions. Following the vocabulary reinforcement questions through which the target words and phrases were highlighted and collaboratively rehearsed, every individual learner was asked to compile the synonymous words/phrases and paraphrase some of the sentences, under the instructor's direct guidance. To this end, the instructor asked every individual participant to disintegrate a certain part of the text into smaller parts and classify it into several labeled categories (frames) such as surprise, fear,

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happiness, anger, and so on. The frames were mainly shaped using the chunks extracted from the story. To correct mistakes made by the participants, the instructor took advantage of recast and corrective feedback.

The training phase in the collaborative-cooperative group was roughly similar to that of the collaborative one; however, the active interaction between the instructor and every individual learner (collaboration) was supplemented by an interaction between the learners (cooperation). To this end, when almost everyone contributed to the summary of the target chapter, the instructor asked several comprehension-check and vocabulary enhancement questions and required every individual learner to expand their content-relevant lexical database through paraphrasing and compiling synonymous words/phrases. Working in groups or pairs under the instructor's expert guidance, the participants then benefited from the cooperative construction of a variety of frames representing different contexts (e.g., fear, anger, excitement, happiness, etc.). The participants of the study were required to practice the frames in cooperation with their partner/teammates to internalize and personalize the chunks. In addition to the instructor's corrective feedback and recast, the participants in the collaborative-cooperative experimental group benefited from peer correction to correct their mistakes. The course was concluded with the administration of the post-test measure.

DESIGN OF THE STUDY

The current study was a quasi-experimental research with a pre-test/post-test comparison group design. The study followed the design to explore whether a literature-based interactive input-output vocabulary instruction (the independent variable) has any significant effects on vocabulary achievements (the dependent variable) of Iranian student teachers. Based on the between-group design of the study, one individual and two interactive groups were involved. The two interactive groups received two different interaction modes to examine the differential impact of a literature-based collaborative input-output versus a literature-based collaborative-cooperative input-output instruction on the vocabulary learning and retention of the participants. Additionally, every feasible statistical technique was employed to identify the confounding variables or any pre-existing factors (covariate variables) that were likely to be involved in the study to ensure the accuracy of the ultimate results.

RESULTS

DESCRIPTIVE STATISTICS

Table 1 displays the descriptive statistics estimated based on the three study groups' achievements in the pre-test and post-test.

Table 1
Descriptive Statistics of the Pre-test and Post-test Scores in the Study Groups

Group	Variable	N	Min	Max	M	SD	Skewness	Kurtosis
Control	Pre-test Scores	16	8	19	13.13	2.58	.242	.957
	Post-test Scores	16	21	35	29.63	3.70	-.650	.502
Collaborative	Pre-test Scores	16	8	15	11.44	2.39	.071	-.931
	Post-test Scores	16	27	36	31.38	2.82	.414	-.962
Collaborative-Cooperative	Pre-test Scores	17	10	17	12.24	1.98	.826	.454
	Post-test Scores	17	28	37	32.35	2.76	-.073	-.993

As shown in Table 1, the performance of the control group on the pretest (M = 13.13, SD = 2.58) was, on average, better than that of the two experimental groups (collaborative: M = 11.44, SD = 2.39; collaborative-cooperative: M = 12.24, SD = 1.98). On the other hand, the participants of the collaborative-cooperative group (M = 32.35, SD = 2.76) outperformed their counterparts in the collaborative (M = 31.38, SD = 2.82) and control groups (M

Journal of Applied Linguistics Studies, Vol.4, No.2, 2024: 214-231
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= 29.63, *SD* = 3.70) in the post-test. Based on a pairwise comparison of the pre-and post-test achievements, vocabulary knowledge of the three groups showed a substantial improvement; however, the greatest amount of increase belonged to the collaborative-cooperative group.

To provide adequate inferential evidence for the significance/non-significance of the between-group differences found through descriptive analysis of the data, a one-way ANCOVA was performed. Before running the ANCOVA, its underlying assumptions were checked and no violation was observed (see Appendix B). Table 2 displays the results of ANCOVA on the post-test scores.

Table 2
Results of ANCOVA on the Post-test Scores for the Between-Subjects Differences

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	307.314	3	102.438	22.743	.000	.603
Intercept	574.435	1	574.435	127.535	.000	.739
Pretest Scores	244.697	1	244.697	54.327	.000	.547
Group	125.590	2	62.795	13.942	.000	.383
Error	202.686	45	4.504			
Total	48034.000	49				
Corrected Total	510.000	48				

The results in Table 2 revealed a significant main effect for the group factor representing different types of instruction received throughout the study course, F (2, 45) = 13.942, $p < .001$ partial $\eta 2 = .383$. In simpler terms, the difference between the study groups was found to be statistically significant. The measure of effect size, shown as partial eta squared, was found to be moderate based on Cohen's (1988) interpretation of effect size. The effect size value indicated that the instructional method the participants were exposed to could account for approximately 38.3% of the variance in the vocabulary post-test scores.

The examination of the adjusted means of the post-test scores (the mean estimated after detaching the covariate effect), as shown in Table 3, indicated that the participants in the collaborative-cooperative and collaborative groups outperformed their counterparts in the control group.

Table 3
Marginal Means of the Vocabulary Post-test Scores

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	28.772	.543	27.679	29.866
Collaborative	32.196	.542	31.104	33.288
Collaborative/Cooperative	32.383	.515	31.346	33.419

To exactly pinpoint where the significant between-group difference lies, the marginal means estimated for the post-test scores were compared between every possible pair of groups. To justify the error of making multiple comparisons, the Bonferroni correction coefficient was utilized. The results are summarized in Table 4.

Journal of Applied Linguistics Studies, Vol.4, No.2, 2024: 214-231
https://jals.aliabad.iau.ir
ISSN: 2820-9974

Table 4
Pair-wise Comparison of the Marginal Post-test Scores

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Control	Coll.	-3.424	.784	.000	-5.373	-1.474
	Coll.-Coop.	-3.610	.749	.000	-5.473	-1.748
Collaborative	Control	3.424	.784	.000	1.474	5.373
	Coll.-Coop.	-.187	.747	1.000	-2.044	1.671
Coll.-Coop.	Control	3.610	.749	.000	1.748	5.473
	Coll.	.187	.747	1.000	-1.671	2.044

Note: Coll. = Collaborative, Coop. = Cooperative

As shown in Table 4, after detaching the impact of the pre-existing between-group differences, a significant difference was found between each of the two experimental groups and the control one in terms of vocabulary learning achievement ($p < .05$). Accordingly, the first two null hypotheses of the study were rejected. Nonetheless, no significant difference was found between the collaborative and collaborative-cooperative groups in terms of their participants' performance on the post-test measure, taking their differences at the outset of the study into account ($p = 1.000$). The last null hypothesis was confirmed considering this result.

DISCUSSION

The current study primarily set out to investigate whether a literature-based interactive input-output instruction affects Iranian EFL student teachers' vocabulary learning. To find a clear answer to this question, the performance of the two experimental groups involved in either teacher-learner (collaborative) or both teacher-learner and learner-learner (collaborative-cooperatives) literature-based input-output tasks was compared with that of a control group who received a conventional literature-based instruction. As shown by the descriptive results, having benefited from each of the three types of instruction, the learners improved dramatically in terms of their knowledge of the target vocabulary. Given the fact that all three groups took advantage of a literary novel as the course input, the finding provided evidence for the study carried out by Puspitasari (2016) which testified to the effectiveness of novels, as an exemplar of literary texts, in vocabulary building.

Although, based on the researchers' first-hand experience, the student teachers who participated in the current research study were initially a little apprehensive about the plentitude of unfamiliar vocabulary items, they gradually became engrossed in the novel, thereby trying to decode as many unknown words as were required to chase the story. The participants' high level of proficiency is also deemed to be influential in helping them to prevail over the initial frustration, since they were more or less familiar with the structures, rhetoric, and highly frequent words used in the novel and, therefore, decoding several complicated and low frequent words/phrases was the only challenge they tackled. Such speculation is compatible with Norland and Pruett-Said's (2006) claim that literary works are beneficial to learners of high language proficiency

The efficacy of a literary approach to English teaching in multicultural L2/FL context has been extensively verified by research (e.g., Choudhary, 2016; Denham & Figuras, 2009; Krsteva & Kukubajska, 2014; Noroozi, 2022; Puspitasari, 2016). Nonetheless, the researchers in the field are split over the major logical reasons behind such effectiveness. While many researchers (e.g., Choudhary, 2016; Denham & Figuras, 2009) believed in the

appropriateness of literature-based learning materials owing to their potential for arousing enthusiasm among learners involved in the dull process of language learning, there are others (e.g., Krsteva & Kukubajska, 2014) who highlighted the efficacy of literature maintaining that it can facilitate native-like competence, providing effective and dynamic instances of authentic language produced by native speakers of the target language. Such different viewpoints on the effectiveness of literature; however, did not negate the clear consensus on the issue that literary tasks are a broadly-accepted prototype of comprehensible input accentuated in Krashen's (1982) input hypothesis.

The comparative inferential statistics showed a significant disparity in retaining new words between the two experimental groups, one exposed to literature-based collaborative input-output instruction and the other to literature-based collaborative-cooperative input-output instruction, and their counterparts in the control group. The experimental groups' participants demonstrated substantially better outcomes in the post-intervention measure compared to those involved in the control group, as shown by the findings. Accordingly, it was inferred that the vocabulary instruction based on a level-appropriate literary text (input) in a learning environment in which the learners' production (output) was further processed either collaboratively or both collaboratively and cooperatively facilitated vocabulary learning among the student teachers of the study.

Going repeatedly through an input-intake-output cycle could be regarded as a plausible explanation for the significantly higher achievements of the two experimental groups compared to the control one. The demand for using the target vocabulary items in a variety of teacher-learner/ learner-learner dialogues may have called the participants' higher levels of attention to the source text (input). Admitting to Gass and Macky (2007) that attention mediates between input and intake, those taught under the experimental condition were more likely to successfully process the input and, therefore, convert it to intake. This claim is also corroborated by Schmidt (1990) who referred to attention as "the necessary and sufficient condition for the conversion of input into intake" (p. 209). Higher levels of intake, therefore, may account for the more profound knowledge of vocabulary among the experimental subjects who significantly outclassed their counterparts taught under the control condition.

Another reason for the efficacy of the study treatment would be the different methods of word decoding employed in the experimental groups. Notwithstanding the commonality of the input and the chief vocabulary learning techniques (i.e., dictionary use and questioning) among the groups, each of the study groups headed in different directions to decode the unfamiliar words/phrases and produce the requested output (summary) accordingly. Although the participants of the control group mainly consulted the dictionary for the meaning of unknown words/phrases to prepare for telling a summary of the target chapter as well as answering the comprehension-check questions posed by the instructor, their counterparts in the two experimental groups used the dictionary not only to comprehend the text but also to make ready for a variety of dialogues (questions and answers) aimed at accentuating the new words/phrases. Such dissimilarity between the groups in the way they were going to be interrogated may have resulted in different degrees of precision while decoding unfamiliar words/phrases. In other words, although the simple definition or synonym of an unknown word could suit the learners of the control group, those in the two experimental groups were in dire need of knowing the deep meaning of the word including a thorough understanding of its pronunciation, collocation, and grammatical behavior.

In addition to the difference between the control and experimental groups in the approach adopted regarding questioning and dictionary use, the three groups differed in terms of the scaffolding they were provided with throughout the course to either amend or enrich their content-oriented output. Referring the participants either individually or in pairs/groups to the source text for further information, the instructor's randomly-provided corrective feedback on the output, which was the only sort of scaffolding in the control group, was supplemented by ample opportunity for self- and peer-correction and recasts in the collaborative and collaborative-cooperative groups. Having seized such a chance, the learners of the two experimental groups were more likely to be headed in the right way of learning vocabulary compared to their counterparts under the control condition of the study. The usefulness of appropriate scaffolding in FL/L2 learning has been validated both theoretically (e.g., Bygate, Skehan, & Swain, 2001; Lantolf, 2000; Teng, 2023; Vygotsky, 1978) and empirically (e.g., Hmelo-Silver & Azevedo, 2006; Veenman, Kok, & Blote, 2005). There is also adequate empirical data (e.g., Johnson & Johnson, 2004; Kang, Fedzechkina, & Nicol,

2023; Waring & Takaki, 2003; Zahar, Cobb, & Spada, 2001) on the positive impact of scaffolded reading-based instruction on FL/L2 learners' vocabulary learning.

The significant contribution of classroom interaction (either teacher-learner or learner-learner) to vocabulary learning, as speculation drawn from the results of the current study, may also be corroborated in light of the findings of bulk of previous studies carried out to explore the contributory role of collaboration in FL/L2 acquisition (e.g., Afghari & Khayatan, 2017; Motaei et al., 2019; Zarei & Glani, 2013), all concluding that collaboration between learners can suitably lead to effective vocabulary learning. Nonetheless, it is worth noting that unlike many of the previous studies which explored the impact of interactive vocabulary learning using techniques that are essentially collaborative such as jigsaw, word-webbing, and snowball, the current study used a variety of vocabulary learning techniques (i.e., dictionary use, questioning, grouping, etc.), irrespective of their collaborative or individual nature, to get the participants work on a variety of input- and output-based activities while seeking to open up room for interaction. The contributory role of collaboration through group/pair work activities in facilitating vocabulary acquisition is evidenced by the relevant literature (e.g., Kim, 2008; Lin, 2018).

Another probable reason for the effectiveness of the interactive treatment administered to the experimental groups could be the reciprocal relationship between the input and the output, a constituent absent from the control condition. Although all three groups of the study were initially provided with the content of a single chapter of the novel before producing a summary of the main ideas, the summaries provided by the participants of the control group were not further processed in terms of the target vocabulary. Unlike such a one-way relationship, summary telling in the two experimental groups was intended to be a reciprocal task, yielding not only a content-oriented output but also a new modified input for further processing of the target vocabulary. As evidenced empirically (e.g., Bakhshi & Mohebbati, 2024; Ellis & He, 1999; Fazeli & Bagheri, 2015; Soleimani & Mahmoudabadi, 2014), the effectiveness of an L2 instruction could be optimized when input and output interact with each other effectively. The concomitants of due consideration of both input and output, as evidenced by the current study, provided additional support to Swain' (2001) comprehensible output hypothesis which put a counterbalanced emphasis on both language materials (input) and language production (output).

The positive impact of input-output instruction on vocabulary learning, as an explanation for the significant impact of the literature-based interactive input-output instruction on the participants' vocabulary achievements, bears a striking resemblance to what has been found by Fazeli and Bagheri (2015). Having compared the effects of input, input-output, and output-input instruction on Iranian EFL learners' vocabulary learning, Fazeli and Bagheri (2015) concluded that the two types of instruction based upon a reciprocal relationship between input and output (i.e., input-output and output-input) led to greater levels of vocabulary acquisition in comparison to an input-only instruction. Given the fact that the role of summary (the output) was confined to a motivator, which only paved the way for answering the instructor's comprehension-check questions, the one-way input-output conventional treatment administered to the control group approximated the input mode of teaching in Fazeli and Bagheri's (2015) study. This reinforces the idea that a well-rounded approach to language instruction, which includes a combination of input and output activities, is more successful in enhancing vocabulary acquisition. The interactive nature of the literature-based input-output instruction in the current study likely fostered a more immersive experience with the material, resulting in enhanced vocabulary achievements among participants.

As its secondary aim, the study compared the two modes of interaction (collaboration and collaboration-cooperation), and the outcomes thereof. Based on the results, neither the collaborative nor the collaborative-cooperative mode of interaction was superior to the other in affecting vocabulary learning among the student teachers. A possibility that may account for this finding is that the two experimental groups shared a great deal of common features such as benefiting from literary-enhanced input, reciprocal input-output tasks, and vocabulary techniques for decoding unknown words/phrases. The two groups, however, diverged on employing either a sole (collaboration) or a dual (collaboration-cooperation) mode of interaction, each supposed to provide a specific type of scaffolding. Benefiting from either expert scaffolding or both expert and peer scaffolding, the participants of the two groups

performed somehow similarly on the post-test measure. This finding is congruent with Wachyunni's (2015) findings which state vocabulary gain was not influenced by individual or cooperative scaffolding.

In sum, in the absence of any empirical evidence for the impact of a literature-based interactive input-output instruction on vocabulary learning, the researchers sought to put an accurate interpretation of the findings through deductive reasoning, delving into the potential impact of every single component that underlay the specific instruction of the study. These components included the use of literary texts as authentic comprehensible input, interactive output processing, and iterative word processing going through an input-intake-output cycle. Nonetheless, the efficacy of the instruction, as a whole, seems reasonable believing that every single component may act as a link in the chain of interaction, as suggested by the interaction hypothesis (Gass & Mackey, 2015).

CONCLUSION

The findings of the current study suggested that authentic comprehensible input, output-based activities guided by several cognitive and metacognitive vocabulary learning strategies, and the scaffolding provided as a result of classroom interaction could act as three interconnected cogs working together to operate the vocabulary learning machine. Based on the results drawn from the current study, the incorporation of these three components into a language pedagogy seems to have the potential to enhance vocabulary learning. Taking advantage of either expert or peer scaffolding while being engaged in a variety of input- and output-based activities, student teachers may be offered an ideal opportunity to commit the newly learned vocabulary into their memory.

The concluding remarks addressed in the current research study may propose several implications for English language pedagogy. The inclusion of reading-based vocabulary courses that promote the multi-dimensional instruction of the study in different teacher training programs may provide student teachers with a systematic approach to enlarge their repertoire of vocabulary used by English native speakers in authentic situations. Enjoying the practical experience required to go through such an elaborate instructional method, the student teachers may be persuaded to adopt the approach for teaching EFL learners as well. Furthermore, this teaching method offers ideal opportunities for learners to interact in pairs or groups and internalize the new vocabulary within the context of its use. This approach is designed to create a learning environment that caters to all types of language learners, alleviating the burden of having to memorize a large amount of vocabulary on an individual basis. Owing to the several limitations/delimitations of the study including the limited sample size, the use of convenience sampling, and the specific context of the study, further research is needed to add credibility to the efficacy of a literature-based interactive input-output vocabulary instruction.

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APPENDICES

APPENDIX A. RESULTS RELATED TO RELIABILITY ANALYSIS

Table A1

Cronbach's α for the Two Counterbalanced Measures of Vocabulary

Measure	Cronbach's Alpha	Standardized Cronbach's Alpha	N of Items
Pretest	.738	.736	40
Post-test	.748	.731	40

Table A2

Bivariate Correlation Coefficients Based on the Pilot Participants' Performance on the Two Measures

Measure	Statistic	Pretest	Post-test
Pretest	Pearson Correlation	1	.864**
	Sig. (2-tailed)	---	.000
	N	15	15
Post-test	Pearson Correlation	.864**	1
	Sig. (2-tailed)	.000	---
	N	15	15

APPENDIX B. RESULTS RELATED TO ANCOVA ASSUMPTIONS

Table B1

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Results of Normality Testing for Unstandardized Residuals of the Post-test Scores

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*df*	Sig.	Statistic	*df*	Sig.
Residuals for Post-test Scores	.113	49	.152	.982	49	.639

Table B2
Results of Levene's Test on the Post-test and Delayed Post-test Scores

Variable	*F*	*df1*	*df2*	*Sig.*
Residuals for Post-test Scores	1.770	2	46	.182

Figure B
The Line Chart Representing the Linear Relationship Between the Pre-test and Post-test Scores

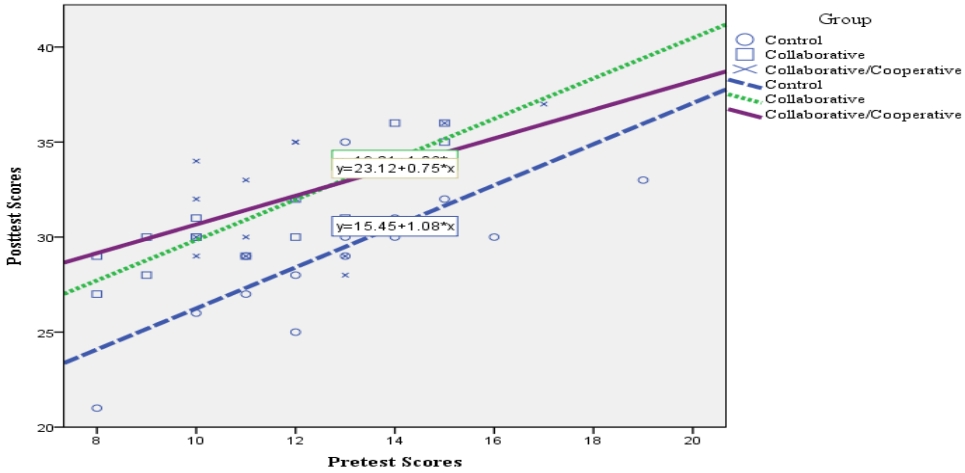

Table B3
ANCOVA Results for the Significance of Interaction between the Covariate and Independent Variable

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	312.079[a]	5	62.416	13.560	.000
Intercept	574.923	1	574.923	124.907	.000
Group	14.042	2	7.021	1.525	.229
Pretest Scores	223.861	1	223.861	48.636	.000
Group * Pretest Scores	4.765	2	2.382	.518	.600
Error	197.921	43	4.603		
Total	48034.000	49			
Corrected Total	510.000	48			