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Research paper

The Effect of Concentration-Attention Raising Tasks on Iranian Beginner EFL Learners' Vocabulary Achievement: Gender in Focus

Sajede Hoseinpoor Siuki

Department of TEFL , Mashhad Branch, Islamic Azad University, Mashhad, Iran

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*corresponding author's email: s.hoseinpour9877@gmail.com

Abstract

Concentration-attention is likely to make important contributions to language learning among learners, particularly beginners. To improve this ability, the researcher of this study designed several tasks (e.g. concentration-attention raising tasks: CARTs) to investigate their effects on vocabulary achievement among beginner EFL learners in Iranian settings. To do so, 48 beginner EFL learners studying at a language institute in Torbat-e Hedariyeh were homogenized and selected by administering the Key English Test (KET) through a convenience sampling. The study used a quasi-experimental design. The eligible participants were randomly assigned to control and experimental groups. It is necessary to mention that both males and females took part in the study since the study, also, focused on the gender's correlation to vocabulary achievement. At the outset of the study, both groups sat for the pretest (researcher-made vocabulary test). The t-test results showed no significant difference between the two groups before the study. While participants in the experimental group received CARTs before instructing new words, those in the control one did not receive any task. At the end of the study, a post-test (the same as the pretest) was administered to the participants of the two groups. Data analysis (t-test) indicated significant outperformance of the experimental group over the control one in the post-test and, it supported the role of CARTs in improving concentration-attention among beginners as an effective factor in vocabulary achievement. Also, it was found that there was not any significant relationship between gender and vocabulary achievement in control and experimental groups.

Keywords: Concentration-attention raising tasks, task, vocabulary, vocabulary achievement

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Introduction

Learning vocabulary involves the process of learning and participating in activities aimed at attracting attention to vocabulary (Susanto et al., 2019). Therefore, it seems effective to engage students in activities that have the potential to raise their concentration and attention in the class. To do so, several non-linguistic tasks (concentration-attention tasks) have been developed to be supplied for Iranian beginner EFL learners to help them improve their concentration and attention

in vocabulary classes before the instructional stages. It is supposed that doing such tasks regularly will assist the learners to practice how to stay more focused during the presentation of new materials. The tasks presented and practiced routinely twice a week, were aimed at preventing the learners from being distracted during the instructions. Both attention and concentration are central to the process of learning and educational achievement.

As Gholami et al., (2022) state, "Attention can be presented to one stimulus in preference to another and maybe concerned with overtly or covertly" (p.568). Basic processes of attention include the process of choosing suitable sensory stimuli, choosing desired and intentional responses, information processing capacity, and maintaining performance (Gholami et al., 2022). According to Chen and Huang (2014), attention involves a mechanism through which learning begins. However, people are not likely to be able to be aware of and attentive to something at once (Cicekci& Sadik, 2019). This is even more challenging in educational contexts, particularly when conscious learning occurs, since the speed of the presentation and the way of presenting the stimulus vary; therefore, learners need to be careful about what they should take into consideration (Smith & Kosslyn, 2014, as cited in Cicekci & Sadik, 2019). The concept that arises here is to focus attention on the right place (Cicekci& Sadik, 2019). Based on the theory of information processing, this is attention that initiates processing information. For learning to occur, information has to be sent to the short-term memory to be processed. Attention helps achieve knowledge. Students are recommended to pay attention and concentrate for competency and skill enhancement to occur so that the content can be memorized for a longer period (Lamba et al., 2014). Lamba et al. believe that the teaching method and duration, novelty and repetition of a topic, contextual condition, interest, health, and emotional status can influence students' concentration-attention in the classroom. If students are distracted by their surroundings and cannot focus on activities and class discussion, they are engaging in such activities as speaking with their peers, sounds made in the class like dropping pens or pencils, body movements, and communicating with the classmates

through notes (Lamba et al., 2014). Attention, according to Gholami et al., (2022), has important contributions to the language learning process. Attention plays a part in managing both the choice of stimuli and the recording of it in memory. It has been documented that attention is crucial in language learning (Robinson et al., 2013). Schmidt (2012) has expressed that people learn about things via attention without which they do not learn much about the things. Results of previous research indicate contributions of attention to learning (Schmidt, 2012). According to Wolfgramm et al. (2016), some scholars believe that attention and concentration have the same meaning (Petermann, 2011), whereas others believe that concentration is just a part of a multifaceted model of attention (Goldhammer & Moosbrugger, 2006). Concentration involves attention maintenance in the long term intentionally; in other words, it necessitates concentrated processing (Wolfgramm et al., 2016).

Teachers' ability to boost students' attention and concentration in the classroom makes important contributions to a better education, yet the issue is practically controversial (Baker & Brown, 2013). Students' attention is important for teachers, yet according to neuroscience attention is no longer an unlimited resource (Isbell, et al., 2017). It seems challenging to find classroom content that successfully competes and captures students' interest and attention, and produces active engagement by all (Trautman et al., 2023). It is not feasible for students to be attentive in the class which may last for an hour or more. However, an increased awareness of attention might help teachers and students manage the classroom experience.

Due to the role of students' concentration-attention in the class, teachers need to design tasks and activities to further engage them with the learning process. Making use of games and enjoyable activities as an instructive device is not something new (Bavi, 2018). The research documented that the use of these activities in vocabulary classrooms and its wash-back effect could help many students overcome their embarrassment and be able to engage more actively in the process of meaning-making (Honarmand & Rostampour 2014, cited in Bavi, 2018). Accordingly, EFL

teachers need to design tasks that are aimed at focusing students' attention on learning new words in the class. The tasks developed by the researcher are non-linguistic and are given to the students before the presentation of new words.

The present study is aimed at designing concentration and attention raising tasks in beginner classrooms to see whether they are effective in vocabulary learning. Also, the role of gender in achieving new English words among the participants is scrutinized. To achieve the objectives of the study, the following research questions were posed:

1. Does the use of concentration-attention raising tasks (CART) have significant effect on vocabulary achievement (VA) among Iranian beginner EFL students?
2. Is there any significant relationship between gender and vocabulary achievement (VA) among Iranian beginner EFL students?

Accordingly, the following null-hypotheses were, also, formulated:

1. Use of concentration-attention raising tasks (CART) does not have any significant effect on vocabulary achievement (VA) among Iranian beginner EFL students.
2. There is not any significant relationship between gender and vocabulary achievement (VA) among Iranian beginner EFL students.

Literature Review

Vocabulary Achievement

Throughout the process of learning new vocabulary, learners make use of vocabulary achievement principles and tasks (VLPT) which have important contributions to vocabulary acquisition as well as vocabulary instruction. The VLPT is aimed at creating awareness, promoting motivation and a positive attitude towards learning English and cultivating students' academic and professional success through lifelong learning. The students need to be aware of the tasks and they should apply them to have better performance (Hayet& Bipasha, 2020). Hayet (2018) points out

that effective activities and instructional principles of learning vocabulary affect learners' vocabulary development and aid them in acquiring new words understanding them by relating them to their prior knowledge, and remembering the meaning of words. As a part of language learning, learners have to know about these vocabulary achievement principles and tasks that are crucial in vocabulary acquisition as well as in vocabulary instruction (Hayet& Bipasha, 2020).

Concentration- Attention Raising Tasks (CART)

Besides the above-mentioned techniques and strategies for teaching new words, CARTs (nonlinguistic tasks) seem to prepare and activate students' mental ability and boost their attentional control or concentration on subjects. Ducrocq et al. (2016) view attentional control as a needed function regulating goal-directed behavior. Based on recent models of working memory (e.g., Miyake et al., 2000; Unsworth, Redick, Spillers, & Brewer, 2012, as cited in Ducrocq et al., 2016), attentional control is defined as the relative efficiency of the central executive functions of working memory including inhibition (e.g., distraction resistance), shifting (e.g., within-task control), and updating (updating and incorporating memory-based information) to attain a task goal.

Trautman et al. (2023) believe that learning requires grabbing and maintaining student attention, interest, and active engagement as a primary challenge in the classroom. As Ashley (2005) said children can also concentrate their attention, but modern children have great difficulty maintaining attention focus on tasks that need mental effort. Learners encounter difficulty reaching a point of concentration. One of the basic challenges, according to BenCharef (2016), which can affect the learning process is concentration difficulty i.e. attention. According to this author, attention is the ability to manage the mental power of focusing on a task. The main part of processing information is devoting attention to it (BenCharef, 2016). The terms concentration and attention are closely related to each other. Regardless of their subtle differences, these terms are

often used synonymously. Therefore, it makes sense and seems necessary to define them and determine any association between them.

With the expectation to maintain their attention in class for a specific period at their age, according to Asprilia et al. (2020), first graders have not yet developed a mature ability. On the other hand, as Rabiner et al. (2016) state, research documents that first grade is a critical moment to achieve basic scholastic abilities, including reading which contributes to academic achievement in the long run. Aprilia et al. (2020) view attentional ability as an evolutionary process developed by people since their infancy. Concentration occurs when an individual tends to focus on the task and overcome distractions (Mann, 2005, as cited in Brand, 2010). It can be summarized as the practice of wholly attending to via intense mental effort. To understand the relationship between concentration-attention and their contributions to learning, Bester and Brand (2013), propose the model (Figure, 2.1) below.

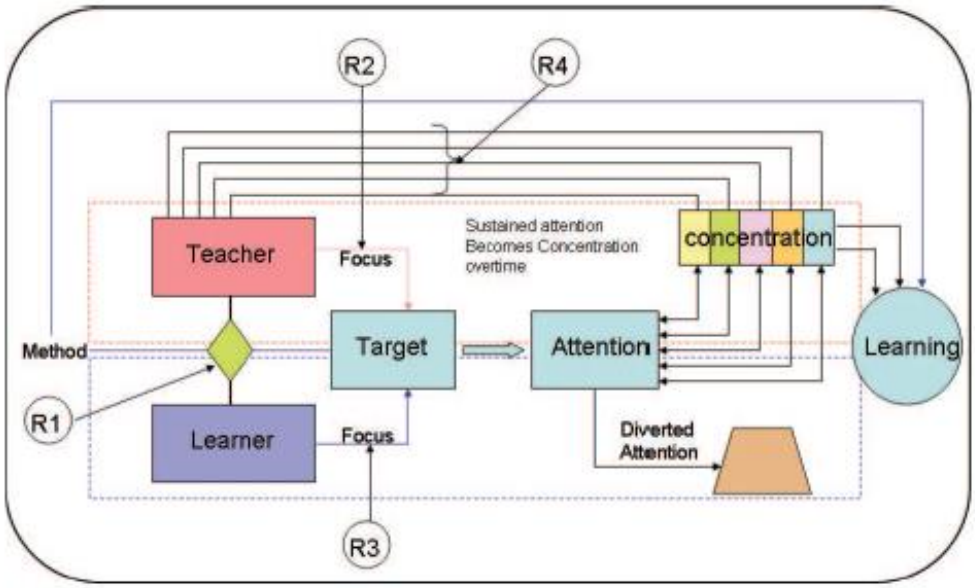

Figure2.1. Linking attention and concentration (Bester & Brand, 2013)

Note: The identified relationship between attention and concentration which are two important factors in learning process. From: "The effect of technology on learner attention and achievement in the classroom," by Bester and Brand, 2013, South African Journal of Education, 33(2), p. 2).

According to Bester and Brand (2013), the association (R1) between the teacher and the learner is aimed at learning. These authors believe that learning occurs when the teacher utilizes a method of attracting the learner's attention to the target. In their model, focus is considered as capturing the learning's attention on the specific pre-chosen target. Accordingly, there is an association (R2) between the teacher and the target that leads to an association (R3) between the learner and the target. The learner's attention is captured when s/he a learner shifts his/her focus correctly on the intended target. Gradually, sustained attention develops into concentration (Bester & Brand, 2013). Based on Figure 2.1, concentration is disrupted when it diverts back to attention (symbolized by the double arrowed lines) which is then focused elsewhere on a new target often not intended by the teacher. The teacher therefore is required to continually focus the learner back onto the required target (R4). Once the learner's attention is focused on the required learning material, and if this focus is maintained over some time, concentration is formed.

It is likely to be beneficial to learners to be prepared mentally before being exposed to new materials that are supposed to be presented within the class. So, it is advised to boost concentration-attention among learners before instructing new words. It makes sense to conduct studies on attention and, particularly, on the students' attention profile to perceive the teaching practice, in teaching analysis logic, to identify the phenomenon and to see if it can make important contributions to the process of learning (Petrica, 2010, cited in Santos et al., 2019). As a result, attention is emphasized as a learning-initiation mechanism (Ainley & Luntley, 2007; Chen & Huang, 2014). However, as Cicekci and Sadik (2019) assert, it is not feasible for people to pay attention and become aware of everything simultaneously. Such problems are even greater at school, particularly when conscious learning occurs due to different rates of presentation and the way of presenting the stimulus. As a result, students are forced to be concerned about what should be taken into account (Smith & Kosslyn, 2014, as cited in Cicekci & Sadik, 2019).

Additionally, a class is an environment where different necessary but unimportant-for-learning stimulants exist and can easily distract students. Despite this, students need to concentrate their attention in the classroom phenomenally (Szpunar, et al., 2013). Information processing theory holds that attention initiates the processing of information (Cicekci & Sadik, 2019). Purwanti et al. (2017) believe management affects the teaching process and is an important part of classroom life. It is part of a process of organizing and directing a class including, management of the time, involving the students, and classroom interactions. On the other hand, classroom management is also concerned with the strategies used by the teacher and the student's attention in the class. Teachers' strategies and students' attention are regularly shuttling between what is being experienced by them externally and internally. If the students' attention is attracted by the context and classroom activities, students can attend to their activities and remember any information provided by the teacher. However, less attending activities and context can distract students' attention thus hindering the process of learning (Purwanti, et al., 2017).

Related Studies

Chang (2024) considered data-driven learning activities as processes that make important contributions to learning new English content through presenting materials to predict the content; accordingly, these activities have the potential to attract students' concentration on new content during the lecture. Helping students focus on the linguistic elements of the lectures through data-driven learning and discussion activities can be helpful for them to develop listening strategies.

Zarifi (2024) in his study on the contributions that varied levels of focus could make to vocabulary learning among EFL learners arrived at the finding that the focus framework offering three modes of vocabulary presentation (Direct Focus, Indirect Focus, and No Focus) was shown to be more effective compared to the traditional model in learning vocabulary. Results further underpinned the direct relationship between focus levels and achievement rates.

Purwanti et al. (2017) conducted a study on strategies used by teachers to retain students' attention during the delivery phase in EFL classrooms to detect the methods used by teachers to focus students' attention during transition in EFL classrooms and to investigate the effects of the teachers' strategies on the students' attention in EFL classroom. The researchers conducted a qualitative study in which they selected one English teacher and 15 students as participants. The findings obtained from the interview and observation indicated the employment of four strategies to focus students' attention in the classroom which were hissing, sounding, clapping, and eye contact. It was also manifested that the teachers' strategies enhanced students' attention in the learning process, improved class discipline, and promoted participation (Purwanti et al., 2017).

Edelstein's (2016) study "Attentional Control: Strategies for Structuring Cognition" offered a twofold experimental study to explore attentional control and the events during attention lapses. Participants of the first group of experiments accomplished a spatial cuing task, in which some participants were mostly exposed to valid cues and the rest of them were mostly provided with incorrect cues, in an extension of spatial cuing to new dimensions of stimuli. Participants in the second experimental group were provided with a creative task to complete where they had to give answers to an open-ended task (Baird et al., 2012), and then were asked to complete a distractor task. In the end, they returned to the early task. By varying the attentive requirements of the in-between task, Edelstein (2016) manipulated the level of subjects' mind wandering, as determined by changes in creative incubation. Based on these experiments, it was concluded that humans' attentional control strategies are adaptive and powerful, if not always consistent (Edelstein, 2016). In the Jamesian sense (1890, cited in Edelstein, 2016 p. 18), it is likely that a line of reasoning formed in an individual's mind takes a meandering, circuitous route that does not help accomplish the task. This may be considered as a lapse of attentional control, a lapse allowing attention to move away from immediate concerns onto practically anything else. Mind wandering, according to Edelstein (2016), has not received much attention but it occurs constantly.

Having taken motivation and concentration into account, Bester and Brand (2013) investigated whether technology could impact attention and achievement within a classroom context. Participants received lessons in Geography, English, and Mathematics. While the experimental group was exposed to technology, the control group did not receive any technology. The results revealed that the performances of the two groups were significantly different. In terms of average attention, also, the two groups differed significantly. Results indicated a high direct relationship between motivation and concentration; also, moderate to high positive relations were observed among attention, concentration, and motivation, taken jointly as independent variables and achievement as the dependent variable (Bester & Brand, 2013).

However, Lutz et al. (2008) proposed two kinds of training for mindfulness meditation, including focused attention and open monitoring. The first type seems to have a close relationship with endogenous attentional control—it involves intentionally paying attention to an object and then returning one's attention to the object of meditation (including the sensation of breathing). According to these authors focused attention develops three attentive skills, including monitoring one's attention to watch for mind wandering, disengaging attention from a distracting object, and redirecting attention to a chosen object. Open monitoring practice differs from the above meditation types; it is mainly concerned with nonjudgmental awareness of one's attention without any explicit focus on objects inherent to focused attention (Edelstein, 2016).

Concerning the role of gender in VA, there is no valid consensus among scholars. Some of them arrived at the finding that manifested female outperformance, while others found males as superior. Scholars including Harji et al. (2015), Jiménez Catalán and Moreno Espinosa (2004), Moyo (2018), and Scheepers (2014) arrived at the finding which supported females; better performance in productive vocabulary. The studies conducted by Moreno Espinosa (2010), and Canga Alonso and Arribas García (2014) indicated a lack of any significant differences between

males and females in productive vocabulary. On the contrary, Castro García's (2017) research showed that males outperformed females in productive vocabulary.

Methods

Participants and Setting

A total of 200 EFL learners expressed their consent, and 48 eligible Iranian EFL beginners participated in the study. The participants' proficiency level was assessed by administering a KET (Key English Test) to 70 EFL learners studying English as a foreign language at language academies in Torbat-e Heydarieh. The researcher selected 48 subjects whose scores were either above or below the mean, approximately one standard deviation from the average. A convenience sampling technique was utilized to recruit participants through a research call. The participants were aged between 8 and 12 years, and their mother tongue was Farsi. Both male and female students were included in the study. It is important to note that these participants had already completed the entire content of VCV 1-2. They were students from the Salis Language Institute in Torbat-e Heydarieh.

Instrumentation

Researcher-made Test of Vocabulary

To assess participants' performance in the vocabulary domain, a researcher-made test consisting of 25 items composed of multiple-choice, matching, circling, finding the odd word, coloring, dictation, and cross-word puzzle, was designed to be administered as the pretest and the posttest.

1. The test items were based on VCV 3 TEXT-BOOK;

2. Some experts in the field commented on the face validity and content validity of the test. To ensure the reliability of the test, a pilot study was conducted on 20 EFL learners not included

among the participants. Having used the test-retest technique, the researcher computed the reliability index of the test (r=.85, p =.00).

Test of Homogeneity: Key English Test (KET)

The researcher employed the Cambridge Key English Test (KET) to establish a uniform level of language proficiency among groups. The test, consists of two main sections: listening and reading-writing. The listening section includes four parts:

1. Listen and draw lines (5 questions)
2. Listen and write a number or name (5 items)
3. Listen and check the correct box (5 items)
4. Listen and color (5 items)

In total, the listening section comprises 20 questions that must be completed within 20 minutes. The reading and writing portions are included, while the listening and speaking sections have been removed.

The researcher analyzed data using SPSS 26, where ANOVA was conducted. Pallant (2007) noted that Levene's test for homogeneity of variances assessed whether the variance of scores was consistent across groups. If the significance value (Sig.) from Levene's test exceeds .05, it indicates that the groups are homogeneous. As shown in Table 4.1, the Sig value is .30, which is greater than .05, confirming the homogeneity of the three groups.

In this research, the investigator employed test-retest reliability to assess the consistency of test scores obtained from the same individual on two different occasions (Hays et al., 1993). To see whether the teacher-made test is reliable, the researcher utilized the Pearson correlation coefficient in SPSS 26. The correlation index (r) between scores from the first and second administrations of the test, conducted two weeks apart, was found to be $r = .85$, $p < .000$, signifying a strong positive correlation and indicating good test-retest reliability.

Procedure

KET was administered among 70 EFL Pre-A1 level (beginner) learners for homogeneity purposes, and a sample including 48 EFL beginners was chosen. These participants were randomly assigned to control (N=24, F=12, M=12) and experimental (N=24, F=12, M=12) groups. Both groups sat for the pretest of vocabulary at the start of the study to check their vocabulary knowledge.

The Experimental Group

While both groups were exposed to the same materials, including 10 words per session, the instructional methods differed. Participants in the experimental group received concentration-attention tasks, whereas those in the control group did not receive any special treatment. Experimental group treatment included CARTs developed based on Rezapour‘s and Ekhteiari’s books. After teaching the vocabulary, the teacher gave one worksheet for each session, which took 5-10 minutes, and then the participants received oral feedback. Correct answers were graded and encouraged verbally.

The Control Group

In the control group, conventional methods of teaching and practicing vocabulary were used. The time allocated for task accomplishment was about 10 minutes, and the process occurred before the instruction (part of warm-up). Participants in the control group did not receive any CARTs. The teaching procedure, being the same for both groups, is composed of three phases, including pre-task (warm-up), while-task (Explicit instruction), and post-task (review, assessment, assignment, group work). Finally, to determine the effects of the treatment on vocabulary knowledge, a post-test was administered, and the groups’ means were compared via independent

samples t-tests in SPSS (22.0). It is necessary to note that due to some gender segregation rules in Iranian language academies, females and males were taught separately.

Instructional Materials

VCV 3 Book (Tabeshpour, 2023)

The book written by Tabeshpour guided the experiment, which took place over 10 sessions held twice a week. Both groups received the materials. It is necessary to mention that units 1-20 were covered during the instruction. Both groups were taught 10 new words each session (100 new words were practiced during the study).

Concentration-Attention Raising Tasks (CART)

The CART tasks were adapted from Rezapour's and Ekhteiari's (2022) book written in Farsi on concentration-attention tasks. The book is from the Brain Club series. The tasks were selected based on the participants' level (Pre-A1); in other words, enjoyable and fun tasks that could motivate learners were selected. They were all non-linguistic tasks. Also, some experts helped the researcher select the appropriate tasks. They required the students to trace a root or matching, finding, etc. Participants of the experimental group received a total number of 10 worksheets. It is necessary to mention that each worksheet contained two tasks. Each worksheet was brought into the class each session. The time allocated for each task was 10 minutes, during which they were allowed to complete (5 min) and receive feedback (5 min) from the teacher who served as the supervisor (the scoring was just through feedback). The teacher walked among the students to check whether they did the tasks. If they have any problem with the instructions the teacher instructed them. The tasks were administered in pen-paper format. Such tasks aimed to raise concentration attention among the students and were not related to the instructional materials of the course books. The tasks designed for the experimental group included "maze," "following the

patterns," "difference detection," "searching letters," "counting pictures," "counting numbers," "numbering letters of a word," "word making in a table" "alphabets and numbers," "word-making," "crossword puzzle," and so on.

Design and Analysis

The study is a quasi-experimental research with a pretest-posttest control group design. Concentration-Attention raising task was an independent variable whose effects were exploited on VA as the dependent variable. To analyze the data, an independent and paired samples t-test was run in SPSS (22.0). Next phase of the data analysis procedure was concerned with testing normality of data distribution. To do so one-sample Kolmogorov-Smirnov test was run. Null-hypothesis of the test indicates that the distribution is normal.

Results

As Table 1 displays, there is not significant (t=.42, sig=.67>.05) difference between experimental (N=24, M=5.18) and control (N=24, M= 5.35) groups in the pretest which further underpins the homogeneity of the participants.

Table 1
Results of pretest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Cont.	24	5.35	1.41	46	.42	.67
	Exp.	24	5.18	1.29			

To address the first research question "Does use of concentration-attention raising tasks (CART) have significant effect on vocabulary achievement (VA) among Iranian beginner EFL students?" independent samples t-test was run. Results are summarized in Table 2.

As Table 2 depicts, the experimental group participants (N=24, M=18.86) significantly (t=2.14, sig=.03, DF=46) outperformed control participants (N=24, M=18.12) in the posttest.

Therefore, the first null-hypothesis, "Use of concentration-attention raising tasks (CART) does not have any significant effect on vocabulary achievement (VA) among Iranian beginner EFL students" was rejected at a .05 level of significance.

Table 2
Results of posttest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Cont.	24	18.12	1.20	46	2.14	.03
	Exp.	24	18.86	1.18			

To address the second research question "Is there any significant relationship between gender and vocabulary achievement (VA) among Iranian beginner EFL students?" independent samples t-test was run four times as follows: experimental male versus experimental female in the pretest; control male vs. control female in the pretest; experimental male versus experimental female in the posttest; control male vs. control female in the posttest. Tables below depict the results from independent samples t-test for gender effects in VA.

As Table 3 shows, there is not any significant (sig=.16>.05) difference between means of the two genders (experimental group) which indicates that both males and females performed similarly prior to the experiment.

Table 3
Results of t-test for gender effects in the experimental group in the pretest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Exp.m	12	5.56	.94	22	1.45	.16
	Exp.f	12	4.81	1.51			

Table 4 reveals lack of any significant difference (sig=.67) between males and females of the control group in the pretest.

Table 4
Results of t-test for gender effects in the control group in the pretest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Cont.m	12	5.47	1.20	22	.42	.67
	Cont.f	12	5.22	1.64			

As Table 5 depicts, both males and females (experimental group) did not perform significantly different (sig=.77>.05) in the posttest.

Table 5
Results of t-test for gender effects in the experimental group in the posttest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Cont.m	12	18.79	1.19	22	.29	.77
	Cont.f	12	18.93	1.22			

According to Table 6, there is not any significantly difference (sig=.68>.05) between means of the two groups (males and females) in the control group at the end of the study.

Table 6
Results of t-test for gender effects in the control group in the posttest

	Group	N	Mean	Std. Deviation	df	t	sig
Pretest	Cont.m	12	18.02	1.23	22	.41	.68
	Cont.f	12	18.22	1.20			

As Tables 3-6 show gender was not significantly (sig>.05) related to VA among beginner EFL learners in Iranian settings. Therefore, the second null-hypothesis was supported. The next section of the chapter discusses the findings of the study to interpret and describe their significance in association with what is already known about the research problem and to explain any new understanding or insights that emerged here.

Discussion

The current study sought to investigate whether use of CARTs is significantly effective in VA among Iranian beginner EFL learners. Also, it sought to show whether VA is affected by gender.

To do so, 48 participants took part in the study and randomly assigned into experimental (F=12; M=12) and control (F=12; M=12) groups. Results of t-test manifested that applying CARTs could significantly affect VA among the participants. In other words, use of practices and activities to help students stay concentrated and attentive before engaging them in the process of learning unseen words seems to be helpful. To justify the finding, it can be stated that activities aiming to raise concentration and attention further help learners focus on the content and engage in acquiring new words and overcome distracting factors. VA, on the other hand, requires EFL learners to stay focused and engage so that an effective memorization would occur. It was observed throughout the study that preparing the students' minds and helping them stay mentally focused, attentive and concentrated before presenting new vocabulary is effective in further engaging them in learning process through boosting their noticing ability. The present finding of the study further underpins important theoretical assumptions ever made concerning the impact of attention and noticing on vocabulary. Noticing assumption suggests that new vocabulary can be learned more effectively if they are brought to one's attention (Schmitt, 2008). Moreover, Noticing Hypothesis developed by Schmidt (1995) indicates that noticing to the grammatical or lexical features of a language could help leaners learn them more effectively. Similarly, Zarifi's (2024) study manifested that the employment of the techniques that necessitate deep attention could help the learners perform more effectively in acquiring new words. The finding of the study backs up Trautman et al. (2023) who assert that learning process demands grabbing and maintaining student attention, interest and active involvement as a primary challenge in the classroom.

The next question to be addressed aimed to challenge the gender effect in VA. Results of t-test indicated lack of any statistically significant effect of gender on VA among Iranian EFL learners. The finding further supports the idea that males and females exhibit equal ability to acquire new words. However, literature encompasses scanty and dispersed body of studies on gender differences in VA (Montero-SaizAja, 2021).The present finding lends support to Montero-

SaizAja's (2021) who found that there were not any significant gender-based differences in productive vocabulary. To justify her finding, Montero-SaizAja states that this result might be due to the inclusion of homogeneous participants who received the same vocabulary throughout the course. Our finding, also, back up the studies by Moreno Espinosa (2010) and Canga Alonso and Arribas García (2014) which indicated no significant difference.

The present findings can offer pedagogical implications for those involved in EFL settings like teachers, students, and curriculum designers. First, EFL teachers should design and develop tasks and activities to raise their students' concentration and attention before starting the presentation phase of their teaching. This will help their students stay focused and concentrated in the class and they will not get easily distracted and lose their concentration. EFL teachers need to be aware that this (raising concentration and attention among students) is possible through designing appropriate and valid tasks, practice, and management. On the other hand, EFL students are recommended to follow instructions and try to accomplish tasks designed and offered by their teachers. Since the integration of such tasks (CARTs) into instruction led to improvements in VA, curriculum designers, and material developers should design and validate some relevant tasks and include them in academic English textbooks to be practiced before instructional procedures.

Conclusion

The present study concluded that integrating such activities and tasks as those proposed by the researcher could make important contributions to vocabulary achievement among EFL beginners. It makes sense that preparing the minds of students through useful tasks and helping them stay focused and concentrated throughout the process of learning could improve the process of learning. If students overcome mind-wandering and strengthen their ability to concentrate on the tasks, they are more likely to learn new materials and stop their minds from having random

and unrelated thoughts. The current study revealed that the process of boosting concentration on and attention to instructional materials is an acquired skill that requires practice and completing such tasks as those practiced by the experimental group. Helping students stay concentrated and attentive throughout the process of presenting new words seems effective in reducing their distraction which is caused by external and internal sources. The former includes class activities, conversations, and noises. The latter entails fatigue, stress, and rumination. For effective teaching and learning to occur a classroom void of distractions is needed (Mandah, 2019). Mandah (2019) opined that learning occurs via the learners' active behaviors in the class where the instructors act as a facilitator of learning. The quality of learning is mainly dependent upon the context. It is well documented that the first five years of life are regarded as a key developmental stage for cognitive skill growth where they are exposed to initial learning experiences (Sebghati et al., 2024). These authors consider attention as one of the necessary factors that impact education and learning which involves directing processing resources toward a specific stimulus and facilitating advanced mental activities like planning, problem-solving, and reasoning.

The second finding of the study highlighted the insignificance of gender concerning vocabulary achievement. Or to put it differently, males and females (in this study) gained similar scores in vocabulary tests without any statistically significant difference. In addition, it was found that the role of gender is a controversial issue that needs further investigation. Some previously conducted studies manifested males' or females' outperformance, whereas, some others rejected its significant contributions to vocabulary achievement.

Like any other previous research project, the present study has some limitations. A prominent limitation of this study was that it used only quantitative data, using a quasi-experimental design and lacked any self-report data. The second limitation is that it excludes many individual characteristics, which may act as confounding variables. The basis of the tasks (CARTs) was a Persian book and some changes had to be made which might affect the results. The researcher and

the teacher were the same for all groups, therefore, the bias of the teacher was not controlled which threads the results. A researcher-made test of vocabulary included 10 items that were selected from the VCV3 book. There is a lack of previous research on the topic which created some problems in generalizing the data and restricted the access to valid data. Due to educational regulations in Iran and the summer holidays, the study was conducted during the summer course. Regulations posed by the language institutes in the city had diverse effects on data collection procedures. It sounds challenging to keep both the experimental and control groups as similar to each other as possible.

The study at hand focused mainly on using CARTs in EFL beginner classes to see if they are effective in VA in traditional in-person classes, so, more research into the effects of such tasks in remote online classes would be needed. Also, additional research is needed to explore the effects of such tasks on other skills such as listening comprehension, reading comprehension, or writing ability. The sample included beginner EFL learners, other populations should be taken into consideration by future researchers. The present study lacked qualitative data; it makes sense to conduct studies to scrutinize EFL teachers', or students' perspectives toward the treatment. Also, a comparative study is suggested to be conducted to determine the effects of CARTs on vocabulary achievement across different groups of EFL learners (e.g. beginner, intermediate, advanced) to show which group performs better following the treatment used in the study. Another suggestion that should be considered by the researchers interested in the field of language psychology is conducting studies on the effects of CARTs on the psychological traits (self-efficacy, social intelligence, emotional intelligence, autonomy,) of EFL learners to see whether they make important contributions to enhancing them. Above all, the researchers interested in EFL are recommended to deeply review the existing literature to determine the gaps and make attempts to fill in them according to the findings and justifications of the present study. Additional studies should consider adult learners and examine the effects of such tasks on language achievement among adult populations of EFL learners. Also, researchers interested in using tasks in language

learning are recommended to develop linguistic tasks and compare their effects with CARTs among different populations. The study lacked qualitative data; it is suggested to perform studies that make use of personal interviews and observations as data collection sources. Due to a limited number of participants, it is recommended to include a large sample of EFL learners to validate and reliably generalize the data.

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