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Short-Block Instruction Versus Long-Block Instruction: Impact on Reading Motivation and Reading Attitude

Ehsan Namaziandost*, Ph.D.
Department of English, Shahrekord Branch, Islamic Azad University, Shahrekord, Iran
Abbas Pourhosein Gilakjani, Ph.D.
Department of English Language Translation, Lahijan Branch,, Islamic Azad University, Lahijan, Iran
Goodarz Shakibaei, Ph.D.
Department of English, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

Abstract

The purpose of this study was to explore the effects of 2 modes of instruction (Short-block versus Long-block) on Iranian EFL learners' reading motivation and reading attitude. For this study, 60 pre-intermediate level students who were studying in an English language institute in Ahvaz were selected. They took part in a homogeneity test (OQPT) to determine their homogeneity level. Then they were randomly divided into two groups, 30 learners each included, namely short-block instruction group and long-block instruction group. Then the two groups were given a reading motivation questionnaire and reading attitude survey as the pre-test before treatment to determine the participants' reading motivation and reading attitude. During the eleven-session treatment, the long-block group was taught the reading comprehension in an intensive 75-minute session, while the short-block group was taught in three short sessions (twenty-five- minute session). After the treatment sessions, the participants were given a reading motivation questionnaire and reading attitude survey as a posttest. Data were analyzed through descriptive statistics and one-samples *t*-tests and the findings showed a significant difference between the groups. The short-block group outperformed the other groups in both reading motivation and reading attitude post-test. Implications of this study could be a hint for both EFL teachers and learners that teaching through short-block instruction is more effective than long-block instruction in teaching reading comprehension.

Keywords: Reading comprehension, reading attitude, reading motivation, long-block instruction, short-block instruction

Introduction[#]

Expenditure of time for practice is necessary for a learner to master any new ability. It takes a considerable amount of practice time to become proficient in a second language. 'The more the better' is a simplistic concept in response to roughly how many hours are required that leaves many concerns about practice time unanswered. It is unavoidable that decisions about the duration and length of instructional sessions are taken while planning a course. Too often, these decisions are focused purely on convenience and predetermined class period assignments, overlooking research that has shown that the distribution of instructional time can have a substantial impact on language improvements (Cepeda et al., 2009; Namaziandost, Nasri, Rahimi Esfahani, & Keshmirshekan, 2019; Schuetze, 2015). In Iranian EFL courses, learners typically receive roughly 4 hours of instructional time on English language learning each week. Although this short-period of language instruction is definitely insufficient to reach English fluency (Collins & White, 2011; Lotfolahi & Salehi, 2017; Mashhadi & Farvardin, 2017), most Iranian learners still receive their English instructional courses at private language institutes. Further studies are required to check the allocation of this limited amount of weekly

[#]**Corresponding Author**
Email: e.namazi75@yahoo.com

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instructional time to achieve the maximum possible language improvements.

There is no agreement among prior researches on whether instructional time should be massed (concentrated) or distributed (spread out) over a longer period of time. Cognitive psychology researches have consistently found out credible evidence for a phenomenon known as the spacing effect where greater benefits are made when overall training time is divided by one or two intervals as opposed to being conducted in one constant session (Lohnas & Kahana, 2014). These researches, first performed in memory laboratories, have been carefully expanded into classroom-like learning settings. Numerous researches concluded that distributing training time over a longer rather than shorter span of time leads to improving post-test grades (Lotfolahi & Salehi, 2017; Mashhadi & Farvardin, 2017; Miles, 2014; Namaziandost, Nasri, Rahimi Esfahani, & Keshmirshekan, 2019; Rooholamin, Biria, & Haghverdi, 2016; Rohrer, 2015). However, the second language acquisition (SLA) researches involved in Rohrer's review only assessed advancements with treatment intervals of only a few hours on discrete language elements (e.g. vocabulary building and a limited set of target grammar points). Between these research and authentic language learning plans, strong variations exist. Consequently, the validity of results from such research has been challenged for language programs (Serrano, 2011). Contrarily, another group of studies more conducted on fluency and complex language tasks (Bird, 2010; Collins & White, 2011; Rooholamin, Biria, & Haghverdi, 2017; Namaziandost, Razmi, Hernández, Ocaña-Fernández, & Khabir, 2021a; Serrano, 2011) suggested that mass instruction (intensive courses) produces greater improvements in language than distributed instruction (non-intensive courses).

Somewhere between well-defined, succinct memory exercises, assessed in many cognitive psychology types of research, and the more nuanced, worldwide proficiency of language program research, are reading motivation and reading attitudes (Bird, 2010; Khatib & Fathi, 2012). The mastery of reading skills is fundamental to the progress of Iranian EFL learners in standardized and university entrance examinations. The effect of time distribution on developing reading skills and, in turn, its effect on reading motivation and reading attitude is crucially essential for such examinations and it is still largely undiscovered (Ghavamnia, Ketabi, & Tavakoli, 2013; Miles, 2014; Namaziandost, Razmi, Tilwani, & Pourhosein Gilakjani, 2021b; Shirzadi, Akhgar, Rooholamin, & Shafiee, 2017).

Reading skill, in particular, is the most important skill in second or foreign language learning. Reading, the mother of all study skills is a basic tool of learning, and one of the most important skills in everyday life (Fitrisia, Tan, & Yusuf, 2015). Nearly all children begin school with the expectation they will learn to read, and one of the most important things a child is asked to do is to read. Sookchotirat (2005) suggested that reading skill is the most important skill as it is the basis of all the success in one's life. Good readers can gain more knowledge of any kind of reading. Reading makes the reader more knowledgeable, have wider perspectives and vision. Reading helps the reader get new ideas leading to cognitive development. When the readers transfer what they read to apply with their idea a new perspective or idea is created.

Reading is one of the four main skills in language teaching which has an important role in language teaching systems. Berado (2006) clarified the meaning of reading as "different things to different people, for some it is recognizing written words, while for others it is an opportunity to teach pronunciation and practice speaking" (p. 60). Guo and Roehrig (2011) claimed that "reading is a basic and complementary skill in language learning. Second language students need to learn and read for communication and to read greater and greater quantities of authentic materials" (p. 216). He further added that reading for meaning or reconstructing the writer's meaning is at the crux of the reading process. Understanding or comprehending a text is the primary purpose of reading.

Habók (2015) considered reading as an "enjoyable activity which can bring pleasure for the readers" (p. 28). Readings expose students to new vocabularies, syntax, and even new cultures. Despite the importance of reading comprehension, most Iranian students suffer from weakness in reading comprehension. Despite all attempts in teaching reading, it seems that the language learners have lost their interest in reading and become passive regarding this field. To enhance reading comprehension skills among Iranian students, the researcher used short-block instruction versus long-block instruction.

According to Rajab, Zakaria and Rahman (2012), reading skills are essential at all academic levels and can lead to good job opportunities; therefore, it is necessary to search for those factors and methods of instructions that help learners increase their motivation for reading.

Reading motivation helps EFL learners read more effectively. This was also endorsed by Wang (2008) and Han (2017, who stressed that learners who study a foreign language should improve their reading abilities to properly comprehend written texts. Motivation is a crucial element in enhancing the comprehension of reading as both scholars and teachers have acknowledged. According to Dornyei (2003), the

concept of motivation is so complex that it is comprised of various models and hypotheses. Teachers should have an entertaining and relaxing atmosphere to increase their students' reading comprehension. Through utilizing various styles, students can build a more appealing environment. Teachers are, in reality, templates and motivators. They will ensure that students use their books, read their texts, reserve more room for study (Jabbari & Golkar, 2014; Namaziandost, Rahimi Esfahani, & Hashemifardnia, 2018).

Motivation is one of the most significant variables that may affect reading comprehension. Besides, the association between reading encouragement and reading comprehension is greater than reading experience and reading behavior. A lot of studies have looked into the connection between motivation and reading comprehension, and it indicates that there is a strong link between reading comprehension and reading motivation (Karimi & Dastgoshadeh, 2018; Morgan & Fuchs, 2007).

Studies have shown that cognitive and inspirational factors influence student comprehension of reading (Kintsch, 2012; Rajab, Zakaria, & Rahman, 2012). Previous work has supported reading inspiration in conjunction with students' perception of development, as reading comprehension helps students to interpret material because they have previous experience of it to improve their perception (Fitrisia, Tan & Yusuf, 2015).

Motivation is a force that affects the accomplishment of a particular target. Likewise, according to Ryan and Deci (2000), being inspired requires going on or heading ahead to accomplish something. Motivation requires working on or within an individual to create and control actions. Excitement, desire, eagerness, and eagerness to know are the core motivating factors. The degree and form of the motivation of each person are different from that of others. In other terms, not only were the rates and quantities of motivation present in people, but their motives may be inconsistent (Nagy & Habók, 2018). Kintsch (2012) described the reason for reading as a curiosity or a willingness to read for various reasons. She concluded that constructive feedback had a beneficial impact on engagement in reading, which is why teachers ought to carry out coordinated reading exercises. According to Baker, Dreher, and Guthrie (2000), teachers and parents will include appropriate and engaging reading resources, build a common learning experience, establish a supportive learning atmosphere, recognize individual children's strengths and disadvantages, include ample room to read, interact with other teachers and managers in a general reading plan, and know the techniques for the integration and effective learning.

Moreover, having been commonly recognized as one of the problems in language learning studies, a disposition that belongs to an affective realm may be viewed as one of the key determinants of the capacity of learners to use language. Gardner (1980, p. 267) described attitudes as the total of man's impulses and emotions, assumptions or perceptions, preconceived ideas, concerns, challenges, and beliefs about some given issue. In this view, the mentality pervades not just the dimension of human perception but also the affective meaning of a single entity. Therefore, the attitude greatly affects what is going to be achieved as part of the actions anytime someone experiences a certain circumstance.

Baker (1998) in Hosseini and Pourmandnia (2013) pointed forth his expansive definition of attitude, establishing attitudes as relational rather than binary – gradients ranging from positive to negative. Nevertheless, concerning this analysis, the researcher classified the students' approach to language learning based on their propensity to be optimistic or negative. In terms of their effect on learners, a constructive mindset enhances the learning process; a pessimistic one hinders the learning process.

Attitude is built in general from some distinguishable characteristics. Wenden (1991) divided attitudes into three components: cognitive, emotional, and behavioral. The first, cognitive aspect consists of beliefs and thoughts about an entity, persons, actions, occurrence, and information. This part appears to have a tremendous effect on learning when it applies to one's mind, in this case, awareness. The second, the affective part, covers the emotions and feelings of the individual against the object. This affects one's preferences such as standing for or against, or to like or dislike. The last one, the behavioral dimension, deals with the individual's acts or tendency to participate in and perform specific behavior(s) while one is in a circumstance.

Thus, to increase the learner's foreign language reading motivation and attitude toward, the researcher used short and long block instruction in Iranian EFL classrooms. Long-block instruction is comprised of training or learning sessions that are long and intense as opposed to distributed practice which uses shorter and less intense sessions to impart information to a student or trainee. Short block instruction is a learning strategy, where the practice is broken up into several short sessions – over a longer time. The opposite, Long-block instruction, consists of fewer, longer training sessions.

Two main theoretical accounts of spaced distribution practice are known as *encoding* variability and deficient processing (Greene, 1989). Encoding variability theory emphasized on the fact that spaced materials are better remembered than the massed ones, because each presentation in the spaced distribution is encoded

differently, thus providing more retrieval cues. This theory stresses the role of the context and claims that the context in which an item is presented is encoded together with its meaning (Anderson & Bower, 1972; Nakata, 2015). On the other hand, deficient processing theory proposes that the second presentation of massed materials does not receive enough processing, as the previous presentation is still too recent. In contrast, when a subject is presented after some time has passed and after some intervening items have been shown, full processing will be necessary, since the previous presentation will not be as easily available as in the case of massed sequences.

Meanwhile, the majority of previous studies have revealed the greater learning potential of spaced instruction over massed instruction in learning of grammar (Mashhadi & Farvardin, 2017; Miles, 2014), vocabulary (Nakata, 2015), and reading (Namziandost, Rahimi Esfahani, & Hashemifardnia, 2018). There is recent evidence that spaced distribution instruction is better than massed distribution instruction in the retention of target language structures, that is when learning is measured following a delayed posttest (Miles, 2014).

Exploring the beneficial effects of spacing in learning has been an active area of research in psychological sciences under the name of the spacing effect. The spacing effect refers to a memory advantage whereby memory is enhanced when learning episodes are spread over longer periods rather than being massed in one single session (e.g. Cepeda et al. 2009). In general, it is necessary to distinguish between two types of repetitions, namely restudy and retrieval practice (Goossens, Camp, Verkoeijen, & Tabbers, 2014; Namaziandost, Sawalmeh, & Izadpanah Soltanabadi, 2020). The research in cognitive psychology has shown that using retrieval practice leads to better memory than restudy in the learning phase (e.g. Roediger & Karpicke, 2006). This phenomenon is commonly referred to as the retrieval practice effect or testing effect. The testing effect refers to a memory phenomenon whereby testing has a more reinforcing impact on memory than restudying.

Moreover, doing long-term spacing effect studies in real educational settings provides the opportunity to determine the magnitude of the spacing effect. The magnitude of the spacing effect is determined by the lag and the RI. The lag or the intersession interval (ISI) is the break between two learning events, and the RI is the break between the last learning session and the final test session (Cepeda et al., 2009; Rohrer & Pashler, 2007). There is a relationship between ISI and RI, and some studies have attempted to explain this relationship. A major finding of these studies is that there is an optimal ISI for any given RI. In their study, Cepeda et al. (2009) concluded that RI (recall) increases as the length of ISI increases.

Reviewing the related literature on spacing effect studies, a simple design of a spacing effect research has several characteristics: First, a spacing effect study is made up of two main phases of study and test. Second, the study phase consists of at least two similar sessions. Third, the study sessions are separated by a break in between. If this break does not exist, the result will be a massed effect. Fourth, another break that separates the study phase and the test phase from each other which is usually longer than the study break. Fifth, the test phase (test session) during which a recall test assesses the learned information.

Based on the literature reviewed above, 1) massed instruction is ineffective for long term retention of information, skills, and processes. 2) Spaced instruction is most effective with things that have already been learned and need to be recalled or performed on demand. 3) Afterschool teachers can maximize the spaced instruction benefit by working with the school day teachers and making effective use of downtime. 4) Knowledge, skills, and concepts should initially be repeated frequently and taper off over time.

Despite the importance of short and long block instructions, they have not yet received the attention they deserve. Rare studies, if any, compared the impacts of short and long blocks instruction on Iranian EFL learners' reading motivation and reading attitude. Therefore, this study aimed to answer the following questions:

RQ 1. Do short-block instruction and long-block instruction have any significant effect on Iranian pre-intermediate EFL learners' foreign language reading motivation?

RQ 2. Do short-block instruction and long-block instruction have any significant effect on Iranian pre-intermediate EFL learners' foreign language reading attitude?

Method

Participants

The participants of this study were 60 students who were selected among 120 pre-intermediate students via non-random sampling from a private institute in Ahvaz, Iran. The participants' age range was between 15 and 19. They had been studying English as a foreign language for at least 4 years. They were pre-intermediate students and their level of English proficiency was determined based on their band score on the Oxford Quick Placement Test (OQPT) in their institute. The learners were non-

randomly divided into two equal experimental groups, namely Short-Block Instruction Group (SBIG) and Long-Block Instruction Group (LBIG). It should be mentioned that only males were included in this study since the researcher could easily have access to them.

Instruments

Oxford Quick Placement Test (OQPT). The first instrument which was used in the present study to homogenize the participants' level of proficiency was OQPT. This instrument was used to collect information on the learners' proficiency. The OQPT consisted of two parts: Part one (1-40) deals with simple grammar and vocabulary items. Part two (41-60) concerns with a bit more difficult multiple-choice items and cloze tests. The students' scores were ranked from high to low and homogenizing the participants was based on the OQPT categorizing chart including 0-10 scores for beginners, 11-17 for the breakthrough, 18-29 for elementary, 30-47 for intermediate, and 48-60 for advanced level). The participants whose scores were between 27 and 35 participated in the study as the pre-intermediate group.

The Motivation for Reading Questionnaire (MRQ) Used as Pretest and Posttest. Another instrument utilized in the present study was a modified sample of Motivation for Reading Questionnaire (MRQ). MRQ was expanded by Dr. Allan Wigfield and Dr. John Guthrie from the University of Maryland in 1997. Wigfield and Guthrie utilized the MRQ on a group of students at one mid-Atlantic state school during the implementation of concept-oriented Reading teaching. Factor analyses carried out by Wigfield and Guthrie affirmed the essence of construct validity which backups eleven factors for the total 53 -item in this MRQ. There was an affirmative relevance of maximum segments of reading motivation with low - to high levels. They additionally asserted that their questionnaire has a reliability range from .63 to .96. In this research, the researchers had selected 30 items of the entire 53 items in the questionnaire because only eight aspects of the total eleven aspects of reading motivation were identified to measure. They are: reading efficacy, reading challenge, reading curiosity, reading involvement, reading importance, reading word avoidance, social reasons for reading, and reading for grades. MRQ was a five-point Likert scale questionnaire made up of five options: 1 for 'I strongly disagree', 2 for 'I disagree', 3 for 'I don't know', 4 for 'I agree', and 5 for 'I strongly agree'. The MRQ was given to participants twice, one before the treatment and once after the treatment.

Reading Attitude Survey (RAS). To assess the participants' attitude toward reading, a reading attitude survey (RAS), adapted from Conradi, Jang, Bryant, Craft, and McKenna's (2013, p.569), "Survey of Adolescent Reading Attitude (SARA)" was used. Each item starts with the expression "How do you feel," and participants were asked to score each item on a 4-point Likert scale from 'very good' to 'very bad.' The reliability coefficient (Cronbach's α) of the attitude toward recreational reading items was 0.989. The survey was converted into Persian, the learners' L1, and given to the researcher's advisors and EFL teachers for validation (content and face validity), and some revisions were made based on the comments. The reliability of the reading attitude survey of the Persian version was checked using Cronbach's Alpha. Internal consistency coefficients of 0.898 which is reliable. Like the MRQ, the RAS was given to participants twice, once before the treatment, and once after the treatment.

Procedure

At first, OQPT was given to 120 Iranian EFL learners. Based on their performance in the OQPT, 60 pre-intermediate students were selected for the target participants of the study. After that, the selected participants were randomly assigned to two equal groups- one SBIG and one LBIG. After that, the groups' foreign language reading motivation and reading attitude was measured by an MRQ and RAS as a pretest. Afterward, the students in both experimental groups received the same treatment but in different ways. The reading comprehension was taught to the experimental groups through short-block instruction and long-block instruction. In massed class, the reading skill was taught for 75 minutes to the students. Seventy-five minutes were allocated to each session. In spacing class, 75 minutes were divided into three 25 minutes and each session lasted 25 minutes. The short-block class was held three times a week but the long-block class was held once a week.

In the treatment phase of the study, the long-block distribution group was taught the reading comprehension in an intensive 75-minute session, while the short-block distribution group was taught in three short sessions (about 75 minutes. total). The first session lasted for 25 minutes; while the second occurred two days after the initial session (lasted 25 minutes); and the third session took 25 minutes and was held two days after the second session.

The instruction lasted 15 sessions. In the first two sessions, the OQPT, MRQ, and RAS were administered; in eleven sessions the students received the treatment, and finally, in the fourteenth and fifteenth sessions, the MRQ and RAS were given to the participants of both experimental groups as the posttest to measure the

effects of the treatment on the students' foreign language reading motivation and reading attitude. It means that after the intervention, participants in both groups were asked to complete the motivation and attitude questionnaires. The MRQ and RAS contained 30 items and 5 items respectively, designed to investigate the participants' motivation and attitude toward using the short-block and long-block distribution after the intervention.

Findings

Before conducting any analyses on tests, it was necessary to check the normality of the distributions. Thus, Kolmogorov-Smirnov test of normality was run on the data obtained from the above-mentioned tests. Since all the *p* values in were larger than .05, it could be concluded that the distributions of scores for the pretest and posttest obtained from two experimental groups had been normal.

SBIG and LBIG Performances on Reading Motivation and Reading Attitude as Pretest

First of all, it was needed to check both groups' reading motivation and reading attitude before the treatment. To reach this objective, both groups answer the MRQ and RAS at the beginning of the study. To see if there is any difference between the participants reading motivation and reading attitude, one-sample *t* test was run.

Table 1.

Descriptive Statistics for SBIG and LBIG Learners' Reading Motivation and Reading Attitude Scores

	N	Mean	Std. Deviation	Std. Error Mean
SBIG. MRQ	30	1.32	.24	.04
LBIG. MRQ	30	1.49	.40	.07
SBIG. RAS	23	1.34	.25	.05
LBIG. RAS	23	1.37	.22	.04

As for the SBIG and LBIG, the motivation mean score appeared to be 1.32 and 1.49, respectively, which was less than 3.00. This indicates that the learners' reading motivation before implementing the treatment was almost the same. However, to check any possible statistical significance, the *Sig.* (2-tailed) value in the *t* test table below must be checked (Table 2).

Table 2.

One-Sample t Test Results for SBIG and LBIG Learners' Reading Motivation and Reading Attitude Scores

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
SBIG. MRQ	29.57	29	.06	1.32	1.23	1.41
LBIG. MRQ	20.38	29	.06	1.49	1.34	1.64
SBIG. RAS	25.04	22	.11	1.34	1.22	1.45
LBIG. RAS	29.23	22	.11	1.37	1.27	1.46

Based on the information in Table 2., there was not any statistically significant difference between the SBIG and LBIG learners' mean attitude and motivation score before the treatment because of the fact that the *p* value higher than the specified level of significance (.06 and .11 < .05). It could thus be inferred that both groups were at the same level of reading motivation and reading attitude before carrying out the treatment.

Lerrner'' Fore Lnnuueee ee ddnng Motivation After Implementing Short-Block Instruction Versus Long-Block Instruction

To unveil the both SBIG and LBIG learners' foreign language reading motivation after the treatment they received, a 30-item Likert scale (with options ranging from *strongly disagree* to *strongly agree*) questionnaire was employed. Table 3 shows the frequency of responses for each choice and item in the questionnaire, in addition to the calculated mean scores for the individual questionnaire items:

Table 3.
Results of the Foreign Language Reading Motivation Questionnaire

NO.	Statements	Groups	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
1	I like being the best at reading.	SBIG	0	0	0	19	11	4.36
		LBIG	11	12	4	2	1	2.00
2	I like it when the questions in books make me think.	SBIG	1	1	3	12	13	3.83
		LBIG	10	16	2	0	2	1.93
3	I read to improve my grades.	SBIG	0	0	5	10	15	4.33
		LBIG	10	9	6	2	3	2.30
4	If the teacher discusses something interesting, I might read more about it.	SBIG	2	0	7	11	10	3.90
		LBIG	9	11	5	1	4	2.33
5	I like hard, challenging books.	SBIG	0	0	1	21	8	4.23
		LBIG	10	11	3	3	3	2.26
6	I enjoy a long, involved story or fiction book.	SBIG	0	0	0	8	22	4.73
		LBIG	8	11	3	3	5	2.53
7	I know that I will do well in reading next year.	SBIG	0	0	2	17	11	4.30
		LBIG	9	6	10	2	3	2.46
8	If a book is interesting, I don't c. re how h3rd it is to read.	SBIG	0	0	3	13	14	4.36
		LBIG	3	12	3	9	3	2.90
9	I try to get more answers right than my friends.	SBIG	0	1	5	12	12	4.16
		LBIG	7	11	3	4	5	2.63
10	I have favorite subjects that I like to read about.	SBIG	0	0	1	12	17	4.53
		LBIG	6	18	3	1	2	2.16
11	I make pictures in my mind when I read.	SBIG	3	0	2	10	15	4.13
		LBIG	10	11	3	3	3	2.26
12	I don't like reading some–hing when the words are too difficult.	SBIG	0	0	3	11	16	3.90
		LBIG	10	10	3	7	0	2.23
13	I enjoy reading books about people in different countries.	SBIG	0	0	1	10	19	4.60
		LBIG	12	6	1	9	2	2.43
14	I am a good reader.	SBIG	0	2	5	11	12	4.10
		LBIG	13	10	2	0	5	2.13
15	I usually learn difficult things by reading.	SBIG	0	0	1	11	18	4.56
		LBIG	9	5	3	10	3	2.76
16	It is very important to me to be a good reader.	SBIG	1	3	5	7	14	4.00
		LBIG	10	16	2	0	2	1.93
17	I read to learn new information about topics that interest me.	SBIG	2	2	3	12	11	3.93
		LBIG	10	11	3	3	3	2.26
18	If the project is interesting, I can read difficult material.	SBIG	0	0	0	12	18	4.60
		LBIG	11	11	3		5	2.23
19	I learn more from reading than most students in the class.	SBIG	0	0	0	10	20	4.66
		LBIG	12	6	1	9	2	2.43
20	I read because I have to.	SBIG	0	0	2	12	16	4.46
		LBIG	13	3	1	3	10	2.80
21	I like to read about new things.	SBIG	0	0	3	11	16	3.90
		LBIG	10	2	6	4	8	2.66

NO.	Statements	Groups	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
22	**I like having the teacher say I read well.**	SBIG	2	2	3	12	11	3.93
		LBIG	11	7	2	0	10	2.70
23	**My friends and I like to trade things to read.**	SBIG	1	3	5	7	14	4.00
		LBIG	9	11	2	3	5	2.46
24	**Complicated stories are no fun to read.**	SBIG	0	0	5	10	15	4.33
		LBIG	9	5	3	10	3	2.76
25	**Finishing every reading assignment is very important to me.**	SBIG	2	0	7	11	10	3.90
		LBIG	13	3	1	3	10	2.80
26	**My friends sometimes tell me I am a good reader.**	SBIG	0	0	1	21	8	4.23
		LBIG	8	12	0	2	8	2.66
27	**Grades are a good way to see how well you are doing in reading.**	SBIG	0	0	0	8	22	4.73
		LBIG	9	11	2	3	5	2.46
28	**I like to get compliments for my reading.**	SBIG	2	2	3	12	11	3.93
		LBIG	11	11	3		5	2.23
29	**I sometimes read to my parents.**	SBIG	0	0	0	12	18	4.60
		LBIG	12	6	1	9	2	2.43
30	**I talk to my friends about what I am reading.**	SBIG	0	0	0	10	20	4.66
		LBIG	9	11	2	3	5	2.46

As can be seen in the table above, for all the questionnaire items, the corresponding mean scores for SBIG were larger than the average value of the choices (that is, 3.00). This means that the SBIG learners all agreed with the 30 statements in the questionnaire. In other words, their motivation increased after implementing short-block instruction. Regarding LBIG, as can be seen in Table 3, the corresponding mean scores were smaller than the average value of the choices (that is, 3.00). To see if this degree of having positive motivation is statistically larger/significant or not, the *p* value in the one-sample *t* test table should be examined:

Table 4.

One-Sample t Test Results for the SBIG's and LBIG's Reading Motivation

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SBIG	78.54	29	.00	4.26	4.15	4.37
LBIG	50.17	29	.06	2.41	2.32	2.51

Regarding SBIG, since the *p* value is lower than the significance level (.00 < .05), it could be understood that the SBIG learners held significantly positive motivation after being taught through short-block instruction for the purpose of reading. In addition, as can be seen in table 2, the LBIG's motivation did not improve after being taught through long-block instruction since the *p* value is higher than the significance level (.06 >.05).

Learners' Attitudes Towards Short-Block Instruction Versus Long-Block Instruction Treatment

It was also mentioned that the second research question of the study was set up to find out if short-block instruction and long-block instruction have any significant effect on Iranian pre-intermediate EFL learners' foreign language reading attitude. To examine the attitudes of the learners towards this treatment, one-sample *t* test was employed. Table 2 displays the results of descriptive statistics performed for this analysis.

Table 5.
Results of the Reading Attitude Questionnaire

No.	Statements	Groups	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
1	Communicating with foreigners is one of the main purposes of learning English.	SBIG	1	0	1	10	18	4.46
		LBIG	10	13	3	0	4	2.16
2	I like to learn more about foreign language readings.	SBIG	0	0	3	15	12	4.30
		LBIG	10	11	4	0	5	2.30
3	If I have a limited vocabulary knowledge, it will affect my understanding of the contents.	SBIG	1	1	0	16	12	4.23
		LBIG	10	18	1	1	0	1.73
4	Teaching through SBI and LBI can cause to better reading comprehension.	SBIG	0	3	1	15	11	4.13
		LBIG	9	17	2	0	2	1.96
5	Teaching reading comprehension through using various teaching methods is effective and motivating.	SBIG	2	2	0	13	13	4.16
		LBIG	11	17	0	0	2	1.83
6	Effective teaching methods are necessary make reading comprehension better.	SBIG	0	6	0	9	15	4.10
		LBIG	10	8	3	2	7	2.60
7	The English text, which contains no new words, might not be comprehensible, mainly because of the lack of the necessary background knowledge.	SBIG	3	0	0	7	20	4.36
		LBIG	10	18	1	1	0	1.73
8	Lack of time instruction could cause poor performance in reading comprehension.	SBIG	1	1	2	11	15	4.26
		LBIG	10	10	0	5	5	2.50
9	When I read English texts that are related to my interests, I feel I have better comprehension than when the texts are unrelated to my interests.	SBIG	2	1	0	6	21	4.43
		LBIG	9	8	3	0	10	2.80
10	When reading a text, the unfamiliar vocabulary affects my reading comprehension.	SBIG	3	3	1	13	10	3.80
		LBIG	6	11	3	2	8	2.83
11	I cannot understand the meaning of the text if it is not taught effectively.	SBIG	0	0	3	12	15	4.40
		LBIG	10	13	3	0	4	2.16
12	Linguistic complexity of a text affects my reading ability.	SBIG	2	2	1	10	15	4.20
		LBIG	9	8	3	0	10	2.80
13	If I have background knowledge of a foreign text, I find that I face fewer	SBIG	4	1	0	8	17	4.10
		LBIG	11	17	0	0	2	1.83

No.	Statements	Groups	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
	problems with my reading comprehension.							
14	**When I read English texts, I often translate them into Persian.**	SBIG LBIG	0 6	9 11	2 3	10 2	9 8	3.63 2.83
15	**I like to familiar with the Persian reading texts.**	SBIG LBIG	1 1	0 17	1 1	11 7	17 4	4.43 2.86
16	**I like to familiar with American reading texts.**	SBIG LBIG	2 6	1 11	0 3	6 2	21 8	4.43 2.83
17	**I like to familiar with the British reading texts.**	SBIG LBIG	0 10	3 10	1 0	15 0	11 10	4.13 2.66
18	**When I read a text concerning unfamiliar foreign countries, I feel that the text is difficult to understand.**	SBIG LBIG	1 1	0 17	1 1	10 7	18 4	4.46 2.86
19	**I agree that I will grasp the contents of a text more easily when it will be taught through spaced instruction.**	SBIG LBIG	0 10	0 8	3 3	14 2	13 7	4.33 2.60
20	**I think that the reading habits I cultivated in my childhood are helpful in learning a foreign language.**	SBIG LBIG	1 11	0 6	1 0	11 5	17 7	4.43 2.60
21	**I think that these reading habits reinforce my reading speed.**	SBIG LBIG	0 11	0 17	1 0	21 0	8 2	4.23 1.83
22	**When I read an English text or sentence for the first time, I find it easy to understand, if I have enough time to read it.**	SBIG LBIG	2 13	3 7	1 0	14 0	10 10	3.90 2.56
23	**I think efficient reading strategies are important.**	SBIG LBIG	3 10	0 10	0 0	7 0	20 10	4.36 2.66

Taking a look at the mean scores of the questionnaire items in Table 5, it could be seen that all mean scores for SBIG are greater than 3.00. This would indicate that the SBIG learners believed that short-block instruction has positive effects on the students' reading attitude. All items in the teachers' questionnaire received mean scores above 3.00, which means that the students in SBIG concurred with all statements in the questionnaire. On the whole, as it went above, the students in SBIG tended to agree with the majority of the questionnaire items. But the LBIG did not show positive attitudes toward long-block instruction since all mean scores for LBIG are less than 3.00

Table 6.

One-Sample T-test for Reading Attitude

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SBIG	92.49	22	.00	4.22	4.13	4.32
BIG	27.94	22	.07	2.41	2.23	2.59

As revealed in Table 6, the amount of statistic T-values for SBIG and LBIG are is 92.493 and 27.945, respectively, df=22 (df=15) and the significance level for SBIG is 0.000 (sig=0.000) and .07 for LBIG. Since the p value is less than 0.05, this indicated that short-block instruction has positive effects on reading attitude of Iranian EFL learners. On the other hand, reading attitude was not significantly affected by long-block instruction as the p value is higher than 0.05. All in all, the researcher concluded that using short-block instruction in the SBIG's classroom affected both foreign languages reading motivation and reading attitude positively.

Discussion

The purpose of this study was to discover the possible effects of 2 modes of instruction on pre-intermediate EFL learners' reading motivation and reading attitude. The findings statistically showed that SBIG significantly did better than the LBIG on both MRQ and RAS post-tests ($p < .05$). It adds support to previous studies which indicated that the benefits of dispersed practice in cognitive-psychological studies of the spacing impact are important to language learning programs (Miles, 2014). The findings of this research align with surveys in international language systems, most of which have demonstrated significant improvements in mass (intensive) teaching (Collins & White, 2011; Serrano, 2011).

This research supported the findings of Donovan and Radosevich (1999), who identified greater advantages of centralized experience for activities with lower intellectual complexity. On the other side, this observation supports the findings of a few researchers who indicated that the effects of dispersed experience (i.e. spacing impact theory) are not restricted to activities needing fewer cognitive preparation (e.g. memorization activities) but are often applicable to tasks involving a higher degree of cognitive preparation (e.g. editing tasks) (Bird, 2010; Miles,2014).

The findings of this study are in line with those of Year (2009) who examined the potential role of the spacing effect in foreign language grammar learning. The results revealed that the spaced distribution learners significantly outperformed the massed distribution learners on the elicited production and acceptability judgment tests. Spacing instruction helped Iranian EFL students to improve their reading motivation and reading attitude. In spacing instruction students had more time to rest, had more time to think, and had more time to study; this may lead to the students' reading motivation and reading attitude development.

In comparison to a few recent findings on the spacing impact in reading comprehension and other language skills and sub-skills, this research identified major benefits of dispersed practice for post-test success (Bird, 2010; Miles, 2014), all of which recorded approximately identical post-test success by students under scattered and massed conditions. As described above, these experiments concentrated on a very limited set of reading activities (maximum of three) and had a brief period of care. Although other research has shown that distributed practice results in better grades in post-tests, the findings of this analysis indicate that as care is prolonged over time, the effects of distributed practice have become evident for post-tests.

The findings of this research are confirmed by Bird (2010) who studied the impact of clear L2 grammar training by scattered distribution learning. This analysis showed that the scattered distribution had stronger results than the massed community.

Moreover, after analyzing the data, the findings showed that the massed group did not improve on their MRQ and RAS post-test compared to their pre-test. Their scores on the MRQ and RAS pre-test and post-test were almost the same.

The findings of this research are consistent with those of Sobel, Cepeda, and Kapler (2011), who had 39 middle-school children who learned 8 new English terms over two sessions with one week pause between study sessions. The children have acquired vocabulary in two separate working environments (massed vs. spaced). The findings showed that the recall of scattered items was significantly stronger than the recall of massed items.

The results of this research are confirmed by Lotfolahi and Salehi (2017), who used a novel approach to classify various timeframes for space in young EFL learners. To this end, young EFL learners were taught English – Farsi word pairs implementing various spacing schedules (massed vs. spaced). The results found that scattered practice provided greater long-term retention than massed work.

Studying content over two or three different sessions (i.e., scattered or distributed) of time also results in stronger learning than spending the same time studying the knowledge in one session.

According to the encoding variability theory, the more spaced two items are, the more likely it is that they will be encoded differently in the participant's mind (Anderson & Bower, 1972). This variability in memory representation, which is facilitated by the different contexts in which spaced items appear, provides more retrieval cues. Consequently, remembering is favored in spaced distribution instruction. Besides, according to deficient processing theory, in spaced sequences, the

first presentation is not easily accessible at the time of the second presentation, and full processing of the second presentation is thus necessary. As a result, this processing, in turn, facilitates learning and retention. In effect, it is deemed that when participants are exposed to two items simultaneously or within a short period of time, they do not devote as much attention to these items as when they are presented with sufficient spacing.

The findings of this study are in line with who Mashhadi and Farvardin (2017) examined the effects of spaced and massed distribution instruction on EFL learners' recall and retention of grammatical structures. The findings of the repeated measures mixed ANOVAs, one-way ANOVAs, and post hoc Tukey tests showed that the spaced distribution group significantly did better than the other two groups on the delayed posttest. However, there was not a meaningful difference between the spaced and massed distribution groups on the immediate posttest.

Conclusion

There is increasing proof that the principle of spacing impact has consequences for real-life language courses. This study showed that when there is an allocated schedule of a few hours of weekly instruction time, the allocation of that instruction time over a week is essential for short-term and long-term memory of reading tasks of varying degrees of intellectual complexity. In the light of the superior post-test results, course planners and students studying for high-stakes tests will pay heed to the need for a weekly timetable that distributes teaching time over a range of days. Since such regular training sessions can be brief, this form of scheduling is more efficient than when those few hours are restricted to a single day.

The findings of this study will have implications for the order in which the topics are addressed in the language course. Instructors who consider themselves teaching grammar in the sense of mass scheduling will incorporate aspects of dispersed instruction in their lesson plans. For example, instead of concentrating on one grammar theme for the entirety of a long teaching session, class time can be split into segments each with a separate grammar theme or form of assignment. Grammar topics presented earlier in the course will be tested regularly. If the target topic is learned only during one or a few tightly focused learning sessions and not checked at a later date, it is less likely to be recalled. Frequent and regular processing of the target material can result in faster learning.

In summary, the results of this study showed that short-block instruction leads to better learning than long-block instruction. The findings revealed that the short-block instruction group had better performance on reading motivation and reading attitude post-test thanks to short-block instruction. From the obtained findings, it can be concluded that learning through short-block distribution instruction gives the learners a better opportunity to retain a sufficient amount of knowledge gained from instruction until the next opportunity for review arises, either accidentally through input, explicitly through additional instruction, or through the need to use the specific item in speaking, reading, or writing (Miles, 2014).

The implementation of short-block instruction gives many benefits to learning foreign language skills, especially reading comprehension. Through short-block instruction students can learn reading comprehension with more self-confidence. The findings of the present study suggest that English learners should consciously use short-block instruction to manage their performance and to maintain their learning.

The findings of the present study would encourage teachers to teach their students through short-block instruction since this type of instruction is more useful than the long-block one. The findings can help English teachers whether to use short-block instruction or long-block instruction. With the knowledge gained from this study, it will be possible for L2 educators, researchers, and curriculum planners to gain insight into how to facilitate teaching English language reading motivation and reading attitude through short-block instruction and long-block instruction.

Like all studies, this study had limitations and could not include all the issues related to the topic. They are as follows:

1. One limitation is that the study included only participants that were 15+/-1 years old. So, the results cannot be generalized to the other age groups.
2. The population was limited to 60 people. Therefore, this cannot be generalized either.
3. The time allocated to the instruction was so limited.
4. The participants of this study were limited to the pre-intermediate level learners. So, care must be exercised in generalizing the results beyond its proper limits.
5. The result of this study may be affected by classroom situation and social factors. These factors were not considered in the present study.
6. The role of the variables such as age, motivation, and anxiety were not regarded in this study.
7. The participants were only male learners; therefore, the results of the study may not be generalizable to female learners.

Future research is needed to verify the current study results and to continue exploring the effects of short-block and long-block instruction on EFL students' reading skill. Future research should also extend the

amount of time to determine the maintenance of treatment effects. Future studies are suggested to include training sessions to assist the teachers in implementing short-block and long-block instruction. Upcoming studies need to determine if the treatment is equally effective in diverse populations and other geographical locations. Further studies can include more participants to get richer findings. Moreover, in studies with a similar topic both female and male students are recommended to be involved. Future research should look at different ages and a wider variety of environments, to see how far the benefits of short-block and long-block instruction can be extended. More research needs to be conducted in diverse classrooms to gain a greater understanding of the effectiveness of short-block and long-block instruction for learners with different social/cultural linguistics backgrounds and learner-internal traits and of possible ways to overcome pedagogical limitations experienced by particular groups of learners. Next studies are recommended to investigate the effects of short-block and long-block instruction on other skills and sub-skills of the English language.

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