The Impact of Integrating Blended Learning with Task-Based Language Learning on Reading Comprehension of Iranian EFL Learners

Research Article

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Abstract

Task-based language learning and blended learning have become an ideology in modern EFL teaching and are considered to be an effective trend in teaching English as a foreign language. Thus, the present study explored the effect of integrating blended language learning into task-based language learning on Iranian male and female intermediate EFL learners' reading comprehension ability. Initially, four groups including two experimental groups and two control groups were formed. The two experimental groups were taught through blended integrated task-based lan-

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guage learning. In so doing, Staker and Horn's (2012) blended learning model was integrated into Ellis' (2017) task-based model in order to improve participants' reading comprehension ability. In this innovative approach, learners were involved in a series of offline and online focused and unfocused task-based reading comprehension activities, whereas the control groups were taught through conventional reading comprehension methods using traditional reading strategies. Accordingly, the results of ANCOVA indicated that learners in the experimental groups obtained considerably higher scores than those in the control groups. Further, the results of two-way ANOVA depicted that there was no substantial difference between the female and male learners across groups. Finally, the pedagogical implications of this study suggested that curriculum designers and materials developers can incorporate the innovative notion of integrating blended learning into task-based language learning method to transform the learning environment into more student-centered classrooms. More importantly, the teachers can develop learners' critical thinking and metacognitive skills by designing interactive reading comprehension online tasks.

Keywords: hybrid/blended learning, task-based language learning, reading comprehension, reading strategies, gender

Introduction

Reading as a dynamic cognitive function involving a collection of mechanisms and strategies is one of the most critical learning challenges students face. Although the majority of Iranian English institutes' and schools' curricular programs are reading-oriented, there is no emphasis on using different reading strategies and as a result, reading comprehension ability is a significant challenging task for many Iranian EFL learners (Khataee, 2018; Namaziandost, 2020; Taghizadeh & Khalili, 2019). However, many researchers have found task-based language learning as the most effective learning strategy in enhancing and improving learners' reading comprehension ability (Chalak, 2015; Kalantari & Saedi, 2009; Madhkhan & Musavi, 2017; Noshad & Zamanian, 2017; Rezaei et al., 2017; Setayesh & Marzban, 2017).

As Ellis (2017) stated, task-based language learning cannot be viewed as a single, monolithic solution. In his view, hybrid/task-based language learning comprise of both focused and unfocused tasks. He referred to focused tasks as the ones whose primary learning focus is on learning specific and particular grammatical structures (focus on form) implicitly; this means that the students are not explicitly aware of the grammatical feature that they are learning; thus they learn the grammatical features incidentally. But as he mentioned, on the other hand, unfocused tasks emphasize on learners' interaction and negotiation of meaning (focus on meaning).

Similar to task-based language learning, web 2.0 technologies also encourage learners to become more active, more self-directed and more self-regulated learners. Among technology-mediated learning methods, blended learning is considered to be one of the most effective and beneficial approaches to both

teachers and learners (Bonk & Graham, 2006). In line with the previous studies, Staker and Horn (2012) proposed an innovative design for blended learning which is called 'Station Rotation Models'. This model includes different learning stations and the students have to rotate between the stations based on the fixed schedule. These stations comprise teacher-led instruction station, online learning station, collaborative learning station. At each station, one course assignment must be completed and the teacher monitors learners' progress. Each lesson concludes with online assessment, or a project will be given to the students at the end of the lesson.

Literature Review
Theoretical Underpinning

The type of tasks is considered as the core of the task-based language learning methodology. As Ellis (2017) further suggested, grammar might not be fundamental to the task-based language learning, but it does have a significant role within it. Tasks may be unfocused or focused. Unfocused tasks are tasks designed to give learners the ability to use language in general in a communicative manner. Focused tasks are tasks designed to provide opportunities for communication by using a specific linguistic feature (usually a grammatical property). Hence, Ellis (2017) proposed the framework for classifying tasks based on input-providing tasks and output-providing tasks. Ellis (2017) made a distinction between input-providing tasks and output-providing tasks. Input-providing tasks provide comprehensible input for L2 learners. Moreover, according to Ellis (2017), output-providing tasks require speaking and writing to achieve the outcome and thus, such skills provide an opportunity for learners to communicate and negotiate in target language and it leads to learners' higher level language development.

As the classroom technology continues to evolve rapidly, teachers are now starting to introduce more innovative online and computer-based tasks, activities and assessments. But, teachers realize that the emphasis on some offline activities such as collaborative and cooperative learning in the form of face-to-face exercises should remain as the core of any language teaching method. Therefore, the notion of the computer-based and classroom-based lessons are overlapping. This mixture of technology-based as well as the traditional paper and pencil classroom-based learning experience is known as hybrid or blended learning (Bersin, 2004). Station-rotation model is gaining popularity among EFL teachers and practitioners since it allows teachers to create a nice balance between online and offline work (Tucker, 2020). According to Staker and Horn (2012), in the Rotation models, the students have to rotate between different language modalities based on the fixed schedule. At least one of the modalities should be technology-based and online learning. These learning stations comprise different activities such as collaborative learning (in small or large groups), teacher-led instruction, online tasks and activities, paper and pencil assignment, formative and summative assessments.

Previous Studies

Task-based language learning has emerged as an intellectual communicative method and thus, learners are faced with similar tasks to those they have to perform outside the classroom (Ahmed et al., 2020). Task-based language learning is recommended as a replacement for the conventional approach in the teaching of English as it encourages a system in which the use of practical communicative languages is required (Rostami et al., 2020). Recently, using task-based language learning method and task-based activities have gained special attention in Iranian educational context. For instance, Tavakoli et al. (2019b) explored the impact of computer-assisted language learning-mediated task-based language teaching on EFL university students' motivation towards reading. The experimental group was taught via computer-assisted language learning-mediated task-based language learning method, while the control group only received a traditional task-based reading instruction. The results of the study suggested that technology-mediated task-based language learning improved and enhanced learners' motivation with regard to reading. In another study, Mehri and Tavakoli (2020) explored the effect of technology-mediated reading tasks on autonomy and metacognitive skills used by Iranian EFL intermediate learners. Mehri and Tavakoli (2020) found that technology-mediated task-based instruction was effective in enhancing learners' autonomy and metacognitive strategy use in comparison to the traditional explicit reading comprehension strategy. Further, in the study done by Rostami et al. (2020), the experimental group was taught through task-based language learning method whereas the control group was taught through conventional book-based method. The results of this study demonstrated that task-based activities improved students' reading comprehension ability.

Blended learning improves student-teacher and student-student engagement and creates a more diverse and engaging learning environment, resulting in increased participation (Donnelly 2009). For instance, Alroomy, and Althewini (2019) studied the effect of blended learning on medical students' reading performance. The results of the study indicated that online extensive reading strategy facilitated the learners' reading decoding process. Additionally, Macaruso et al. (2020) investigated the effect of blended learning on elementary students' reading skill. Experimental groups showed higher gains on the reading test than control groups. Thus, the outcomes of this study suggested that bended learning had a significant effect on elementary students' reading skill.

Considering the significant effect of task-based language learning as well as the demanding notion of blended learning in the EFL context, the present study attempts to open new horizons highlighting the effect of blended integrated task-based language learning as an innovative strategy for Iranian EFL learners to overcome reading challenges. Further, the present study intends to introduce an exciting and enjoyable reading approach in order to establish a positive attitude towards reading skill among Iranian EFL learners. Moreover, several reports on task-based language learning have been undertaken in Iran but little

research has been performed to determine the real activities of teaching English at high schools as well as language institutes. Therefore, the results of the present study can provide EFL researchers and practitioners with more awareness concerning the possible contributions of using blended integrated task-based language learning materials to teaching and learning reading comprehension ability. In line with the significance of this research, the present study attempted to address the following questions:

RQ1: Does the integration of blended learning into task-based language learning have any effect on Iranian EFL learners' reading comprehension ability?

RQ2: Does the effect of the integration of blended learning into task-based language learning on Iranian EFL learners' reading comprehension ability differ in terms of gender?

Method
Participants

The study was conducted with 80 Iranian EFL intermediate learners (43 females and 37 males) studying at a private language institute. The participants were 37 teenage males and 43 teenage female learners attending the institute. In order to make sure of homogeneity, subjects were chosen from among 120 students, based on their scores on the OQPT test. After scoring the papers, those with scores in the range of 30-39 from the total score of 60 on the OQPT were selected as the intermediate level as the main participants of the research. Afterwards, learners were assigned to four groups: Two experimental groups as female experimental group (n = 21) and male experimental group (n = 19) as well as two control groups which consisted of female control group (n = 22) and male control group (n = 18).

Instruments

Oxford Quick Placement Test (OQPT). OQPT test was administered as a criterion of learner homogeneity. It's worth mentioning that the OQPT test was taken from a study done by Afshinfar and Shokouhifar (2016). According to Geranpayeh (2006), OQPT was validated in 20 countries by over 6000 students. Moreover, the reliability of the test was tested by Allan (2004), who claimed that OQPT has met the international test characteristics and scoring criteria. The test comprised of 60 multiple-choice questions and is divided into two parts. Part one includes 20 reading comprehension questions and 20 vocabulary questions. Part two which is designed for learners with higher language proficiency is comprised of 10 vocabulary questions and 10 grammar questions and 30 minutes were allocated to the test. Subsequently, 80 out of 120 learners who scored in the range of 30-39 from the total score of 60 were considered as intermediate learners and were chosen as the main participants.

Reading Comprehension Pretest. In the pre-intervention stage, all participants were required to answer the online reading comprehension test. The test consists of five different passages with the variety of real-life and authentic topics (i.e., geography, archaeology, climate change, oceanography and life) retrieved from National Geographic website via ngllife.com. Every topic included 10 multiple-choice questions. Therefore, the pretest included 50 multiple-question items. The comprehension reading test was chosen and conducted as both pretest and posttest. Prior to the main study, the pretest of reading comprehension was piloted with 50 learners who were representative of the main participants.

Table 1
Descriptive Statistics of the Reading Comprehension Pretest for Piloting Purpose

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Variance
Reading_Test	50	12.00	36.00	48.00	42.1800	.55158	3.90024	15.212
Valid N (listwise)	50							

It's worth mentioning that Cronbach alpha's formula for the pretest items was employed and the result showed a reliability of .76 (r = .76) which is considered satisfactory (Brown & Hudson, 2002).

Reading Comprehension Posttest. In the post-interventions stage, the posttest (i.e., the same test used in the pretest) was carried out to close the solid phase of the study in order to analyze the effects of treatment. The researcher used the same test twice, both in the pretest and the posttest stages to ensure comparability regarding the difficulty of the comprehension questions and enhance the reliability of the results. However, using the same test twice could make the learners learn from the test. Hence, to eliminate this practice effect, the researchers did not check and discuss the answers of the pretest with the learners, and the learners were not given further access to the pretest material. Furthermore, to eliminate the memory effect, there was a one-month break between the pretest and the posttest.

Internet-Based Materials

TED Ed. Through Ed.Ted.com teachers are able to submit their own interactive lessons. Each lesson is comprised of TED Talks videos in which experts deliver lectures in different fields to motivate, engage and inspire and introduce the ideas which can change the world. In addition to the video, the teachers can create a variety of different tasks and activities which require learners' deep thinking to develop students' critical thinking skills discussion questions, in which the learners should discuss and share their answers with their partners or in a group which requires collaboration and cooperation.

GoFormative. Teachers are able to create online paperless assignments via Goformative.com. Additionally, the teacher can employ pictures and videos to create interactive and innovative assignments. Every student is required to do the assignments and submit them to the teacher. Teacher can rate the assignments and give feedback to the students based on their performances. Further, the Teacher Dashboard enables the teacher to track every student's progress during the course.

Course Books

Creative Thinking and Reading with TED Talks. *Creative Thinking and Reading with TED Talks* (written by Lauri Blass, Mari Vargo and Eunice Yeates, 2015) is comprised of 10 units based on different authentic and real-life themes (i.e., life, science, education, tech, creativity, etc.) and each unit includes three parts. In the first part, pre-reading, post-reading and text-based critical thinking tasks are presented. In the second part, pre-viewing, while-viewing, post-viewing, and video-based (TED Talks videos delivered by the experts in field lecturing about real-life and authentic topics) critical thinking tasks are provided. In addition, project works are presented in the third part. It is worth mentioning that this course book was used to teach reading in experimental groups.

Practice Makes Perfect Intermediate English Reading and Comprehension. *Practice makes perfect intermediate English reading and comprehension* (written by Diane Engelhardt, 2013) consists of 15 units and each unit is provided with pre-reading (introduction to topic), reading text (after-reading exercise), vocabulary (understanding and learning vocabularies), reading strategies (paraphrasing, organizing and summarizing reading text), and critical thinking (evaluating the information in the reading text). It should be noted that this course book was used to teach reading in control groups.

Procedure
Pre-Treatment Stage

To collect the data of the current study, first, reading comprehension pretest was given to the learners. The test included 50 questions in the form of paper-and-pencil. The learners were asked to fulfill the activities in 45 minutes on the provided answer sheet. This test was administered as pretest and the posttest of the study.

Experimental Groups

In treatment groups reading class, students were taught through blended integrated language learning. The time of the whole treatment for both experimental groups was one month (four sessions per week) and 90 minutes per session were devoted to the treatment.

Pre-Task Stage/Direct Instruction Station. In this stage, the teacher introduced the content and lesson. Then, in order to activate learners' background knowledge about the topic, he went through pre-reading and warm-up activities. These activities are comprised of four tasks. In task A, for instance, if the topic was about 'infographic information'- the students looked at the infographic information presented in their course book and chose the three best answers that could serve as the title of the infographic picture. In Task B, students wrote their own ideas about the story behind the infographic information and also discussed their answer with their partner (combining focused and unfocused tasks together). In task C, the students discussed their opinion about whether the infographic information was effective (unfocused task). In Task D, they read the introductory paragraph and discussed their own opinion with their partner (unfocused task).

While-Task Stage/ Teacher-Led Station. In this phase, the students read and comprehended the passage while learning the bolded words. Then, in task A (Getting the Main Ideas) they used the information from the passage and chose the best answer for each multiple choice questions. In task B (Understanding Details), they engaged in writing (focused task) and discussed (unfocused task) their own detailed ideas. In task C, after they understood the infographic information presented in their book, they answered the related questions. In task D (Getting Meaning from Context), students guessed the meaning of compound words, then wrote (focused task) and discussed (unfocused task) their own ideas. In task E (Building Vocabulary), learners answered the multiple choice questions; for example, they used the "Bandwidth of the Senses" infographic and the words in the box to complete the paragraph.

While-Task Stage/ Online Station. In this phase, the learners logged in to their account and then, they engaged in interactive tasks and activities that the researcher had previously created via TedEd website (ed.ted.com). In this online and interactive task, the students watched a video about "David McCandless makes data visualizations". Then, they answered two analytical questions and discussed their answers with their partners. Then, they went to McCandless's website (informationisbeautiful.net) and found an infographic that they thought was particularly interesting and effective and shared it with the class.

Post-task Stage/Online Station. In this stage, learners were divided into small groups. Afterwards, the teacher assigned a project to every groups. These projects were designed by the researcher via using Goformative.com. The teacher posted a variety of reading comprehension passages on the website and every group was assigned to different reading topics. For instance, group A was assigned the topic of "Sharks" and Group B was assigned to the topic of "Volcanoes". Every online assignment comprised of three parts. In part one, learners watched a video from National Geographic to get familiar with the topic; then they read online reading passages and finally they answered the online multiple choice questions.

Post-Task/ Offline Station. In the offline stage, the teacher gave pairs of students a set of sentences, which they put in order to make a story. For example, a story about 'Incas: Lost Society'. (at first, the sentences were in the correct order, but the teacher had mixed them up so that he would not give them out in a perfect sentence). While they did this, the teacher went round the class monitoring and assisting students. Then, the teacher went through the sentences with the class to make sure that everyone had the correct order. He explained that the end of the story was missing, and asked the students, once again in pairs or groups, to try to work out what the end might be. They wrote a final sentence or two. Finally, the class listened to the different endings and decided which one they liked best.

Control Groups

Both control groups received 90 minutes of the institute's regular reading instruction per session for 16 consecutive sessions to control for novelty effect, group size, and independence of the person who delivered the intervention. The same teacher who delivered the treatment to experimental groups provided the traditional reading instructional routines that are currently used in language institutions and schools to the control group.

Post-Treatment Stage. After one month of treatment on the experimental group and control group, which took 16 sessions, 90 minutes each, the participants in all groups took a 50-item reading comprehension posttest, and the results were compared and contrasted to check the hypotheses of the study.

Results
Descriptive Statics

Initially, the assumptions underlying ANCOVA and two-way ANOVA were analyzed. For the first assumption, the descriptive statistics for kurtosis and skewness were checked to ensure that all scores were normally distributed. Afterwards, to achieve a greater degree of certainty, the Shapiro-Wilk normality test was also conducted. For checking the second assumption, Levene's test was run to assess the equality of variance. Regarding the third assumption, ANCOVA was assessed in order to control pre-existing differences (covariate) and to adjust the posttest results. Finally, the linearity assumption was tested, since ANCOVA implies a linear relation between the dependent variable and the covariate (Tabachnick & Fidell, 2013).

Assumptions for ANCOVA and Two-Way ANOVA

In order to interpret the data obtained from this analysis, as stated above, it was important to test the four assumptions. Descriptive normality statistics (Kurtosis & Skewness) were tested along with inferential normality tests to determine whether the data obtained were normal. If Kurtosis and Skewness

are between -2 and +2, the data obtained are assumed normal (Tabachnick & Fidell, 2013).

Table 2
Descriptive Statistic for Kurtosis and Skewness

	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Pretest	80	30.00	40.00	35.1125	.28518	2.55072	-.143	.269	-.672	.532
Posttest	80	30.00	48.00	39.8625	.62509	5.59100	.082	.269	-1.522	.532
Valid N (listwise)	80									

According to Table 2, the Skewness and Kurtosis values for the pretest were -.143 and -.672 respectively, and for the posttest were .082 and -1.522, respectively. Since such results are between -2 and +2 and the data tend to be normally distributed, the usual curve histograms for the pretest and posttest of the three groups showed the distribution of data is normal. However, the inferential statistics of Kolmogorov-Smirnov and Shapiro-Wilk's tests of normality were also conducted to verify the data obtained to achieve a higher degree of certainty. Since every group has a sample size of less than 50, Shapiro-Wilk normality test was conducted to assess the normal distribution of the scores. The outcomes of normality tests are presented in Table 3.

Table 3
Test of Normality of Pretest and posttest for Male and Female Learners Across Groups

	Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pretest	MaleExp	.149	19	.200*	.965	19	.664
	FemaleExp	.144	21	.200*	.956	21	.447
	MaleCon	.152	18	.200*	.934	18	.232
	FemaleCon	.126	22	.200*	.962	22	.520
Posttest	MaleExp	.173	19	.136	.932	19	.187
	FemaleExp	.204	21	.023	.924	21	.105
	MaleCon	.198	18	.060	.931	18	.199
	FemaleCon	.184	22	.052	.920	22	.077

As it is indicated in Table 3, ShapiroWilk test of normality revealed that the p-values of the pretests and posttests of the experimental and control groups are more than .05, indicating a normal distribution of data (pretest p-values: ME = .664, FE = .447, MC = .232, FC = .520; posttest p-values: ME = .187, FE = .105, MC = .199, FC = .077). Therefore, the data is normally distributed.

Leven's homogeneity test of variance was performed to assess the equality of variance across the four groups' samples. The findings are illustrated in Table 4.

Table 4
Levene's Test

Levene Statistic	df1	df2	Sig.
2.548	3	76	.268

As it shown in Table 4, the variance is homogenous across experimental and control groups, F (3,76) = 2.548 < 4.38, *p*= .268 > .05, indicating that another assumption underlying the application of ANCOVA test and two-way ANOVA test was met.

Another assumption to be tested is the covariate-dependent variable relationship for each group. This included testing to investigate if the covariate and dependent variable had a statistically relevant relationship. If the interaction at an alpha level of .05 is important, this statement is subject to violation. The results are shown in Table 5.

Table 5
Test of ANCOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1437.042[a]	7	205.292	83.908	.000	.891
Intercept	363.934	1	363.934	148.749	.000	.674
Groups	43.830	3	14.610	5.971	.001	.199
Pretest	12.190	1	12.190	4.982	.029	.065
Groups * Pretest	15.909	3	5.303	2.167	.099	.083
Error	176.158	72	2.447			
Total	122670.000	80				
Corrected Total	1613.200	79				

a. R Squared = .891 (Adjusted R Squared = .880)

As shown in Table 5, the significance value is greater than the critical value (*p* = .099 > .05). Therefore, it can be concluded that the principle of regression slopes homogeneity was not violated. The linearity of regression line slopes is illustrated in Figure 1 below. To check the linearity assumption, it was necessary to check the relation between the dependent variable and the covariate for the four groups (Figure 1).

Figure 1
The Linear Relationship Between Dependent and Covariate Variables
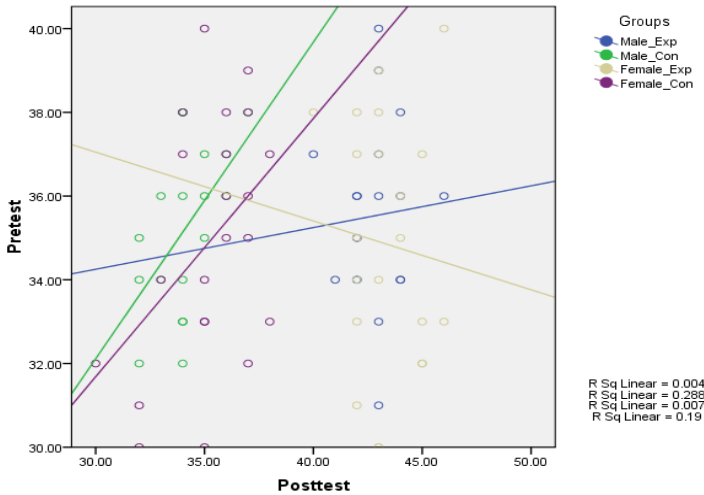
As depicted in Figure 1, a linear relationship existed across the four groups, suggesting that there was no evidence of a curvilinear relation. Thus the linearity assumption has been met.

Investigating the Null Hypotheses

Having established the prerequisite assumptions, the ANCOVA and two-way ANOVA were run to test the null hypotheses. Table 6 shows the descriptive statistics indicating the outcomes of all male learners' performance in the posttest.

Table 6
Descriptive Statistics for the Posttests of Male Learners across Groups

Groups	Mean	Std. Deviation	N
Male_Exp	42.7895	1.31567	19
Male_Cont	34.1111	1.40958	18
Total	38.5676	4.59795	37

Table 6 indicates that there were differences in the two groups' reading comprehension posttests (ME, M = 42.78, SD = 1.31; MC, M = 34.11, SD = 1.40). Further, ANCOVA was run to compare the effectiveness of two different interventions designed to improve male participants' reading comprehension. Male participants' scores on the pretest of reading comprehension ability was used as the covariate in this analysis. The outcomes are shown in table 7.

Table 7
Test of ANCOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	701.627[a]	2	350.814	200.621	.000	.922
Intercept	119.829	1	119.829	68.527	.000	.668
Pretest	5.482	1	5.482	3.135	.086	.084
Groups	682.950	1	682.950	390.560	.000	.920
Error	59.454	34	1.749			
Total	55797.000	37				
Corrected Total	761.081	36				

a. R Squared = .922 (Adjusted R Squared = .917)

Based on Table 7, after adjusting for pretest scores, there was a meaningful difference between the male experimental group and male control group on reading comprehension posttest scores, F (1,34) = 390.5 > 4.38, *p* = .00 < .05, partial eta squared = .920), suggesting that integrating blended learning into task-based language learning could significantly improve male participants' reading comprehension ability. Table 8 provides the descriptive statistics showing the outcomes of all female learners' performance in the posttest.

Table 8
Descriptive Statistics for Posttest of Female Learners Across Groups

Groups	Mean	Std. Deviation	N
Female_Exp	43.3333	1.55991	21
Female_Cont	35.2273	2.06863	22
Total	39.1860	4.48413	43

Table 8 indicates that there were differences across the two female groups' reading comprehension posttests (FE, M = 43, SD = 1.55; FC, M = 35.22, SD = 2.06). In addition, ANCOVA test was performed to evaluate the efficacy of two separate approaches designed to enhance reading comprehension ability of female learners. In this research, female participants' scores on the reading comprehension ability pretest were considered as the covariate. The findings are shown in Table 9.

Table 9
Test of ANCOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	712.265[a]	2	356.132	107.717	.000	.843
Intercept	351.440	1	351.440	106.298	.000	.727
Pretest	6.283	1	6.283	1.901	.176	.045
Groups	707.123	1	707.123	213.880	.000	.842
Error	132.247	40	3.306			
Total	66873.000	43				
Corrected Total	844.512	42				

a. R Squared = .843 (Adjusted R Squared = .836)

As it shown in Table 9, after adjusting for pretest scores, there was a significant difference between the female experimental group and female control group on reading comprehension posttest scores (F (1,40) = 6.283 > 4.38, *p* = .00 < .05, partial eta squared = .842), indicating that integrating blended learning into task-based language learning could highly enhance female participants' reading comprehension ability. Table 10 shows the means of the scores for the post-tests of the four groups.

Table 10
Pairwise Comparison

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
Male_Exp	Male_Con	8.705*	.520	.000	7.668	9.741
	Female_Exp	-.548	.501	.278	-1.547	.451
	Female_Con	7.484*	.496	.000	6.496	8.472
Male_Con	Male_Exp	-8.705*	.520	.000	-9.741	-7.668
	Female_Exp	-9.253*	.504	.000	-10.257	-8.248
	Female_Con	-1.221*	.498	.017	-2.214	-.228
Female_Exp	Male_Exp	.548	.501	.278	-.451	1.547
	Male_Con	9.253*	.504	.000	8.248	10.257
	Female_Con	8.032*	.479	.000	7.078	8.986
Female_Con	Male_Exp	-7.484*	.496	.000	-8.472	-6.496
	Male_Con	1.221*	.498	.017	.228	2.214
	Female_Exp	-8.032*	.479	.000	-8.986	-7.078

After running the pairwise comparisons, the researcher used the results to check the first null hypotheses by comparing the mean differences between the four groups.

Table 11
Descriptive Statistics for the Posttest of Male and Female Learners across Groups

	N	Mean	Std. Devia-tion	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male_Exp	19	42.7895	1.31567	.30184	42.1553	43.4236	40.00	46.00
Male_Con	18	34.1111	1.40958	.33224	33.4101	34.8121	32.00	37.00
Female_Exp	21	43.3333	1.55991	.34040	42.6233	44.0434	40.00	46.00
Female_Con	22	35.2273	2.06863	.44103	34.3101	36.1445	30.00	38.00
Total	80	38.9000	4.51888	.50523	37.8944	39.9056	30.00	46.00

Table 11 demonstrates that there were differences across all of the four groups' reading comprehension posttests (ME, M = 42.78, SD = 1.31; MC, M = 34.11, SD = 1.4; FE, M = 43, SD = .1.55; FC, M = 35.22, SD = 2.06). Additionally, two-way ANOVA test was run to explore the impact of integrating blended learning into task-based language learning on male and female participants. The results are shown in Table 12.

Table 12
Test of Two-Way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1409.734	3	469.911	175.524	.000
Within Groups	203.466	76	2.677		
Total	1613.200	79			

According to Table 12, the two-way ANOVA results between the posttest scores of male and female experimental and control groups shows a significant difference among the posttests of four groups (F (3, 76) = 175.52 > 4.38, p = .000 < .05). Thus, it can be concluded that the four groups were different in their reading comprehension ability. Since the sample sizes across groups were not equal, the researcher conducted Scheffe's post-hoc test to highlight the differences among the groups. The results of Scheffe's post-hoc are presented in Table 13.

Table 13
Results of Sheffe's Post-Hoc Test

(I) Groups	(J) Groups	Mean Differ-ence (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Male_Exp	Male_Con	8.67836*	.53818	.000	7.1396	10.2171
	Female_Exp	-.54386	.51806	.777	-2.0251	.9374
	Female_Con	7.56220*	.51244	.000	6.0971	9.0274
Male_Con	Male_Exp	-8.67836*	.53818	.000	-10.2171	-7.1396
	Female_Exp	-9.22222*	.52556	.000	-10.7249	-7.7195
	Female_Con	-1.11616	.52002	.212	-2.6030	.3707

Female_Exp	Male_Exp	.54386	.51806	.777	-.9374	2.0251
	Male_Con	9.22222*	.52556	.000	7.7195	10.7249
	Female_Con	8.10606*	.49917	.000	6.6788	9.5333
Female_Con	Male_Exp	-7.56220*	.51244	.000	-9.0274	-6.0971
	Male_Con	1.11616	.52002	.212	-.3707	2.6030
	Female_Exp	-8.10606*	.49917	.000	-9.5333	-6.6788

Since a significant result was obtained in the overall analysis of variance, Sheffe's post-hoc test was conducted to check the second null hypothesis and compare the combined mean scores across the all four groups.

The First Null Hypothesis

The first null hypothesis of the current study stated that the integration of blended learning into task-based language learning does not have any meaningful effect on Iranian EFL learners' reading comprehension ability. To test this null hypothesis, as presented in Table 10, the mean difference of the male experimental group and male control group is MD = 8.705, $p = .000$, $p < 0.05$, with the male experimental group outperforming the male control group. Further, the mean difference of female experimental group and female control group is MD = 8.032, $p = .000$, $p < 0.05$, with the female experimental group outperforming female control group. Therefore, it can be inferred that the first null hypothesis of the study is rejected and thus the integration of blended learning into task-based language learning has had a meaningful effect on Iranian EFL learners' reading comprehension ability.

The Second Null Hypothesis

The second null hypothesis of the current study stated that the integration of blended learning into task-based language learning does not have any meaningful effect on Iranian EFL learners' reading comprehension ability differ with gender. According to table 13, the mean difference of female experimental group and female control group is MD = 8.10, $p = .000$, $p < 0.05$; thus, the female experimental group outperformed the female control group. Moreover, the mean difference of female experimental group and male control group is MD = 9.22, $p = .000$, $p < 0.05$, with female experimental group outperforming the male control group. Further, as the mean difference of female experimental group and male experimental group is MD = .54, $p = .77$, $p > 0.05$, therefore, it can be inferred that there was no meaningful difference between the reading scores of female experimental group and the male experimental group. Additionally, the mean difference of female control group and male control group is MD = 1.11, $p = .212$, $p > 0.05$; hence, it can be concluded that there was not any meaningful difference between the reading scores of female learners and male learners in control groups. Therefore, it can be concluded that the second null hypothesis of the study is retained and thus the integration of blended learning

into task-based language learning does not have any meaningful effect on Iranian EFL learners' reading comprehension ability in terms of gender.

Discussion

The present research explored the effects of integrating blended learning into task-based language learning on EFL male and female learners' reading comprehension ability. In this regard, four groups (two experimental and two control groups) formed the sample of the study. The findings revealed learners in experimental groups who received the treatment improved more significantly than those in the control groups in terms of their reading comprehension ability. The results of ANCOVA indicated that reading ability of both male and female learners in experimental groups were highly and significantly improved as the result of using blended integrated task-based language learning strategies. Further, the results of the two-way ANOVA revealed there was not any meaningful difference between male and female learners.

The outcomes of this research support the results of several studies which found that the combination of technology and task-based language learning has a more significant effect than traditional methods on learners' reading comprehension (Mehri & Tavakoli, 2020; Rostami et al., 2020; Tavakoli et al., 2019).

The results of this research are in alignment with the several studies which examined the efficacy of blended learning in improving reading comprehension among EFL students (Alroomy & Althewini, 2019; Macaruso et al., 2020).

Conclusion and Pedagogical Implications

This research has found that the integration of blended language learning into task-based language learning improves the male and female learners' reading comprehension ability. Moreover, the results found that female and male learners in experimental groups who were exposed to blended integrated task-based language learning strategy gained the highest mean score and thus, outperformed the two control groups of this study.

The findings of this study suggested that the learners are no more confined to the traditional paper-based reading comprehension approach. Therefore, the students are not limited to read an extensive amount of reading text, which ultimately makes the reading process boring and tedious and thus, the students become passive learners. Instead, using focused and unfocused reading-based tasks makes learners more active learners and the reading process will become more enjoyable and exciting as well. Through focused reading-based tasks, students also develop their writing skill as well as grammatical knowledge and by using unfocused reading-based tasks, learners are required to participate in online and offline collaborative learning stations and are thus encouraged to communicate with peers and develop their communicative skills. Furthermore, teachers develop learners' critical thinking by designing and creating online

reading-based tasks. The participants of this study adopted more positive attitudes towards reading when they were asked to study the lessons and fulfil the task provided in ed.ted.com, goformative.com and TED Talks videos. Moreover, by engaging in offline and online evaluative and analytical reading comprehension tasks which were provided on TEDEd website, learners developed their critical thinking skills. Additionally, at the end of each session, the teacher assigned each group to different online projects and through using group project work, not only did students learn how to collaborate together in groups — providing their own feedback, listening to others, and resolving disagreements as they come up — they also developed meaningful relationships with teachers, which reinforce how fun learning is. Even while working on projects, students develop relationships with community leaders, gaining knowledge for careers and beyond. Further, by engaging in project work, learners also develop their creative and critical thinking skills and build on their research skills. Since, based on the outcomes of the present research, there was no substantial difference between male and female learners in experimental groups, it can be inferred that blended integrated task-based language learning is an effective reading approach for both male and female EFL learners and thus decision-makers, policy-makers, and curriculum designers can incorporate the notion of blended integrated task-based language learning approach in order to enhance and improve EFL learners' reading comprehension ability across gender.

Suggestions for Further Studies

This study explored the effect of blended integrated task-based language learning strategy on male and female learners' reading comprehension ability. This application was found to be beneficial in enhancing students' reading comprehension abilities by offering an innovative learning experience to students who were able to engage in online and offline learning by accomplishing interactive and graded reading comprehension tasks. In this study, Ellis's (2017) blended integrated task-based language learning was used as an innovative way to improve male and female learners' reading comprehension ability. Another study can be done using different frameworks proposed by different scholars. In the presented study, the Station-Rotation model was employed as a framework for blended learning. Another study can be carried out using different blended leaning frameworks.

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