

Boosting Reading Achievement by Employing Learner Autonomy Curriculum: Effects of Strategy Instruction

¹Layla Aryanjam*

²Mojgan Rashtchi

IJEAP- 2106-1736

³Parviz Maftoon

Received: 2021-06-25

Accepted: 2021-09-22

Published: 2021-09-28

Abstract

Models proposed to enhance learner autonomy facilitate creating autonomy-supportive environments and promote learning achievement. This study intended to provide empirical evidence for the effect of employing Benson's (2001) and Blin's (2010) instructional models of learner autonomy on Iranian EFL learners' reading achievement and strategy use. To this end, three intact classes with 75 sophomores majoring in TEFL were selected based on convenience sampling and received the strategy-based reading instruction in the models' framework. They were randomly assigned to the experimental groups that practiced Benson's Instructional Model (BEN-M, n=26), Blin's Instructional Model (BLN-M, n=24), and the control group that followed Conventional Teaching Methods (CTM, n=25). An explanatory mixed methods research was used. After the treatment, the participants took a reading post-test. They also participated in semi-structured interviews. They took a reading strategy questionnaire (RSQ) before and after the treatment as well. Tests of one-way Analysis of Variance were exploited to scrutinize the changes between the means of groups and specify the effectiveness of intervention programs in improving the reading skills and strategy usage. Post-hoc Scheffe test located where precisely the differences laid. For qualitative data analysis, semi-structured interviews were transcribed and coded and then underwent content analysis. The results indicated that instructional intervention led to a higher level of reading achievement. The experimental groups outperformed the control group regarding the application of reading strategies. The semi-structured interviews also revealed that the participants held favorable perceptions of the instructional models.

Keywords: Autonomy, Benson's model, Blin's model, Reading strategy, Reading achievement

1. Introduction

Many research studies during the last decades have focused on learner autonomy and autonomous learning, which brought about modifications and advances in education (e.g., Borg & Alshumaimeri, 2019; Everhard & Murphy, 2015). One reason is that autonomous learning is more purposeful and gives learners the capability to live independently. Learners with such disposition accept responsibility for their education; thus, it removes the barriers between learning and living. Autonomous learners can select goals, initiate activities, and constantly revise and evaluate their work to become self-sufficient (Mulyah et al., 2020). Strategies employed by learners increase their self-confidence and learning and result in active, self-directed involvement necessary for communicating competence (Talley, 2017).

In recent years, the relationship between learner autonomy and language proficiency has become a crucial argument (e.g., Hossain & Mustapha, 2020; Hu & Zhang, 2017; Melvina & Julia, 2021). Regarding the significant effect of learner autonomy in reading courses, Almusharraf, (2020)

¹PhD Candidate in TEFL, 1354lr@gmail.com; Department of English, Science and Research Branch, Islamic Azad University, Tehran, Iran.

² Associate Professor of TEFL (Corresponding Author), mojgan.rashtchi@gmail.com; TEFL Department, Islamic Azad University, North Tehran Branch, Tehran, Iran.

³ Associate Professor of TEFL, pmaftoon@srbiau.ac.ir; Department of English, Science and Research Branch, Islamic Azad University, Tehran, Iran.

investigation provided evidence on the role of learner autonomy in awareness-raising, taking charge of learning, cultivating reading abilities, and increasing motivation. Similarly, Swatevacharkul's (2017) study employing extensive reading instruction integrated within a learner autonomy training framework showed that self-directed learning positively affects participants' English reading comprehension ability. Research findings also show that reading strategy training could enhance self-confidence, motivation, and achievement (Kung, 2019).

Unfortunately, accepting responsibility for learning on the part of learners does not happen automatically. Becoming independent and reflecting critically on learning is not an easy process. Teachers should prepare learners with the proper tools to learn autonomously and with the chance to rehearse applying those tools (Wang & Han, 2020). However, as Roe and Perkins (2020) believe, the development of learner autonomy in some contexts, especially in teacher-centered Asian educational settings, seems challenging. Many learners do not possess essential autonomous skills and personalities and are afraid of engaging in such learning, which necessitates the instruction of self-regulating strategies. Thus, the challenge of education should be to develop methods and means to prepare learners for living in society. Promoting the supportive educational systems and programs of personal autonomy is a requirement that develops proper capacities and increases the sense of freedom in language learning. Different models have been proposed to help learners apply different cognitive and metacognitive strategies toward autonomy. The current study researchers employed Benson's and Blin's models to examine their efficacy in promoting learner autonomy and reading achievement.

2. Literature Review

2.1. Benson's (2001) Model

Holec (1981, as cited in Benson, 2009, p. 17) was the first to propose the idea of autonomy or "the ability to take charge of one's learning" in language acquisition. As Benson notes, such a definition ignores abilities, attitudes, or dispositions. Learner autonomy needs to view the learner holistically, consider different language learning dimensions and how they interact. Benson applies technical, psychological, and political terms to explain the main versions of autonomy in language learning. They are related to three codependent levels of control over learning management, cognitive process, and learning content, which overlap with each other and those versions (Figure1).

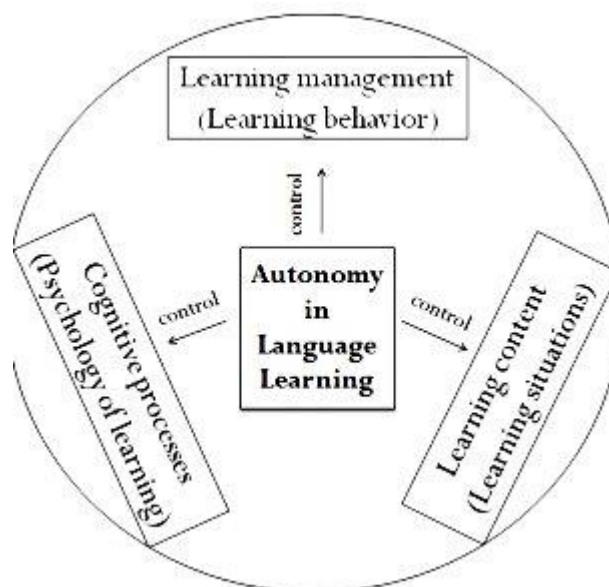


Figure 1: The Capacity to Take Control Over Learning (Benson, 2001, P. 47)

The technical version of autonomy embraces language learning behavior that happens outside the formal educational situation and without the tutor's interference. It is the other-created situations that arm learners with strategies to learn on their own and helps them make decisions about what, when, and how to learn (Ningsih & Yusuf, 2020). Autonomy in the psychological version focuses on inner changes that occur within the person and comprises metacognitive knowledge. Effective autonomous learning needs metacognitive knowledge since learners' comprehension of themselves, the tasks they perform, and the strategies they practice influence their decisions about learning (Marantika, 2021). The political version or control over learning content deals with attaining structural circumstances needed to control both the learning process and the institutional settings within which it arises. Learners need the capability to set learning objectives and a selection of proper related materials, methods, and techniques to control the content of learning. Besides social interaction and negotiations with teachers and peers, it needs independent choices in different learning conditions given by the educational context. It enables students to act in a broader, social environment (Illés, 2019).

Ahmanpanah and Tajeddin (2015) investigated the effect of applying Benson's model in the development of EFL learner autonomy. The study involved 40 male and female EFL learners participating in the Academic Writing Course. The findings suggested a greater autonomy subscale after the instructional intervention. As the study showed, the growth of autonomy resulted in more effective learning. Teaching strategies that empower learners to be more competent lead them to take more responsibility for their learning.

2.2. Blin's (2010) Model

Blin developed a theory-driven learner autonomy model connected to the CALL application from the Activity Theory (AT) outlook. Learners, considering their objectives, are agents who engage in an activity, give specific direction to it, and construct their surroundings in distinctive ways. An activity produced by a given task is unique for each individual since it creates social interactions, settings, motifs, and histories of that specific person. Even time and conditions influence the performance of the same person on the same task. Hence, activity is inseparable from its socio-cultural context. Successful learning depends on a learner's socially and historically constructed motive, goal and values, and engagement with the task as an activity (Lantolf, 2000).

Engeström (1999) outlines the activity system in terms of six elements – object, subject, artifacts, community, rules, and division of labor that operate on the three levels: collective activity, group or individual action, and automatic operation. The subject (student/agent) is a part of a community with a similar object (goal/objective). Artifacts and rules are mediating factors for the relationship between the subject and the object. The division of labor is the mediator of the relationship between the community, and the object, which connects individual actions to the collective activity remains the central issue of AT. An activity system's organization is represented in a triangle format to emphasize the relationships between its vital parts (Figure 2).

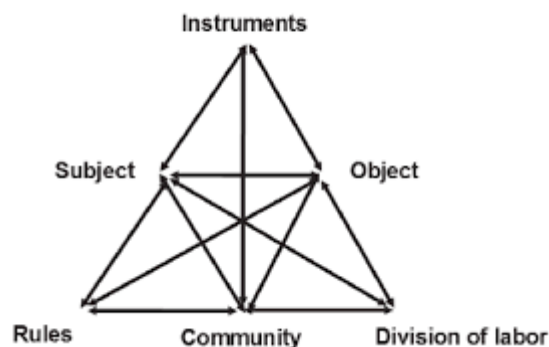


Figure 2: AT System (Engeström, 1999, P.31)

Activity systems interact and grow over time due to the internal and external contradictions that arise within and between them (Engeström, 2008). Contradictions defined as deviation from the expected procedure are considered a base for alteration and improvement. CALL can produce contradictions or tensions within and between the activity system's components as a new artifact that mediates the language learning activity. It can also create contradictions with other adjacent activities, which can transform both the environment and the subjects and may directly influence the object and the activity's outcome. CALL can be an invaluable supplement to the language classroom due to the intricate relationship between education and technology. Research findings indicate the significant role of a technology-rich learning environment on reading achievement (Haymon & Wilson, 2020; Vavasseur, Crochet, & Dempster, 2016) and autonomous learning (Chanthap & Wasanasomsithi, 2019).

Blin's AT CALL-based model addresses needs and difficulties in the educational system and constructs and modifies the learning environment with learners' help. The model encompasses five separate yet interrelated steps: specifying expected outcomes; determining the object and actions that transform an object into the outcomes; specifying the subjects; specifying the mediators of the activity such as tools and artifacts, language, explicit and implicit rules and conventions, and division of labor; identifying possible internal and external contradictions.

Hajimaghsoodi and Maftoon (2018) studied the insight of Iranian EFL students on the efficacy and affordance of AT incorporated with CALL in enhancing writing skills. The findings suggested learners' positive perceptions toward applying CALL within the AT framework, though there was a significant difference in their perceptions regarding AT elements. A study by Menendez (2009) inspected the influence of an AT-based teacher-mediated, CALL-mediated teaching program on the reading skills of a group of Hispanic learners of English in Florida. The findings indicated that the program had a significant impact on participants' reading achievement. Qualitative results also reported that the application of AT in the program's design significantly affected the quality of instruction.

Unfortunately, fostering learner autonomy by systematic language teaching in the EFL environment designed by different models has received little attention. Due to the significance of language learning in today's world, it was worth investigating whether the application of Benson's and Blin's instructional models of learner autonomy could affect EFL learners' reading achievement and strategy use. The researchers formulated the following research questions to address the issue:

Research Question One: Do instructional models of learner autonomy (Blin's and Benson's) versus no model condition have different impacts on Iranian EFL learners' reading achievement?

Research Question Two: Do instructional models of learner autonomy (Blin's and Benson's) versus no model condition have different impacts on Iranian EFL learners' use of strategies?

Research Question Three: How do the participants evaluate the effect of Blin's and Benson's autonomy models on their reading achievement?

3. Method

3.1. Research Design

The researchers designed an explanatory mixed methods research to fulfill the purposes of the present study. The design was the most suitable one for two reasons. First, it offered an in-depth examination to unravel the issue at hand. Second, it provided qualitative and quantitative evidence and support for two models of learner autonomy with unique features proposed as theoretical frameworks for classroom instruction that could be associated with the theory and existing literature.

3.2. Participants

The participants were 75 Iranian female learners majoring in TEFL from three intact classes at the BA level in Farhangian University, Mashhad, an all-female university. They were selected through convenience sampling. To examine the homogeneity of the participants regarding general English

proficiency, they took the reading and writing sections of a Preliminary English Test (PET) at the onset of the study. After administering the General Proficiency Test (GPT), those students whose scores fell between one standard deviation above and below the mean were selected. The participants were at the intermediate level of language proficiency. They were randomly assigned to the study groups and practiced Benson's Instructional Model (BEN-M, n= 26), Blin's Instructional Model (BLN-M, n=24), and the Conventional Teaching Method (CTM, n=25). The instructor and learning contents were the same to control material and teacher variables.

3.3. Materials and Instruments

3.3.1. General Proficiency Test (GPT)

The reading and writing sections of a Preliminary English Test (2015) were administered at the onset, the results of which indicated the participants' homogeneity in general English proficiency. Although the focus of the study was on reading skills, the test included both reading and writing sections to provide a more robust picture of the participants' language proficiency level. In the next step, the students' performances on the reading sections of GPT were scored separately to ensure that the study groups did not differ in the study's dependent variable before the treatment. The reading section had five parts and 32 questions. Cronbach's alpha was 0.79, indicating acceptable internal consistency. It is worth mentioning that the researchers did not administer two separate tests (for testing homogeneity and reading ability) to control the interaction effect of pretesting, which is a threat to the external validity (Best & Kahn, 2006).

3.3.2. Reading Strategy Questionnaire (RSQ)

Two self-report Reading Strategy Questionnaires, including the Comprehension Strategy Questionnaire (CSQ), advanced by Taraban, Rynearson, and Kerr (2000), consisting of 35 self-report statements about comprehension strategies, and the Metacognitive Reading Strategies Questionnaire (MRSQ) developed by Taraban, Kerr, and Rynearson (2004), entailing 22 self-report statements about metacognitive strategies were combined and used without any changes. Since CSQ only measures cognitive and comprehension strategies and MRSQ is about metacognitive strategies they were combined to include both categories of strategies. Both questionnaires follow a 5-point Likert scale format ranging from 1 to 5 (1= *Never Use*, 2= *Rarely Use*, 3= *Sometimes Use*, 4= *Often Use*, and 5= *Always Use*). Respondents have to point out how often they apply each item when they read English texts. Since these two questionnaires have 17 statements in common, the researchers combined them to include 40 self-report statements about cognitive and metacognitive reading strategies (Appendix A). Cronbach's alpha showed the questionnaire's high internal consistency ($\alpha=0.92$). RSQ was administered before and after the treatment to examine the participants' strategy use.

3.3.3. Semi-structured Interview

Eight randomly selected learners from each experimental group participated in the interviews after the treatment. Semi-structured interviews were conducted through phone calls and in English for about 15-20 minutes and were tape-recorded. Learners could answer the interview questions in Persian if they wanted. The interview questions asked about different aspects of the instructions the participants received (Appendix B). The researchers transcribed and coded the interviews before analyzing their content.

3.3.4. Reading Comprehension (RC) Post-Test

The researchers used the reading part of a genuine TOEFL Internet-based Test (iBT) administered by ETS (2015) to examine the participants' achievement levels. The reading section consists of three passages, each approximately 700 words in length, followed by 14 questions. Cronbach's alpha demonstrated acceptable internal consistency ($\alpha = 0.77$). TOEFL is suitable for intermediate and upper-intermediate English proficiency levels, comparable to the participants' level. Even though the test could be challenging for them, to rationalize intervention, the post-test content should be beyond the learners' zone of actual development. It is worth mentioning that the pretest and post-test were not

the same. The pretest was constructed for intermediate-level learners, whereas the post-test was designed for advanced-level test-takers. By selecting a higher-level test, the researchers aimed to measure participants' reading improvement after treatment. Sixty minutes were allocated to the test.

3.3.5. Materials

Fourteen authentic reading passages based on their content and readability index were selected from different web pages, such as:

<https://www.nationalgeographic.com>,

<https://www.thebalancecareers.com>,

<https://ancientcivilizationsworld.com>,

<https://www.calmclinic.com>

<https://www.ncbi.nlm.nih.gov>

<http://blog.english-heritage.org.uk/>

<https://www.britannica.com>

The researchers selected a hundred topics from the websites and piloted them with learners comparable to the participants to ensure that they were in harmony with learners' interests. Their publication dates were 2017 to 2020; their length was between 900 and 1300 words with the readability indices of 11 to 13 obtained through Fry's formula available at <http://www.readabilityformulas.com/>

3.4. Procedure

The treatment took 32-weekly sessions twice a week, each last for 90 minutes. The first and the last sessions were allocated to the pre-and post-tests. The remaining sessions were dedicated to reading instruction. Due to the COVID-19 Pandemic, learners used the Adobe Connect application to participate in their classes virtually.

3.4.1. Benson's Instructional Model (BEN-M) Group

In the first four sessions, a range of reading strategies including 'Super Six' comprehension strategies extracted from the New South Wales Department of Education (2010): making connections, predicting, questioning, clarifying, visualizing, and summarizing, and also three categories of metacognitive strategies: planning, monitoring, and regulating (Schraw, 1998) were taught explicitly. First, the instructor described each strategy and clarified the purpose. Subsequently, she modeled how to apply the strategy by reading the first paragraph of the passage aloud and using the think-aloud technique to share the notions with learners. Afterward, learners employed the strategies to the new texts.

The typical class procedure in the subsequent sessions included the following phases. After sending the day's text to the learners, the participants focused on the title, headings, subheadings, and photos to activate prior knowledge, predict the content, and discuss the topic. They previewed the reading passage to guess the text's rhetorical organization and main idea. Afterward, the text was read paragraph by paragraph. Learners were motivated to underline, highlight, annotate the text's main points, and write comments or questions in the margins to be re-read and revised during the reading process. They generated and answered some predictive and Wh-questions before and during a reading.

Before reading another part of the text, students predicted what would happen in the next section by using contextual clues. They made inferences about its purpose and drew conclusions. They handled unfamiliar words during reading, using some repair strategies. They thought about the text organization, used text structure to support comprehension, and created visual representations such as graphic organizers and outlining techniques. Finally, they summarized what they had read.

Learners monitored their comprehension by questioning, thinking about, and reflecting on the opinions and facts presented in the reading passage. They kept a learning log with records once a week during the course to reflect on their learning. The instructor monitored them by asking questions or providing guidance. She tried to reduce the level of her control and support as much as possible. A homework choice board was designed, including 14 different activities allowing for learners' choice. The students also selected additional texts of their own choice for extensive reading as a course project and delivered verbal reports on them.

3.4.2. Blin's Instructional Model (BLN-M) Group

The researchers designed an online course on Edmodo based on AT's six elements suitable for EFL reading classes. Edmodo platform is an online environment available at <https://new.edmodo.com/> to construct e-courses. It enabled the instructor to post announcements and assignments. Students also could share thoughts, collaborate with classmates, and benefit from its helpful guidelines and tools. The instructor could check and monitor learners' engagement. The first session was allocated to a training session, during which the Edmodo website and its various sections were introduced to learners. The teacher familiarized the participants with the class procedure and course requirements. Predetermined strategies were taught explicitly, similar to the BEN-M group. To define the division of labor, the teacher benefited from reciprocal teaching, in which strategy-based instruction happens in small-group sets. Groups were formed, and members' reading roles, including predictor, clarifier, questioner, and summarizer, were determined. Members also had secondary roles for doing other remaining strategies.

Each session, the instructor provided a text via the website, asking the participants to express what they already knew about the topic. Then, the learners read aloud the text in their groups and discussed the issue. They distributed reading strategies among themselves to accomplish their cooperative labors in class, and each member was responsible for leading a part of the discussion. They had to predict the passage's content, the author's purpose for writing the text and discuss perceptions regarding the text while the predictors recorded their efforts. The clarifiers made a list of new words and an inventory of the strategies to employ for comprehending the meanings, for example, restoring meaning by using context and re-reading. The questioners generated questions about the text before and while reading and tried to look for evidence to answer them. The summarizers summarized the text, ensuring the inclusion of the main points. Finally, during the post-reading discussion, they evaluated their understanding and filled in a learning log. The learners shared their findings in the groups, received feedback, and reflected on peers' and their own work.

The instructor provided the appropriate amount of scaffolding and got involved when necessary to offer a correction or guidance to release the responsibility to learners gradually. The learners uploaded their assignments on the Edmodo website, checked them with all properties available on the software, and sent it to the teacher for evaluation. The teacher revised them and catered written commentaries. Each session, the learners' engagement, and work quality were monitored and evaluated on the website. During the sessions, the group members were connected through WhatsApp's voice or video call.

3.4.3. Conventional Teaching Method (CTM) Group

The CTM group followed a traditional teacher-centered reading approach in which the instructor directed the lessons, initiated questions, and expected the learners to answer. This approach concentrated on teaching the meaning of the words, analyzing the texts' grammatical structures, explaining structural points if needed, translating the English text, and answering the predetermined questions. The researchers designed a set of instructional activities, including pre, while, and post activities for each reading passage, to assist learners in reading comprehension. Similar to the experimental groups, a range of reading strategies formed the basis for class activities. For each reading passage, a reading strategy was determined. Every session, the teacher read the written explanation of the strategy and explained it briefly, and then learners practiced it while reading.

The participants were engaged in the pre-reading activities. Some read aloud the passage of the day, and all searched for the meaning of unknown words. The instructor elucidated the structural complications and clarified the expressions. Finally, learners responded to the predetermined comprehension and grammar drills associated with the passage. Each session, the teacher assigned learners some homework based on in-class activities.

3.5. Data Analysis

A series of one-way Analyses of Variance (ANOVA) tests was employed before and after the treatment to examine the differences between the groups' means and determine which intervention program was more effective in enhancing the reading achievement and application of strategies. Post-hoc Scheffe test was utilized to locate where the differences laid. For qualitative data analysis, semi-structured interviews were transcribed, coded, and analyzed to extract the main themes.

4. Results and Discussion

4.1. Results

4.1.1 Quantitative Results

Table 1 summarizes the one-sample Kolmogorov-Smirnov test results for the normality of the GPT, RCT, and pre-and-post RSQ scores. As shown, all quantitative variables have a normal distribution ($p > .05$), indicating the legitimacy of running parametric tests.

Table 1: One-Sample Kolmogorov-Smirnov Test

Variables	BLN-M	BEN-M	CTM
GPT Reading	p=0.2	p=0.2	p=0.2
GPT Writing	p=0.2	p=0.07	p=0.06
GPT Total	p=0.2	p=0.2	p=0.2
RC Test	p=0.14	p=0.2	p=0.2
Pre-RSQ	p=0.06	p=0.2	p=0.05
Post-RSQ	p=0.2	p=0.2	p=0.1

Table 2 shows the descriptive statistics of GPT total scores in BEN-M group (M= 41.84, SD=11.74), BLN-M group (M=46.08, SD=10.15), and CTM group (M= 40.96, SD=10.76).

Table 2: GPT Total Descriptive Statistics

Group	M	SD	Min	Max
BLN-M	46.08	10.15	20	70
BEN-M	41.84	11.74	13	64
CTM	40.96	10.76	13	68

ANOVA was used to determine whether there was any significant difference between the three groups' mean scores on the GPT. Leven's test showed that the assumption of the homogeneity of variances was assumed ($F=.160$, $p=.852$). No significant differences between the three groups [$F(2, 72) = 1.53$, $p=.22$] were observed (Table 3).

Table 3: ANOVA, GPT Scores

Source	SS.	df	MS.	F	p
Between Groups	366.17	2	183.1	1.53	0.22
Within Groups	8598.18	72	119.42		
Total	8964.35	74			

Table 4 shows the descriptive statistics of reading scores in BEN-M group (M=20.34, SD=6.06), BLN-M group (M=21.62, SD=4.95), and CTM group (M=20.16, SD=4.66). A one-way ANOVA determined any significant differences between BEN-M group (M=20.34, SD=6.06), BLN-M group (M=21.62, SD=4.95), and CTM group (M=20.16, SD=4.66). Mean scores on the GPT reading. Leven's test ($F=.944$, $p=.394$) indicated that the variances were homogeneous. As Table 4 shows, no significant differences were observed [$F(2, 72) = 0.55$, $p=.57$].

Table 4: ANOVA, GPT Reading Scores

Source	SS.	df	MS.	F	p
Between Groups	31.07	2	15.53	0.55	0.57
Within Groups	2008.87	72	27.9		
Total	2039.95	74			

Table 5 shows the descriptive statistics of pre-RSQ scores in BEN-M group (M=110.80, SD=20.17), BLN-M group (M=98.87, SD=17.29), and CTM group (M=106.56, SD=17.48).

Table 5: Descriptive Statistics, Pre-RSQ Scores

Group	M	SD	Min	Max
BLN-M	98.87	17.29	72	142
BEN-M	110.80	20.17	85	160
CTM	106.56	17.48	83	155

As shown in Table 6, the one-way ANOVA determined no significant differences between the three groups' mean scores on the pre-RSQ [$F(2, 72)=2.677, p=.07$].

Table 6: ANOVA, Pre-RSQ Scores

Source	SS	df	MS	F	p
Between Groups	1813.52	2	906.76	2.677	.07
Within Groups	24386.82	72	338.71		
Total	26200.35	74			

After the treatment, the researchers compared the groups' mean scores on the post-test via a one-way ANOVA. Table 7 shows the descriptive statistics of the study groups: BEN-M group (M=32.84, SD=6.98), BLN-M group (M=34.41, SD=5.22), and CTM group (M=28.56, SD=4.87).

Table 7: RCT Descriptive Statistics

Group	M	SD	Min	Max
BLN-M	34.41	5.22	20	44
BEN-M	32.84	6.98	17	44
CTM	28.56	4.87	18	42.66

Leven's test ($F=2.35, p=.1$) showed the legitimacy of running ANOVA. The results (Table 8) revealed a statistically significant difference between the groups on the post-test [$F(2, 72)=6.74, p=.002$].

Table 8: ANOVA, RCT Post-test Scores

Source	SS	DF	MS	F	Sig.
Between Groups	452.73	2	226.37	6.74	.002
Within Groups	2418.07	72	33.58		
Total	2870.80	74			

The post hoc Scheffe test indicated that the experimental groups significantly outperformed the control group (Table 9). BEN-M group (M=32.84) performed significantly better ($p=.03$) on the RC test after receiving instruction than CTM group (M=28.56). BLN-M group (M=34.41) also performed significantly better ($p=.003$) than CTM group (M=28.56). However, the comparisons between BEN-M and BLN-M groups were not significant ($p=.63$). The results suggest that the application of learner autonomy models does not have different impacts on the reading achievement of EFL learners through employing models is beneficial in promoting reading skills.

Table 9: Scheffe Multiple Comparisons

(I) group	(J) group	Mean Difference (I-J)	SE	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BLN-M	BN-M	1.56	1.64	.63	-2.53	5.66
	CT-M	5.84*	1.65	.003	1.70	9.98
BEN-M	BL-M	-1.56	1.64	.63	-5.66	2.53
	CT-M	4.27*	1.62	.03	.22	8.33
CTM	BL-M	-5.84*	1.66	.003	-9.98	-1.70
	BN-M	-4.27*	1.62	.03	-8.33	-.22

0.05 level of significance

The data for answering the second question came from comparing the groups' post-RSQ scores. Table 10 shows the descriptive statistics: BEN-M group (M=168.04, SD=20.94) BLN-M group (M=156.29, SD=23.21), and CTM group (M=135.84, SD=23.99).

Table 10: Descriptive Statistics, Post-RSQ Scores

Group	M	SD	p*
BL-M	156.29	23.21	
BN-M	168.04	20.94	<0.001
CT-M	135.84	23.99	

A one-way ANOVA compared the effect of instructional programs on groups' strategy use. The homogeneity of the variances ($F=.138$, $p=.871$) was examined, and the results (Table 11) indicated a significant effect of the two instructional models on strategy use [$F(2, 72) = 13$, $p < .001$].

Table 11: ANOVA, Post-RSQ Scores

Source	SS.	df	MS.	F	Sig.
Between Groups	13479.31	2	6739.653	13.050	.000
Within Groups	37183.28	72	516.434		
Total	50662.587	74			

Scheffe test was conducted for multiple comparisons to determine where the differences laid (Table 12). BEN-M (M=168.04) had a significant difference ($p < .001$) with CTM (M=135.84). BLN-M (M=156.29) also had a significant difference ($p=.01$) with CTM (M=135.84). However, the comparison between BEN-M and BLN-M groups was not significant ($p=.196$). The results suggest that the application of both models affects strategy use.

Table 12: Scheffe Multiple Comparisons

(I) group	(J) group	Mean Difference (I-J)	SE	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BLN-M	BEN-M	-11.74	6.43	.196	-27.82	4.33
	CTM	20.47*	6.49	.010	4.21	36.68
BEN-M	BLN-M	11.74	6.43	.196	-4.33	27.82
	CTM	32.19*	6.36	.000	16.28	48.10
CTM	BLN-M	-20.47*	6.49	.010	-36.68	-4.21
	BEN-M	-32.19*	6.36	.000	-48.10	-16.24

0.05 level of significance

4.1.2. Qualitative Results

The researchers collected the participants' evaluation of the efficacy of two instructional models via semi-structured interviews to answer the second research question.

4.1.2.1. Blin Model

Six dimensions categorize the main themes obtained from BLN-M group: (1) novelty and motivation; (2) comprehensiveness; (3) boosting autonomy; (4) improving performance; (5) improving teamwork skills; and (6) engaging learners.

Novelty and Motivation: All interviewees agreed on the originality of the procedure and acknowledged it as a motivation for learning:

"It was a completely different, new, and up-to-date way of learning and very useful. It motivated everyone to work." (S2)

"It was a new experience. The classes were active with a friendly atmosphere, very motivating and useful." (S5).

Comprehensiveness: All respondents mentioned comprehensiveness as another merit of the method:

"It was a complete package. The software allowed access all kinds of resources and educational facilities." (S1)

"The model was all-inclusive because we had all the tools we needed in Edmodo." (S4)

Boosting Autonomy: Most of the respondents reported that the model helped them improve their autonomy as the result of strategy training, collaborative learning, and the facilities prepared on the instructional website:

"Necessary strategies, continuous practice, and the facilities I had in Edmodo helped me act autonomously. Teamwork made me responsible." (S4)

"Edmodo and peers helped me do the exercises without the direct intervention of the teacher. Strategies also made me self-sufficient." (S6)

Improving Performance: Most students were satisfied with their improvement after the instruction:

"I feel the difference in my reading. It even improved my general English and writing. I like reading now." (S5)

"I feel I've made a lot of progress, and the class has been useful to me. During this semester, I realized how much I love reading." (S4)

Improving Teamwork Skills: Most participants noted the effectiveness of group work and cooperation in the class procedure:

"I developed a high sense of responsibility and teamwork skills after the course." (S3)

"My teamwork skills improved. I learned to take group responsibility and respect others' opinions." (S4)

Engaging Learners: The respondents emphasized engagement and self-sustained improvement. They appreciated the stress-free atmosphere of the class and the effective use of the website:

"The instruction was engaging and activated me to do the required exercises correctly." (S2)

"The teaching model encouraged me to be active and engaged." (S4)

4.1.2.2 Benson Model

The main themes obtained in BEN-M group can be categorized into six dimensions: (1) novelty and motivation; (2) becoming a better reader; (3) boosting autonomy; (4) improving performance; (5) having a free choice; (6) engaging learners.

Novelty and Motivation: Almost all participants expressed positive perceptions toward the program and affirmed it as an innovative method:

"I tried a new specialized method that was interesting and different from most of the classes I had before." (S14)

"It was a new, creative, and pleasurable method that boosted everyone's motivation." (S15)

Becoming a Better Reader: In many instances, the respondents expressed that extensive reading helped them become better readers. They were more willing to read:

"It made me very interested in reading.... to work on a wide range of texts and genres without stress and become more confident and a better reader." (S12)

"Extensive reading helped me realize that reading is interesting. It reduced my anxiety. It increased my self-esteem and made me a better reader." (S14)

Boosting Autonomy: For most respondents, Benson instructional model helped improve autonomy resulting from strategy training and extensive reading:

“The strategies I learned, extensive reading and assignments improved reading skills and self-confidence. I have learned to read on my own.” (S12)

“The course helped become self-sufficient. Strategy training and purposeful extracurricular activities were fantastic.” (S9)

Improving Performance: All interviewees acknowledged progress at the end of the course in reading and other language skills. They mostly were satisfied with their improvement:

“I gained a broad knowledge of English, and familiarity with the culture. The course strengthened my reading and writing.” (S13)

“The method was beneficial for me. My reading and writing abilities changed drastically at the end of the semester.” (S10)

Having a Free Choice: The respondents maintained that content based on learners’ preferences resulted in a learner-centered environment and enhanced reading motivation:

“The selection of content according to students’ interests was a brilliant point that made in-class and out-class activities attractive.” (S10)

“The classes were completely student-centered. I was free to choose and act freely. It was fantastic.” (S13)

Engaging Learners: The interviewees affirmed their increased engagement and self-sustained improvement. They found the class environment stress-free:

“I was engaged in the class procedure, as it had a strict schedule. I had to do some practical work in a limited deadline.” (S16)

“Because of the strong supervision, the precise class schedule, and the timed exercises, students participated voluntarily and did the exercises with motivation.” (S9)

4.2. Discussion

The results indicated the efficacy of using Benson’s and Blin’s models of learner autonomy on the reading achievement of Iranian intermediate EFL learners. However, the findings revealed no significant differences between the two models, while both groups outperformed the control group. As verified by the interviewees’ responses, the reason for the finding could be attributed to the novelty of both models and their positive effects in increasing motivation, autonomy, and confidence for learning. As Oates (2019) argues, learning success depends on the degree of motivation, reflection, and autonomy. The use of the models encouraged participants to get engaged actively in the learning process, thus increased class efficacy and students’ achievement. Likewise, they offered ample learning opportunities and directed learners’ attention to the potentials of the learning environment. According to Saunders and Wong (2020), active involvement in learning and the freedom to experiment and reflect on potential selves are practical elements in autonomous learning environments that result in learning success.

In addition, using the models was particularly useful in promoting learners’ reading skills. This conclusion could be due to the individualistic nature of reading. It could be assumed that reading encourages learners to rely on their capabilities for performing the task and thus, facilitates autonomous learning. Employing the models promotes learners’ cognitive processes necessary for reading comprehension. The classroom procedure provided by the models under scrutiny help individuals integrate bottom-up and top-down skills and thus fosters reading skills. It seems that the several factors the autonomy models carry to the learning environment (e.g., cooperation, peer learning, classroom interaction, motivation) intermingle with proficiency factors (e.g., grammar, vocabulary, L2 decoding) and bring about success in reading comprehension. Besides, the statistical findings align with the interview results indicate that classroom procedures of the two models

cultivate a positive feeling of autonomy achieved in meaning production and help learners overcome their passivity. The result of this condition is success in reading skills.

Consistent with previous research (e.g., Tavallali & Marzban, 2015; Jianfeng, Raj, & TjinAi, 2018), this study suggests that an autonomy-supportive learning environment leads to more incredible learning achievement. Thus, in every language-teaching program, instruction must make room for autonomous learning. Learner autonomy should be an essential part of the learning organization and at the center of language education theory and practice. The current study can deepen understanding of the ways autonomy can be supported within traditional teaching contexts since it practically portrayed how autonomy could be implemented in classroom settings. The results highlighted the necessity of a steady shift in the reorientation of attention from instructors to learners. For Such alteration, educators must be prepared to leave their old-fashioned methods and step into the unknown. The students, in contrast, should be more active, creative, and committed to learning.

The present research also showed the importance of using e-learning platforms as a beneficial learning material in higher education. Interactive e-learning tools have the potential to motivate learners and engage them in undertaking solitary and collective learning tasks. Using such platforms creates motivation in learners, promotes learning, and fosters online activities. Concerning Blin's model, the findings are in line with Hajimaghsodi (2018), who investigated the efficacy of AT incorporated with CALL in the enhancement of writing skills. The present study also finds support from Liu, Sun, and Tu (2019), who explored the effect of CALL on learner autonomy and achievement. Remarkably, not much is found concerning the impact of AT on reading comprehension. One related study by Saghaieh Bolghari (2017) showed that cooperative AT-based reading comprehension effectively promoted reading achievement.

Regarding Benson's model, no empirical research has previously focused on its efficacy on the reading achievement of EFL learners. However, the model has been shown to cultivate autonomy and writing performance (Rahmanpanah & Tajeddin, 2015). Likewise, the current research, compatible with previous studies (e.g., Mardiana & Hidayat, 2019; Rashtchi & Pourmand, 2014; Wang & Ho, 2019), indicates the positive effect of extensive reading on reading comprehension by providing an input-rich environment. Similarly, as the interview results indicated, extensive reading could boost learners' self-confidence, reduce anxiety, and enhance motivation. Allowing choice in tasks is another factor that can lead to the growth of autonomy. Participants expressed that having the freedom to select content in a learner-centered environment lets them decide based on their needs, substantiating previous findings (e.g., Aharony & Bar-Ilan, 2016; Noviyanti, 2018). Teachers have to prepare a greater diversity of reading materials that match learners' preferences and meets their academic needs, leading to higher motivation. In-class activities can also be connected with the joyful planned homework.

The positive answer to the second research question indicated that the systematic, planned instruction of strategies in the models' framework positively affected learners' strategy use. Research studies also propose that teaching reading strategies lead to improved performance in reading and a greater degree of strategy use (e.g., Canan, 2021; Course, 2017). Interviewees' responses support the quantitative findings in this regard. The participants stated the instructor's modeling of strategies, immediate feedback and support, and persistent practice of strategies as the reasons for their success. Such an outcome highlights the necessity for instructors and syllabus designers to watch autonomous learning activities in EFL classrooms closely. This study suggests that EFL learners are not wholly conscious of the association between strategy knowledge, application, and autonomous action. Therefore, raising students' consciousness on strategy use is beneficial for developing language skills (Rashtchi & Khani, 2010). The researchers again could not find any empirical research investigating the effect of the autonomy models on strategies. Nevertheless, the findings align with Ceylan (2015), indicating that the more strategies learners use, the greater their autonomy by assuming the responsibility of their learning process.

The answer to the third research question, collected through interviews, showed that the participants had approximately a positive perception toward the efficacy of models on their reading

performance, thus validating the use of the models for L2 reading. Interviewees in both groups similarly pointed to the novelty and motivation, promoting confidence and autonomy, improving performance, increasing engagement and self-sustainment as the merits of the models. However, BLN-M participants mentioned that the model's comprehensiveness and ability in improving teamwork skills as the most positive points. However, BEN-M learners stated extensive reading and free choice as the specific merits of the model. The results parallel with previous studies verify participants' positive perceptions of autonomous learning in a reading program (e.g., Almusharraf, 2021; Marsevani, 2021). In conclusion, although this research was limited in scope, it showed the efficacy of using Benson's and Blin's models of learner autonomy in reading courses.

5. Conclusion and Implications

The findings confirmed the use of models in reading courses at the tertiary level. The models could also promote strategy use by learners. The BLN-M group perceived the instruction, collaborative learning, and e-learning platform as effective, motivating, and innovative. The positive perception was due to the newness of this AT-based CALL model, the combination of reading instruction and technology as a learning aid, and putting social learning as the basis for the class activity that encouraged collaboration and communication among the learners. The findings suggest that Blin's model joint with multi-strategy instruction gives a practical approach to teaching reading in Iranian EFL classrooms. Investigating Benson's model also provided precocious evidence of the significance of controlling learning management, learning content, and cognitive processes to raise reading achievement among EFL learners. The results showed that autonomy-supportive in-class and out-of-class activities facilitate learner achievement in reading.

The present study has implications for language pedagogy and materials development. The primary implication of researching learner autonomy rests on the reality that language educators should focus on autonomous learning. Teachers should be prepared to apply learner autonomy models. Learner autonomy implies learners' choice in selecting learning strategies and gives precedence to learning preferences, leading to resolving learning complications, setting personal goals, and self-assessing learning outcomes. Nevertheless, autonomy in the Iranian EFL learning context is still at the beginning of the way, and numerous experiments should verify its effectiveness. Another theoretical implication of this study leans back on the influence of strategy instruction on reading success. The investigation provided empirical evidence for how training strategies under the autonomous models' framework could be assimilated to increase students' reading comprehension. This paper also verified the importance of using e-learning platforms as a beneficial learning material in higher education. Interactive e-learning tools have the potential to motivate learners and engage them in undertaking solitary and collective learning tasks.

The current study does not complete highlighting the power of employing models on learners' reading skills. More qualitative investigations are needed to detect students' modifications in drives and goals over time while contributing to autonomous learning programs. It is also worth investigating whether the learner autonomy models affect learners' critical reading and thinking capacity as they are the principal constituents of formal learning and individual improvement, which can be practiced through reading strategies. Supplementary research is necessary to explore the impact of individual differences on autonomy and detect which personal traits or learning style preferences benefit more from the models in improving reading achievements. Regarding the valuable visions into the benefits of learner autonomy models for EFL reading comprehension, further studies are necessary to reveal whether in-person or online classes can be more beneficial for learner autonomy. Also, the degree and quality of teachers' scaffolding for learners' autonomy could be the focus of further studies. Cultural differences can also be a determining factor in achieving autonomy as the subject of future investigations.

The study's primary limitation that affected its internal validity and generalizability was the Covid-19 outbreak, which forced the researchers to change the data collection and classroom procedures. The Pandemic could have also caused some intervening variables out of the researchers'

control (such as participants' psychological disorders due to the worldwide pressures)to impact the results. Further investigations and replications in a free-corona-virus world can verify the findings.

References

- Aharony, N., & Bar-Ilan, J. (2016). Students' academic reading preferences: An exploratory study. *Journal of Librarianship and Information Science*, 50 (1), 3-13. <https://journals.sagepub.com/toc/lisb/50/1>
- Almusharraf, N. (2020). Teachers' perspectives on promoting learner autonomy for vocabulary development: A case study. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1823154>
- Almusharraf, N. (2021). Perceptions and application of learner autonomy for vocabulary development in Saudi EFL classrooms. *International Journal of Education and Practice*, 9(1), 13-36. <https://doi.org/10.18488/journal.61.2021.91.13.36>
- Benson, P. (2001). *Teaching and researching autonomy in language learning*. Longman.
- Benson, P. (2009). Making sense of autonomy in language learning. In R. Pamberton, S. Toogood, & A. Barfield (Eds.), *Maintaining control: Autonomy and language learning* (pp. 13-26). Hong Kong University Press.
- Best, J. W., & Kahn, J. V. (2006). *Research in education*. Pearson.
- Blin, F. (2010). Designing cyber tasks for learner autonomy: Towards an activity theoretical pedagogical model. In M. J. Luzón, M. N. Ruiz-Madrid, & M. L. Villanueva (Eds.), *Digital genres, new literacies and autonomy in language learning* (pp. 175–196). Cambridge Scholars.
- Borg, S., & Alshumaimeri, Y. (2019). Language learner autonomy in a tertiary context: Teachers' beliefs and practices. *Language Teaching Research*, 23(1), 9–38. <https://doi.org/10.1177/1362168817725759>
- Canan, A. (2021). The effect of instruction in reading strategies on the reading achievement of learners of French. *Eurasian Journal of Educational Research*, 91, 321-337. <https://doi.org/10.14689/ejer.2021.91.15>
- Ceylan, N. O. (2015). Fostering learner autonomy. *Procedia - Social and Behavioral Sciences*, 199, 85-93. <https://doi.org/10.1016/j.sbspro.2015.07.491>
- Chanthap, N., & Wasanasomsithi, P. (2019). The effect of integration of a blended learning and extensive reading instructional model on Thai EFL undergraduate students' learner autonomy. *LEARN Journal: Language Education and Acquisition Research Network Journal*, 12(2), 76-96. <https://so04.tci-thaijo.org/index.php/LEARN/issue/view/12999>
- Course, S. (2017). Reading strategies and reading diaries for autonomous learning in a Turkish context. *The Reading Matrix: An International Online Journal*, 17(1), 124-144. <https://readingmatrix.com/archive/17/1>
- Engeström, Y. (1999). Activity theory and individual and social transformation. In Y. Engeström, R. Miettinen, & R. L. Punamäki (Eds.), *Perspectives on activity theory* (pp. 19-38). Cambridge University Press.
- Engeström, Y. (2008). *From teams to knots: Activity-theoretical studies of collaboration and learning at work*. Cambridge University Press.
- Everhard, C.J., & Murphy, L. (2015). *Assessment and autonomy in language learning* (Eds.). Basingstoke: Palgrave Macmillan.
- Hajimaghsoodi, A. (2018). *The effect of activity theory-based computer assisted language learning on the writing achievement of Iranian EFL learners*. (Unpublished doctoral dissertation), Islamic Azad University, Science and Research Branch, Tehran, Iran.

- Hajimaghsoodi, A., & Maftoon, P. (2018). Iranian EFL learners' perception of the efficacy and affordance of activity theory-based computer assisted language learning in writing achievement. *Journal of Teaching Language Skills (JTLS)*, 36(4), 33-66. <http://dx.doi.org/10.22099/jtls.2018.24838.2222>
- Haymon, C., & Wilson, A. (2020). Differentiated reading instruction with technology for advanced middle school students' reading achievement. *Journal of Educational Research and Practice*, 10, 70–89. <https://doi.org/10.5590/JERAP.2020.10.1.05>
- Hossain, M. M., & Mustapha, S. M. B. (2020). The relationship between learner autonomy readiness and English language performance of undergraduates at public universities in Bangladesh. *Journal of Education and Social Sciences*, 16(1), 82-92. <https://www.jesoc.com/issue/volume-16-october-2020-issue-1/>
- Hu, P., & Zhang, J. (2017). A pathway to learner autonomy: A self-determination theory perspective. *Asia Pacific Educ. Rev.*, 18, 147–157. <https://doi.org/10.1007/s12564-016-9468-z>
- Illés, E. (2019). A proposed theoretical model of adult language learner autonomy. *Journal of Adult Learning, Knowledge and Innovation*, 3(2), 41–48. <https://doi.org/10.1556/2059.03.2019.05>
- Jianfeng, C., Raj, G. S., & TjinAi, J. T. (2018). The relationship among learning strategy, autonomy and language proficiency of Chinese EFL learners. *International Journal of Foreign Language Teaching & Research*, 6(23), 23-34. http://jfl.iaun.ac.ir/issue_1122754_1124219.html
- Kung, F. W. (2019) Teaching second language reading comprehension: The effects of classroom materials and reading strategy use. *Innovation in Language Learning and Teaching*, 13(1), 93-104. <https://doi.org/10.1080/17501229.2017.1364252>
- Lantolf, J. P. (2000). Introducing socio-cultural theory. In J. P. Lantolf (Eds.), *Socio-cultural theory and second language learning* (pp. 1-26). Oxford University Press.
- Liu, X., Sun, L., & Tu, J. (2019). Effects of Computer Assisted Language Learning on Learner Autonomy. *IEEE International Conference on Computation, Communication and Engineering (ICCCE)*, 124-126. <https://doi.org/10.1109/ICCCE48422.2019.9010804>.
- Marantika, J. E. R. (2021). Metacognitive ability and autonomous learning strategy in improving learning outcomes. *Journal of Education and Learning (EduLearn)*, 15(1), 88-96. <https://doi.org/10.11591/edulearn.v15i1.17392>
- Mardiana, E., Hidayat, N. (2019). The effect of extensive reading on students' reading achievement of senior high school. *Kontribusia*, 2(2), 16-20. <http://dx.doi.org/10.30587/kontribusia.v2i2.1004>.
- Marsevani, M. (2021). Learners' perception and practices on autonomous language learning in EFL settings. *International Journal of Language and Literature*, 5(1), 54-65. <http://dx.doi.org/10.23887/ijll.v5i1.32598>
- Melvina, M. & Julia, J. (2021). Learner autonomy and English proficiency of Indonesian undergraduate students. *Journal of Educational Sciences*, 16(2), 803-818. <https://doi.org/10.18844/cjes.v16i2.5677>
- Menendez, R. M. (2009). *Cultural-historical activity perspectives on the effects of participation in teacher-mediated, computer-mediated reading instruction* (Unpublished doctoral dissertation), University of Miami, Florida.
- Muliyah, P., Aminatun, D., Nasution, S. S., Hastomo, T., Sitepu, S. S. W., & Tryana, T. (2020). Exploring learners' autonomy in online language-learning in Stai Sufyan Tsauri Majenang. *Getsempera English Education Journal*, 7(2), 382-394. <https://doi.org/10.46244/geej.v7i2.1164>
- New South Wales Department for Education and Training (2010). *Teaching comprehension strategies*. New South Wales, NFALS. Retrieved from

<http://www.curriculumsupport.education.nsw.gov.au/literacy/assets/pdf/packages/combook.pdf>

- Ningsih, S., & Yusuf, F., n. (2020). Analysis of teachers' voices of learner autonomy in EFL online learning context. *Advances in Social Science, Education, and Humanities Research*, 546, 556-561. <https://doi.org/10.2991/assehr.k.210427.084>
- Noviyanti, S. D. (2018). Students' reading preference and its implications: A study of three English education departments in Jember. *Lingua Scientia*, 25(2), 89-97. <https://doi.org/10.23887/lis.v25i2.18826>
- Oates, S. (2019). The importance of autonomous, self-regulated learning in primary initial teacher training. *Front. Educ.*, 4(102), 1-8. <https://doi.org/10.3389/educ.2019.00102>
- Rahmanpanah, H., & Tajeddin, Z. (2015). Investigating a systematic approach to the promotion of EFL learners' autonomy. *Journal of Language and Translation*, 5, 1(9), 17-31. http://tlt.azad.ac.ir/article_518703.html
- Rashtchi, M., & Khani, P. (2010). Improving Iranian EFL learners' oral proficiency through metacognitive strategies instruction. *Journal of English Language Studies*, 1(4), 137-156. <https://jurnal.untirta.ac.id/index.php/JELS/index>
- Rashtchi, M., & Pourmand, S. (2014). Controlled extensive reading and vocabulary knowledge: Let's move towards autonomous learning in EFL contexts. *International Journal of English and Education*, 3(2), 132-146. http://ijee.org/vol_3_issue_2
- Roe, J., & Perkins, M. (2020). Learner autonomy in the Vietnamese EAP context: A literature review. *Asian Journal of University Education (AJUE)*, 16(1), 13-21. <https://doi.org/10.24191/ajue.v16i1.8490>
- Saghaieh Bolghari, M. (2017). *An activity theory perspective on the rate of cooperative assessment in the reading comprehension of Iranian EFL learners*. (Unpublished doctoral dissertation), Islamic Azad University, Science and Research Branch, Tehran, Iran.
- Saunders, L., & Wong, M. A. (2020). *Instruction in libraries and information centers : An introduction*. Windsor & Downs Press. <https://doi.org/10.21900/wd.12>
- Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science*, 26(1/2), 113-125. <https://link.springer.com/journal/11251/volumes-and-issues/26-1>
- Swatevacharkul, R. (2017). The effects of self-directed learning on the English reading comprehension ability of MBA students. *The New English Teacher*, 11(1), 1-15. <http://www.assumptionjournal.au.edu/index.php/newEnglishTeacher/issue/view/229>
- Talley, L. A. (2017). *best teaching strategies to help struggling readers*. (Unpublished doctoral dissertation), Carson-Newman University, Jefferson City, Tennessee, United States.
- Taraban, R., Rynearson, K., & Kerr, M. (2000). College students' academic performance and self-reports of comprehension strategy use. *Reading Psychology*, 21(4), 283-308. <https://doi.org/10.1080/027027100750061930>
- Taraban, R., Kerr, M., & Rynearson, K. (2004). Analytic and pragmatic factors in college students' metacognitive reading strategies. *Reading Psychology*, 25(2), 67-81. <https://doi.org/10.1080/02702710490435547>
- Tavallali, E., & Marzban, A. (2015). Becoming autonomous learners through self-regulated learning. *Journal of Applied Linguistics and Language Research*, 2(3), 72-83. <https://www.jallr.com/index.php/JALLR/issue/view/5>
- Vavasseur, C., Crochet, F. & Dempster, S. (2016). The impact of digitally enhanced reading interventions on struggling readers and teacher education candidates. *Open Journal of Social Sciences*, 4, 97-112. <https://doi.org/10.4236/jss.2016.411008>.

- Wang, C., & Ho, C. (2019). Extensive reading for university EFL learners: Its effects and both teachers' and learners' views. *Journal of Language Teaching and Research*, 10(4), 692-701. <http://dx.doi.org/10.17507/jltr.1004.04>
- Wang, G., & Han, L. (2020). On the strategies to cultivate college students' autonomous English learning ability in the new era. *English Language Teaching*, 13(11), 94-99. <https://ccsenet.org/journal/index.php/elt/issue/view/0/2413>

Appendix A: Reading Strategy Questionnaire

(Adopted from Taraban et al., 2000; Taraban et al., 2004)

Directions: Using the following scale (Never Use, Rarely Use, Sometimes Use, Often Use, Always Use), fill in the appropriate space to indicate the degree to which you use the following strategies when reading materials (e.g., textbooks, articles, reports).

1	I briefly skim the text before reading it.	Never	Rarely	Sometimes	Often	Always
2	I look for important information in the text.					
3	I pay greater attention to important information than other information in the text.					
4	I try to relate the important points in the text to one another in an attempt to understand the entire text.					
5	I try to draw on my knowledge of the subject to help me understand what I am reading.					
6	I use my knowledge of the subject to generate questions about the text.					
7	While I am reading, I reconsider and revise my prior questions about the text based on the text's content.					
8	While I am reading, I reconsider and revise my background knowledge about the subject based on the text's content.					
9	When information critical to my understanding of the text is not directly stated, I try to infer that information from the text.					
10	While I am reading, I try to determine the meaning of unknown words that seem critical to the meaning of the text.					
11	I try to underline when reading to remember the text.					
12	I read material more than once to remember the text.					
13	I make notes when reading to remember the text.					
14	When appropriate, I try to visualize the descriptions in the text that I am reading to remember the text.					
15	I summarize/paraphrase the material that I am reading to remember the text.					
16	When reading, I ask myself questions about the text content to better remember the text.					
17	When I think that I am not comprehending a text, I change my reading strategies (e.g., slowing down, re-reading).					
18	As I am reading, I evaluate the text to determine whether it contributes to my knowledge/understanding of the subject.					
19	After I have read a text, I review it.					
20	After I have read a text, I summarize it.					
21	After I have read a text, I try to interpret what I have read.					
22	After I have read a text, I evaluate what I have read.					
23	After reading a text, I consider other possible interpretations to determine whether I understood the text.					
24	After reading a text, I anticipate how I will use the knowledge that I have gained from reading the text.					
25	While reading, I jump forward and/or backward in the text to find the important information.					
26	I note how hard or easy a text is to read.					

27	As I am reading, I distinguish between information that I already know and new information.					
28	When I am reading, I note when I am interested in or bored with the text.					
29	I try to anticipate information in the text.					
30	As I read along, I check whether I anticipated information correctly.					
31	I set goals for reading (e.g., studying for a multiple-choice test, reading for a research paper).					
32	I search out information relevant to my reading goals.					
33	I evaluate whether what I am reading is relevant to my reading goals.					
34	I vary my reading style depending on my reading goals.					
35	At the conclusion of the reading, I try to construct an overall summary.					
36	As I read along, I check whether I had anticipated the current information.					
37	While reading, I exploit my personal strengths to understand the text better. If I am a good reader, I focus on the text; if I am good with figures and diagrams, I focus on that information.					
38	While reading, I underline and highlight important information to find it more easily later on.					
39	While reading, I write questions and notes in the margin to better understand the text.					
40	When I am having difficulty comprehending a text, I re-read the text.					

Appendix B: Interview Questions

1. Did you enjoy learning English? Why or why not?
2. Has this course helped you improve your reading ability in English? Why?
3. Has this course helped you improve autonomy in language learning, and do you feel more confident reading texts in English? Why?
4. Did you find the tutorial engaging?
5. Has this course assisted you in getting proper help from strategies while reading?
6. Which strategies did you find most useful?
7. What are the main advantages or problems with the course?
8. How much time did you spend on the classwork and for unrequired additional self-directed learning per week? Did the tutorial encourage you to plan for success in the course or to put strategies you had planned at the beginning of the course into action?
9. Are there any other comments, suggestions for improvement, or changes you would make, and why?