ISELT 178
Interdisciplinary Studies in English Language Teaching

Pages 178 to 198

Examining the Impacts of Flipped, Online, and In-Person Language Instruction on EFL Learners' Writing Motivation and Writing Self-Efficacy

Seyyed Parsa Talebzadeh [1], Farnoush Ahangaran[1]*, Aram Pouyan[2]
[1] Islamic Azad University, Urmia, Iran.
[2] Urmia University, Urmia, Iran.

10.22080/iselt.2025.29882.1116

Received
August 20, 2025
Accepted
September 29, 2025
Available online
December 19, 2025

Keywords:
Affective Learner Factors, Flipped Language Instruction, Online Language Instruction, Writing Motivation, Writing Self-Efficacy

Abstract

Technological advancements have had a major impact on language instruction in recent years. Flipped language instruction (FLI) and online language instruction (OLI) constitute two of the major technology-informed language teaching approaches. Nonetheless, there is not adequate research on the impacts of these approaches on EFL learners' affective factors. The present study employed a quasi-experimental design to examine the effects of FLI, OLI, and traditional in-person language instruction on Iranian EFL learners' writing motivation (WM) and writing self-efficacy (WSE). Accordingly, the researchers used convenience sampling to select 75 intermediate-level male EFL learners as the participants and gathered the data using Waller and Papi (2017') WM questionnaire and Han and Hiver (2018) WSE questionnaire as the WM and WSE pretests and posttests, which were administered prior to and after the 16 treatment sessions. In the FLI treatment sessions, the researchers provided the learners with writing instruction at two stages including the pre-class stage and the in-class stage. On the other hand, the OLI treatment sessions involved the online writing instruction stage. One-way ANOVA test and paired-samples t-test were used to perform the data analysis. The results highlighted the fact that FLI and OLI significantly ameliorated the participants' WM and WSE. In addition, FLI was a more viable approach compared to OLI in this regard. The results can provide EFL teacher education course developers, syllabus designers, and teachers with guidelines on the integration of FLI and OLI into the process of language instruction in foreign language contexts.

1. INTRODUCTION

The advancements in technology have had major impacts on all aspects of human life, including education in academic settings (Schrodt et al., 2022; Tanis, 2020; Yu, 2021). Educationalists have strived to integrate technological knowledge and innovations into the processes of teaching and

* **Corresponding Author:** Farnoush Ahangaran, Assistant Professor, Department of English Language and Literature, Ur.C., Islamic Azad University, Urmia, Iran, **Email**: farnoush.ahangaran@iau.ac.ir

learning in diverse fields of knowledge (Qader & Yalcin Arslan, 2019; Singh & Thurman, 2019). In this regard, Learning Management Systems (LMSs) have attracted considerable attention as technological breakthroughs that facilitate the delivery of training programs in academic settings (Chang & Lin, 2019; O'Flaherty et al., 2015). LMSs encompass the software that has been designed to expedite, manage, and track the learners' process of learning on the internet (Ahmed, 2016; Al-Ghamdi & Al-Bargi, 2017; Al-Harbi & Alshumaimeri, 2016). These online platforms have been extensively used in academic settings due to their specific features, including discussion forums, messaging, and virtual meeting spaces that have beneficial impacts on learners' academic success (Lee, 2021).

The favorable characteristics of LMSs have prompted second language (L2) researchers to adopt them in internet-based instructional approaches, including FLI and OLI (Lee & Wallace, 2018). FLI encompasses an approach to language teaching that integrates online educational resources into in-person classes (Nugroho & Fitriati, 2021). In addition, OLI comprises an approach that facilitates the process of language teaching on online platforms by taking advantage of interactive lessons and exercises along with learning resources such as grammar explanations, vocabulary lists, exercises, and audio materials (Sheerah, 2022).

The review of the related literature indicates that they have focused on specific research lines to the exclusion of others. More specifically, a number of these studies (Akbari & Heidari, 2023; Engin, 2014; Shin & Sok, 2023; Tanis, 2020) have examined the impacts of either FLI or OLI on learners' acquisition of language skills (e.g., writing) and aspects (e.g., vocabulary). In addition, some studies (Alhamami & Khan, 2019; Kartali et al., 2023; Sazegar, 2025) have strived to determine language learners' perspectives on these approaches. Meanwhile, a few studies (Arsyad et al., 2024; Bond & Bedenlier, 2019; Challob, 2021) have investigated the impacts of FLI and OLI on learner factors such as engagement, among others. Nonetheless, these studies have not dealt with a number of the learners' affective attributes, including their WM and WSE. Additionally, most of these studies have mainly focused on one of these approaches and have rarely (Khoshsima, 2021) examined the effects of both of them. Finally, the relevant studies have not compared the effectiveness of FLI and OLI with that of in-person language instruction. As a result, previous research has not investigated the efficacy of OLI and FLI in improving EFL learners' WM and WSE. Thus, existing research has yet to compare the effectiveness of these approaches for ameliorating the learners' WM and WSE in classroom contexts.

These gaps highlight the need for further studies on the impacts of FLI and OLI on language learners' affective factors, which can be justified by the reciprocal determinism principle of Bandura (1986) social cognitive theory. This principle highlights the fact that the individuals' attitudes towards various concepts influence their behavior regarding the pertinent concepts. Accordingly, EEL learners' perspectives on FLI and OLI are likely to affect their learning behaviors, which are considered significant factors in language acquisition. In addition, the research on the utility of FLI and OLI in foreign language classes can provide syllabus designers and teachers with guidelines on the integration of their principles and features into instructional practices in various academic settings. Lastly, examining the utility of FLI and OLI for improving EFL learners' WM and WSE is justified due mainly to the fact that these affective factors are likely to have major impacts on learners' development of L2 writing skill in classroom contexts (Schrodt et al., 2022). Considering these issues, the present study strived to answer the following questions:

1. Do FLI, OLI, and in-person writing instruction have significant effects on EFL learners' WM?

2. Are there significant differences between the effects of FLI, OLI, and in-person writing instruction on EFL learners' WM?

3. Do FLI, OLI, and in-person writing instruction have significant effects on EFL learners' WSE?

4. Are there significant differences between the effects of FLI, OLI, and in-person writing instruction on EFL learners' WSE?

2. LITERATURE REVIEW

Flipped Language Instruction and Online Language Instruction

In recent decades, second language researchers have highlighted the potential of the internet for facilitating the processes of language teaching and learning in academic settings (Arifani et al., 2020; Dehham et al., 2022). Accordingly, they have developed certain internet-based approaches to language instruction including FLI and OLI (Kirmizi & Kömeç, 2019). FLI encompasses an approach that reverses the traditional language teaching model (Yelamarthi & Drake, 2015). It provides the learners with new content and instructional materials, such as lectures or instructional videos on LMSs (outside classroom settings). Moreover, it utilizes in-person class time for active learning activities such as discussions, group work, and problem-solving tasks (Clark, 2015).

The interest in FLI mainly stems from its favorable features that expedite learners' language learning (Lo & Hew, 2020; Yelamarthi & Drake, 2015). It has been argued that FLI is likely to boost the learners' motivation for learning the target language owing to its interactive and engaging nature (Van Alten et al., 2019). In addition, it has been stated that FLI ameliorates the learners' personalized learning since it enables them to engage with the materials at their own pace and to revisit the materials several times (Ahmadabadi et al., 2020). It has also been noted that the focus on meaningful interaction in the in-person class time of FLI improves the learners' accuracy and fluency in the process of communication and increases their confidence in their language ability (Yang & Kuo, 2021).

In addition to FLI, researchers have investigated the efficacy of OLI in diverse settings (Yick et al., 2019). OLI refers to the approach to language teaching that utilizes various internet-based platforms and software to expedite the learners' acquisition of different language aspects (Aslan & Tütüniş, 2024). This approach utilizes various technologies, including video conferencing, LMSs, and interactive resources, in order to deliver language instruction remotely using the internet (Basaran, 2021). In this approach, teachers adopt the role of learning facilitators by using digital internet-based platforms to create a supportive learning environment that enables the learners to take advantage of virtual discussions, collaborative activities, and gamified learning experiences (Berga et al., 2021).

Researchers have highlighted the great potential of OLI for improving learners' acquisition of L2 owing to its flexible nature. That is, OLI facilitates the scheduling of virtual sessions without being concerned about the teacher or the learners' physical locations (Khanahmadi & Nasiri, 2022). In addition, OLI is considered as a cost-effective approach to language instruction that does not require the teacher or the learners to spend money on travel and accommodation expenses (Neisi et al., 2019). The attention to OLI also stems from its global learning community that connects learners from diverse backgrounds and facilitates their cross-cultural exchanges in virtual classes (Basaran, 2021). Lastly, the use of OLI is supported due to the fact that it provides learners with access to diverse resources and tools that can enhance language acquisition (Neisi et al., 2019). The above-mentioned discussions of FLI and OLI highlight the fact that they can affect learners' affective factors, including their WM and WSE, among others (Aslan & Tütüniş, 2024).

Writing Motivation and Writing Self-Efficacy

The significant role of writing in the process of language acquisition has motivated researchers to scrutinize its relevant affective factors (Csizér & Tankó, 2017). In this regard, research has mainly focused on the learners' WM and WSE (Zumbrunn et al., 2019). WM refers to learners' internal resources that prompt them to use the written mode of L2 to express their intentions. It constitutes a dynamic construct that changes according to learners' tasks, learning context, reasons for performing writing tasks, and writing goals (Nolen, 2007). It has been argued that WM is mainly influenced by learners' positive experiences, supportive and constructive learning environments, and engaging writing tasks (Schrodt et al., 2022).

Considering these discussions, Waller and Papi (2017) developed a model of WM and itemized its three main sub-components including *desire, effort*, and *intensity*. As they explained, desire describes learners' intrinsic interest in the expression of their thoughts and opinions using the written mode of the target language. Effort signifies the extent to which the learners strive to perform their tasks despite the relevant challenges in the process of writing skill development. Lastly, Waller and Papi (2017) noted that intensity refers to the learners' seriousness in the process of writing task performance that prompts them to give priority to their writing skill development in their academic settings.

In addition to WM, learners' WSE has been a recurrent variable in the related empirical studies (Gerde et al., 2012). WSE denotes language learners' beliefs in their capability to perform the writing tasks of the target language in educational settings (Trautner & Schwinger, 2020). In other words, WSE determines learners' confidence in their ability to use their writing knowledge, such as grammar and mechanics, in order to manage the writing process effectively (Traga Philippakos et al., 2023). It ameliorates learners' motivation, prompts them to exert effort in the writing process, and boosts their perseverance in writing task performance (Skar et al., 2023).

Considering these discussions, Han and Hiver (2018) developed a model of WSE and particularized its four main sub-components: *past performance, vicarious experiences, verbal persuasion*, and *affective state*. They defined past performance as the impact of learners' previous experiences with writing tasks on their perspectives on their writing ability. Vicarious experiences refer to learners' attitudes towards writing skill development based on their observation of their peers' task performance. Additionally, verbal persuasion determines the extent to which learners consider their writing skills to be effective in influencing others' beliefs. Finally, affective state determines learners' capability to deal with their negative emotions that interfere with their effective writing task performance.

Empirical Background

The examination of the empirical research on FLI and OLI revealed that the majority of the studies have focused on teaching language skills and aspects. For instance, Akbari and Heidari (2023) scrutinized the impacts of OLI on learners' vocabulary learning and retention and reported it as a viable approach. Likewise, Engin (2014) focused on the effects of FLI on EFL learners' writing skill development and found that FLI significantly improved the learners' use of complex structures in essay writing tasks. These studies highlighted the positive effects of OLI on language learning. Nonetheless, they did not expound on the reasons behind the efficacy of OLI in classroom contexts.

Additionally, some of these studies have focused on learners' perspectives on FLI and OLI. Regarding this research line, Alhamami and Khan (2019) probed learners' attitudes towards FLI in their classes and reported that they considered the flexibility of this approach as a main factor in their L2 motivation. Similarly, Sazegar (2025) strived to determine the EFL learners' views on

OLI. Their findings revealed that learners believed the accessibility of OLI resources reduced their foreign language classroom anxiety. These studies reflected the learners' perspective on OLI and FLI. However, these studies did not provide objective evidence of the effectiveness of these approaches in language acquisition.

Finally, few studies have investigated the effects of OLI and FLI on learners' affective factors. In this regard, Bond and Bedenlier (2019) examined the role of OLI in promoting learners' engagement and found that it significantly improved learners' cognitive and affective investment in their tasks. Moreover, Challob (2021) strived to specify the degree to which FLI influenced the learners' autonomy and reported that this approach had a beneficial impact on their learners' independent decision-making in writing tasks. More recently, Arsyad et al. (2024) scrutinized the extent to which FLI affected learners' motivation and reported that it had a positive effect on learners' intrinsic interest in the development of L2 skills. These studies focused on certain learner factors; however, they did not provide a satisfactory understanding of the role of OLI and FLI in the amelioration of other learner factors, such as WM and WSE.

3. METHODOLOGY AND DESIGN

Participants

The researchers used convenience sampling to select the participants. To this end, they selected 75 intermediate-level male EFL learners from three intact classes of a language institute in Urmia, Iran, as the participants and obtained their informed consent. The learners had attended related courses at a language institute for two years. Moreover, a language proficiency test was administered to ensure learners' homogeneity in terms of their proficiency level.

Instruments

In order to gather the data, the researchers used the following instruments:

Proficiency Test

The researchers used Allan (2004) Oxford Placemat Test (OPT) to select the participants and to ensure their homogeneity in language proficiency level. This test encompasses 60 items in three sections including a cloze test, grammar, and vocabulary (20 items in each section). To examine the reliability of Allan (2004) OPT, the researchers used Cronbach's Alpha (α) measure in a pilot study with 25 intermediate-level EFL learners. The results of the reliability analysis of the OPT indicated that it was satisfactorily reliable (α=.89) and could be utilized in the present study.

WM Questionnaire

In this study, the researchers used Waller and Papi (2017) WM questionnaire in the pretest and posttest to examine the participants' WM before and after the treatment, respectively. This instrument involves 7 items that are rated on a six-point Likert scale. The questionnaire targets three main sub-components of WM, including desire, effort, and intensity. The results of the reliability analysis (α=.84) demonstrated the satisfactory reliability of this instrument in the Iranian EFL context.

WSE Questionnaire

The researchers employed Han and Hiver (2018) WSE questionnaire as the WSE pretest and posttest. This scale encompasses 6 items that scrutinize four main sub-components of WSE,

namely past performance, vicarious experiences, verbal persuasion, and affective state. The relevant items of this instrument are rated on a six-point Likert scale. Based on the reliability analysis results, the reliability index of this scale (α=.86) was acceptable, and it could be used in the present study.

LMS

Given the objectives, the researchers selected Adobe Connect LMS of the selected language institute as the LMS of the study and employed it in the treatment sessions of the participants who received FLI and OLI. All of the participants had used Adobe Connect in their courses prior to this study and were familiar with its features. This LMS constitutes a web-based platform that provides the educationalists with access to virtual classrooms (Dhawan, 2020). It has attracted attention in online education owing to its favorable features, including screen sharing, video-conferencing, chat box, polls, and quizzes that provide the learners with a constructive learning environment and engage them in interactive virtual sessions (Tarchi et al., 2022).

Procedure

In this study, first, the researchers selected 75 intermediate-level EFL learners in three intact classes of a language institute in Urmia using convenience sampling and assigned them to three groups: Flipped Group (FG), Online Group (OG), and In-person Group (IG) (25 learners in each group). Next, they administered the WM and WSE pretests of the study to all groups in order to ensure their homogeneity regarding WM and WES before the treatment.

Afterward, during the treatment, the researchers respectively provided FG and OG with FLI and OLI in 16 sessions in eight weeks (two sessions per week). In FG, the researchers followed Hao's (2016) principles of FLI. More specifically, they provided the participants with a kind of instruction that focused on three main aspects of writing skill, including *academic writing*, *creative writing techniques*, and *reflective writing and portfolio development*. Accordingly, they provided the participants with FLI at two main stages: *pre-class stage* and *in-class stage*.

Regarding academic writing, the researchers initially provided the learners with the video files of lectures on the structure of academic essays on Adobe Connect LMS and asked them to complete a short quiz on its key concepts at the pre-class stage. Then, they tried to engage the learners in group discussions of the above-mentioned concepts (e.g., thesis statement) and asked them to use collaborative brainstorming to generate essay topics at the in-class stage.

As for creative writing techniques, the researchers first asked the learners to read excerpts of various writing genres (e.g., fiction), to watch videos on creating writing prompts (e.g., imagery), and to write short creative paragraphs based on the relevant prompts at the pre-class stage. Next, they assigned the learners to small groups, prompted them to share their writing pieces with their peers, and asked the group members to provide each other with feedback on different aspects of their written work at the in-class stage.

Regarding the reflective writing and portfolio development, the researchers asked the learners to watch the videos about portfolio development and to examine portfolio examples, and prompted them to write a reflective journal about their writing growth during their FLI at the pre-class stage. In addition, the learners were prompted to share their portfolios (that encompassed their writing work in their course) with their peers in small groups and to highlight their key pieces. They were also asked to specify their personal writing development goals and discuss the main challenges in achieving their goals in their groups.

The researchers implemented assessment procedures in FG using quizzes at the pre-class stage and peer review feedback at the in-class stage. On the other hand, in OG, the researchers

followed Singh and Thurman (2019) principles of OLI. Accordingly, they focused on the same aspects of the writing skill in the treatment sessions of FG.

As for the academic writing aspect, the researchers provided the learners in OG with video lectures on essay structure using Adobe Connect LMS and asked them to attend discussion forums to share their ideas about essay topics with their peers.

Regarding creative writing techniques, the researchers provided the learners with videos on writing techniques and assigned them to small groups to discuss their ideas about writing creativity and provide feedback on their peers' ideas.

In regard to reflective writing and portfolio development, the researchers required the learners to write reflective journals on their progress in writing and create a writing portfolio that involved all of their written work from their courses. Additionally, they asked the learners to share their portfolios with their peers in small groups and elaborate on the challenges they faced in portfolio development. The researchers used both quizzes and peer feedback as the assessment procedures to make the learners aware of their writing strengths and weaknesses.

Nonetheless, IG was not provided with FLI or OLI. In this group, the researchers adopted the product-oriented approach (Ghufron & Nurdianingsih, 2019) to provide the learners with writing instruction. Accordingly, they provided the learners with explanations of essay structure in academic writing, different techniques of creative writing, and specific writing topics. They also required learners to use the relevant explanations to write essays in pre-determined periods.

Finally, the researchers administered the WM and WSE posttests to all three groups to examine the effectiveness of FLI, OLI, and in-person writing instruction.

Design

The current study employed a quasi-experimental design. According to Creswell and Creswell (2017), this design allows researchers to specify the impacts of independent variables on dependent variables without random assignment. Accordingly, in this study, the researchers used WM and WSE pretests and posttests along with writing instruction treatment sessions to scrutinize he effects of FLI, OLI, and in-person writing instruction (i.e., independent variables) on EFL learners' WM and WSE (i.e., dependent variables) without randomly assigning the participants to the three treatment groups.

Data Analysis

Using SPSS 25, the researchers conducted Kolmogorov-Smirnov and Shapiro-Wilk tests to examine the normal distribution of the data on the pretests and posttests (Pallant, 2020). Afterward, one-way ANOVA and paired-samples t-test were utilized to analyze the impacts of the treatments on EFL learners' WM and WSE in the FG, OG, and IG (Pallant, 2020).

4. RESULTS

The researchers examined the characteristics of the data to specify the statistical tests that had to be used in the data analysis. The results of preliminary analysis indicated that the data were compatible with parametric test assumptions since they were independently collected interval data that were normally distributed based on the results of Kolmogorov-Smirnov and Shapiro-Wilk tests ($p>.05$). Consequently, one-way ANOVA and paired-samples t-test were utilized to perform the data analysis. The following sections report the findings corresponding to the research questions.

Research Question One

The first research question intended to examine the effects of FLI, OLI, and in-person writing instruction on EFL learners' WM. To answer this question, first, the researchers had to ensure the homogeneity of FG, OG, and IG in terms of their WM using a one-way ANOVA test. Table 1 presents the descriptive statistics on the WM pretest of these groups:

Table 1: Descriptive Statistics on WM Pretest

	N	M	SD	SE
FG	25	18.88	1.641	.328
OG	25	19.24	1.899	.380
IG	25	19.56	1.850	.370

The results of Levene's test showed the variance homogeneity of the groups (p=.508); therefore, the researchers examined the results of the ANOVA test of the WM pretest.

Table 2: ANOVA Test of WM Pretest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.787	2	2.893	.893	.414
Within Groups	233.360	72	3.241		
Total	239.147	74			

As shown in Table 2 and Figure 1, the groups were homogeneous regarding their WM pretest results (p>.05).

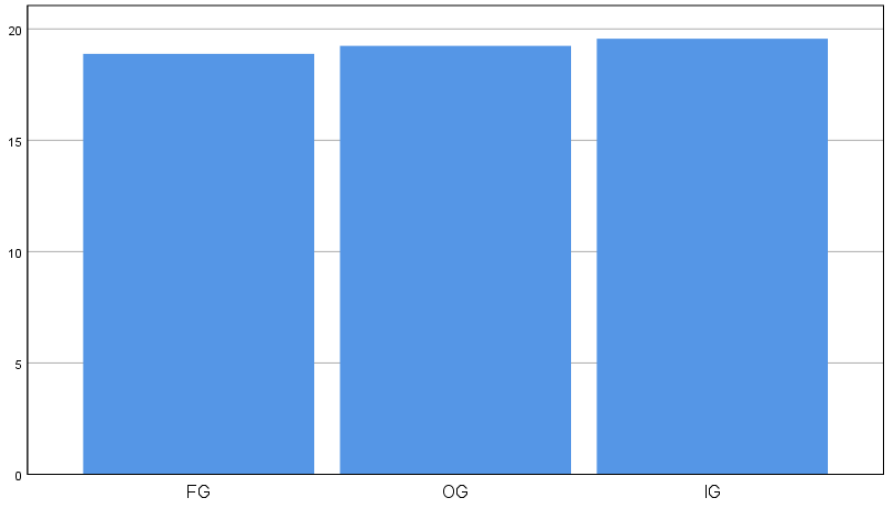

Figure 1: WM Pretest Performances of FG, OG, and IG

Consequently, the researchers used a paired-samples t-test to compare the performances of the groups on the WM pretest and posttest. Table 3 provides the relevant descriptive statistics:

Table 3: Descriptive Statistics on WM Pretest and Posttest Results of FG, OG, and IG

		M	N	SD
Pair 1	FG Pretest	18.88	25	1.641
	FG Posttest	33.52	25	3.016
Pair 2	OG Pretest	19.24	25	1.899
	OG Posttest	28.92	25	1.847
Pair 3	IG Pretest	19.56	25	1.850
	IG Posttest	20.04	25	1.645

Moreover, Table 4 provides the results of the paired-samples t-tests of the pretest and posttest results of these groups:

Table 4: Paired-Samples t-test of the WM Pretest and Posttest Results of FG, OG, and IG

	Paired Differences							
				95% CI				
	M	SD	SEM	Lower	Upper	t	Df	Sig. (2-tailed)
FG Pretest - Posttest	-14.640	3.147	.629	-15.939	-13.341	-23.257	24	.000
OG Pretest-Posttest	-9.680	2.795	.559	-10.834	-8.526	-17.319	24	.000
IG Pretest-Posttest	-.480	1.806	.361	-1.225	.265	-1.329	24	.196

As shown in Table 4, FG and OG had significantly better performances on the WM posttest compared to the pretest ($p<.05$). Figure 2 shows these results:

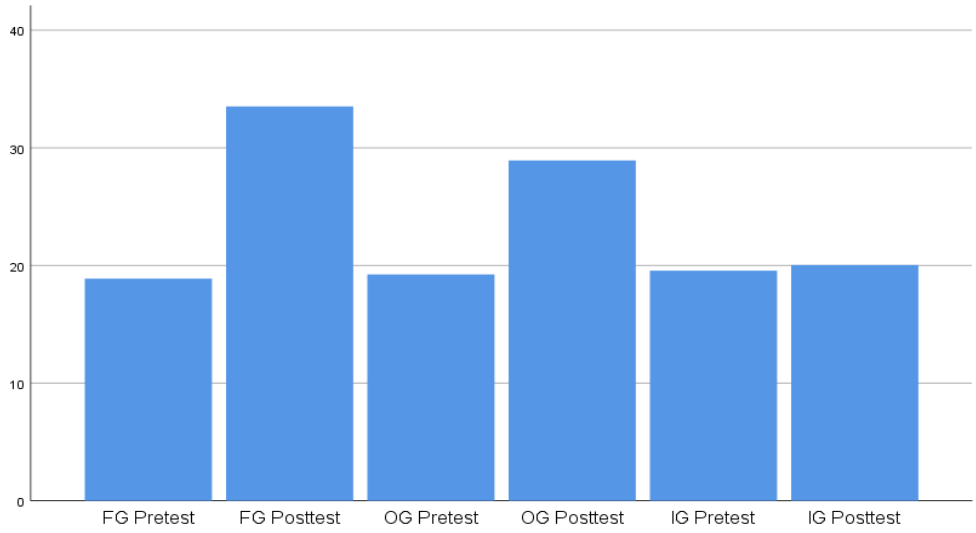

Figure 2: WM Pretest and Posttest Performances of FG, OG, and IG

Research Question Two

The second research question examined the significant differences between the effects of FLI, OLI, and in-person writing instruction on EFL learners' WM. To address this question, the researcher used a one-way ANOVA test. As illustrated in Table 5, the results of Levene's test proved the variance homogeneity of the groups (p=.224).

Table 5: Descriptive Statistics on WM Posttest

	N	M	SD	SE
FG	25	33.52	3.016	.603
OG	25	28.92	1.847	.369
IG	25	20.04	1.645	.329

Table 6: ANOVA Test of WM Posttest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2347.707	2	1173.853	231.529	.000
Within Groups	365.040	72	5.070		
Total	2712.747	74			

Consequently, the researchers examined the results of the ANOVA test of the WM posttest. As depicted in Table 6, there were significant differences between the WM posttest performances of the groups (p<.05). Nonetheless, the researchers had to examine the results of the post hoc Tukey test to determine the places of these differences. Table 7 shows the related results:

Table 7: Tukey Test of WM Posttest

(I) Groups	(J) Groups	Mean Difference (I-J)	SE	Sig.
FG	OG	4.600	.637	.000
	IG	13.480	.637	.000
OG	FG	-4.600	.637	.000
	IG	8.880	.637	.000
IG	FG	-13.480	.637	.000
	OG	-8.880	.637	.000

As shown in Table 7, there were significant differences between the performances of all of the groups on the WM posttest (p<.05). More specifically, FG had the best performance on this test. Moreover, OG outperformed IG. Figure 3 illustrates the relevant results:

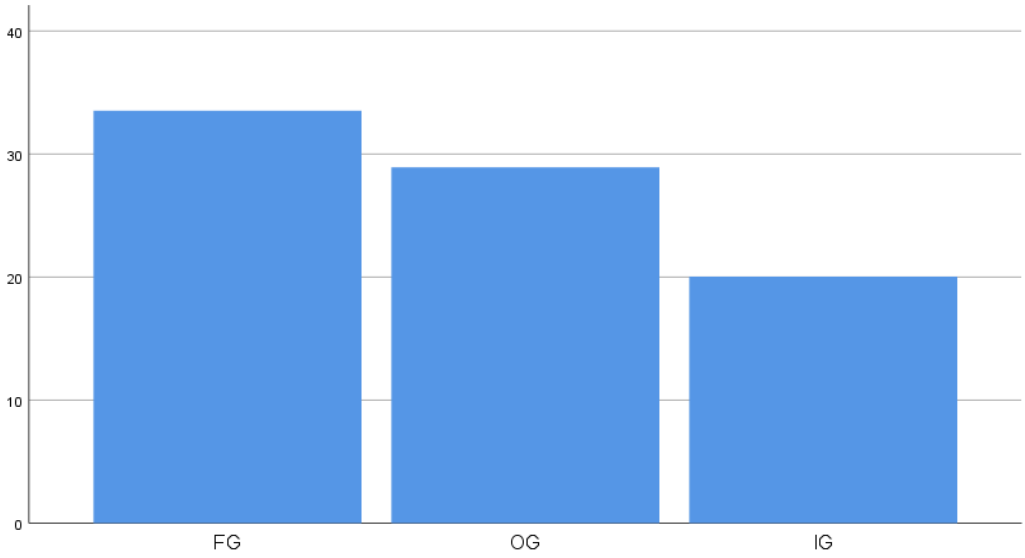

Figure 3: WM Posttest Performances of FG and OG, and IG

Research Question Three

The third research question investigated whether FLI, OLI, and in-person writing instruction have significant effects on EFL learners' WSE. In order to answer this question, the researchers had to ensure the homogeneity of FG, OG, and IG in terms of their WSE using a one-way ANOVA test. Table 8 provides the descriptive statistics on the WSE pretest of these groups:

Table 8: Descriptive Statistics on WSE Pretest

	N	M	SD	SE
FG	25	18.56	2.274	.455
OG	25	19.04	2.441	.488
IG	25	19.28	2.337	.467

The results of Levene's test showed the variance homogeneity of the groups (p=.813). Therefore, the researchers examined the results of the ANOVA test of the WSE pretest.

Table 9: ANOVA Test of WSE Pretest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.720	2	3.360	.608	.547
Within Groups	398.160	72	5.530		
Total	404.880	74			

As shown in Table 9, the groups were homogenous regarding their WSE pretest performances (p>.05). Figure 4 also presents the relevant results:

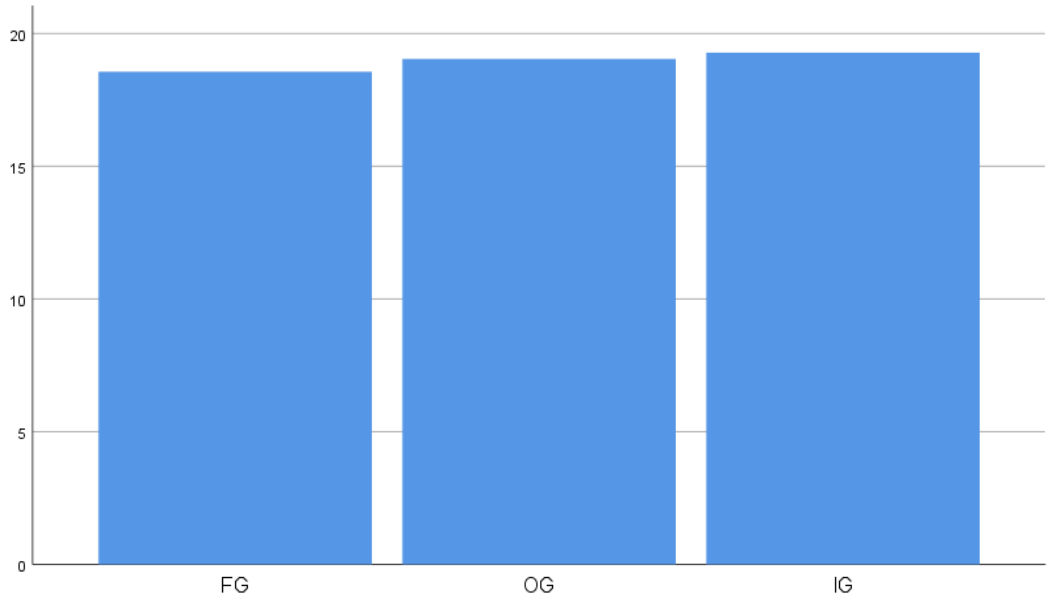

Figure 4: WSE Pretest Performances of FG and OG, and IG

Moreover, the researchers used a paired-samples t-test to compare the performances of the groups on the WSE pretest and posttest. Table 10 provides the descriptive statistics:

Table 10: Paired-Samples t-test of the WSE Pretest and Posttest Results of FG, OG, and IG

		M	N	SD
Pair 1	FG Pretest	18.56	25	2.274
	FG Posttest	29.04	25	2.091
Pair 2	OG Pretest	19.04	25	2.441
	OG Posttest	23.88	25	1.509
Pair 3	IG Pretest	19.28	25	2.337
	IG Posttest	19.64	25	2.612

Table 11 shows the results of the paired-samples t-tests of the pretest and posttest results of these groups:

Table 11: Paired-Samples t-test of the WSE Pretest and Posttest Results of FG, OG, and IG

	Paired Differences							
				95% CI				
	M	SD	SEM	Lower	Upper	t	df	Sig. (2-tailed)
FG Pretest-Posttest	-10.480	3.405	.681	-11.885	-9.075	-15.390	24	.000
OG Pretest-Posttest	-4.840	2.853	.571	-6.018	-3.662	-8.482	24	.000
IG Pretest-Posttest	-.360	1.150	.230	-.835	.115	-1.565	24	.131

According to Table 10, FG and OG had significantly better performances on the WSE posttest compared to the pretest ($p<.05$). Figure 5 shows these results:

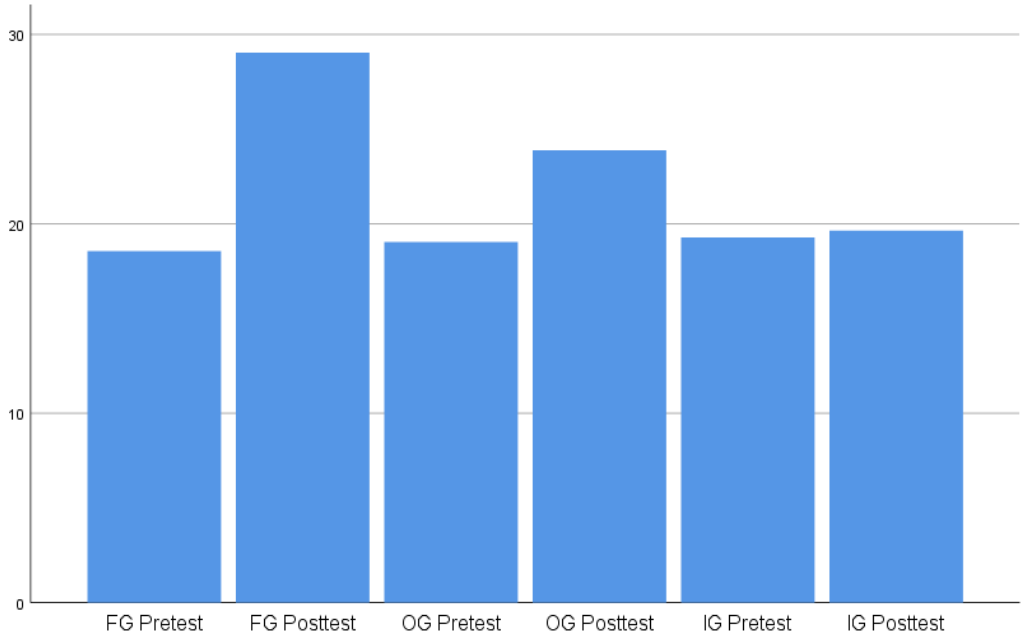

Figure 5: WSE Pretest and Posttest Performances of FG, OG, and IG

Research Question Four

The final research question aimed to examine significant differences between the effects of FLI, OLI, and in-person writing instruction on EFL learners' WSE. To this end, the researcher used a one-way ANOVA test. Table 12 shows the relevant descriptive statistics:

Table 12: Descriptive Statistics on WSE Posttest

	N	M	SD	SE
FG	25	29.04	2.091	.418
OG	25	23.88	1.509	.302
IG	25	19.64	2.612	.522

Since Levene's test confirmed the variance homogeneity of the groups (p=.645), the researchers conducted an ANOVA test on the WSE posttest score.

Table 13: ANOVA Test of WSE Posttest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1108.027	2	554.013	123.358	.000
Within Groups	323.360	72	4.491		
Total	1431.387	74			

As shown in Table 13, there were significant differences between the WSE posttest performances of the groups. Notwithstanding, the researchers had to examine the results of the post hoc Tukey test to determine the places of these differences.

Table 14: Tukey Test of WSE Posttest

(I) Groups	(J) Groups	Mean Difference (I-J)	SE	Sig.
FG	OG	5.160	.599	.000
	IG	9.400	.599	.000
OG	FG	-5.160	.599	.000
	IG	4.240	.599	.000
IG	FG	-9.400	.599	.000
	OG	-4.240	.599	.000

As illustrated in Table 14, there were significant differences between the performances of all of the groups on the WSE posttest (p<.05). More specifically, FG had the best performance on this test. In addition, OG outperformed IG. Figure 6 illustrates these results:

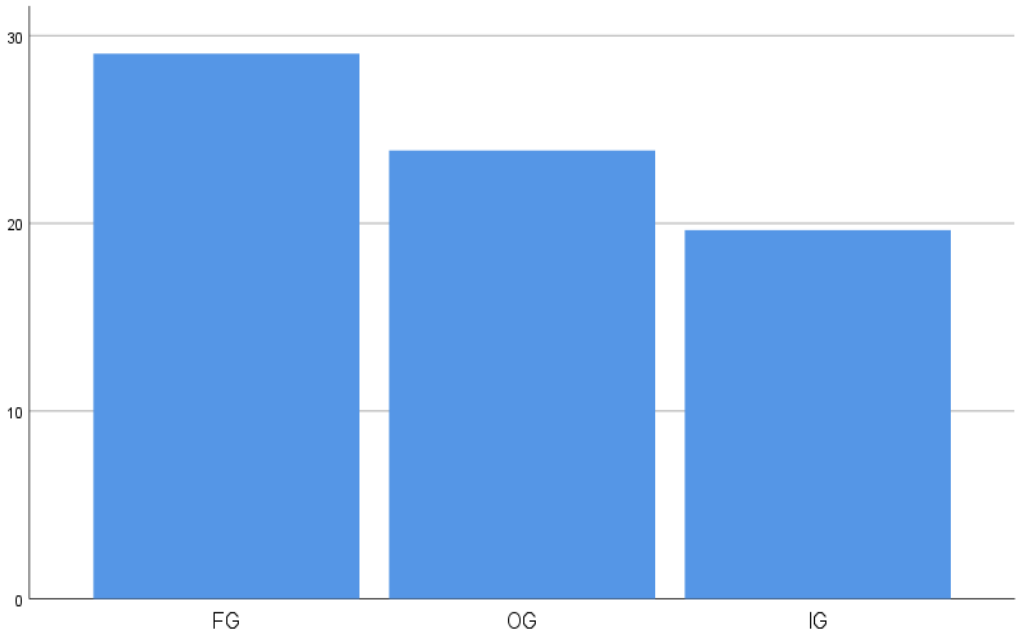

Figure 6: WSE Posttest Performances of FG and OG, and IG

5. DISCUSSION

The present study aimed to compare the efficacy of FLI, OLI, and in-person writing instruction in improving affective factors of L2 learners. Research question one examined the impacts of FLI, OLI, and in-person writing instruction on EFL learners' WM. The results indicated that both FLI and OLI significantly ameliorated the learners' WM in the process of writing task performance. The results generally corroborate the results of Ahmadabadi et al. (2020) and Kartali et al. (2023). As Ahmadabadi et al. (2020) argued in their study, EFL learners considered FLI as a main factor in their learning motivation, given its interactive learning environment. They held that the in-class time of FLI enabled learners to take part in collaborative tasks and hands-on language skill practice based on their online instructional content, engaged them in meaningful discussions, and improved their motivation. In addition, Kartali et al. (2023) attributed the efficacy of FLI to its personalized learning pace. They believed that FLI empowered their learners to learn at their own pace and to choose materials based on their needs. According to Kartali et al. (2023), the flexibility of FLI resources helped the learners to tailor their learning experiences to their preferences, reduced their anxiety, and increased their interest in language learning. Therefore, it can be stated that in this study, the effectiveness of FLI for improving the learners' WM stemmed from its use of interactive writing tasks and its capability to provide the learners with personalized learning experiences.

Regarding OLI, the results are generally in line with the results of Shin and Sok (2023) and Sazegar (2025). Shin and Sok (2023) stated that OLI was highly practical as it was easily accessible to learners; thus, it enabled them to complete their assignments on their own schedule, provided them with positive learning experiences, and increased their motivation. Likewise, Sazegar (2025) ascribed the efficacy of OLI to its immediate feedback and peer interaction features. He discussed that the online discussion forums in their course helped individuals to provide each other with timely feedback, boosted their confidence, fostered a sense of community and support in their course, and increased their motivation. Consequently, it can be argued that, in the current study,

the use of OLI for improving the learners' WM is due to its convenience and instant feedback provision nature.

Research question two compared the effectiveness of FLI, OLI, and in-person writing instruction for ameliorating EFL learners' WM. The results revealed that FLI was more effective than OLI in this regard, which generally supports Khoshsima (2021) findings. In his study, Khoshsima (2021) argued that FLI was more efficacious than OLI owing to the fact that it facilitated learners' active engagement during the in-class period. Evidently, FLI helped learners to use their online materials in order to engage in collaborative tasks, receive personalized feedback on their performance, and engage in various discussions on different aspects of the target language. He further discussed that learners' interaction with their peers and teacher provided them with a favorable learning experience and ameliorated their motivation. Thus, the supremacy of FLI over OLI regarding the amelioration of EFL learners' WM in the present study can be due to its in-class collaborative tasks, which have a more beneficial impact on individuals' interaction and engagement compared to the online discussion forums of OLI.

As for research question three, the analysis of the effectiveness of FLI, OLI, and in-person writing instruction on EFL learners' WSE indicated that FLI and OLI had favorable impacts on this affective factor. Regarding FLI, the results are in line with the results of Arsyad et al. (2024) and Challob (2021). Arsyad et al. (2024) noted that the effectiveness of FLI stemmed from the learners' increased preparedness. According to them, FLI enabled the learners to prepare themselves for their in-person classes at their own pace, helped them to familiarize themselves with the learning concepts, and enhanced their confidence and self-efficacy in task performance. Similarly, Challob (2021) attributed the utility of FLI to the learners' opportunities to use feedback in the in-person sessions. Challob (2021) believed that the iterative nature of the writing tasks in his study helped learners to revise their responses according to teacher and peer feedback, created their growth mindset, and boosted their confidence. Therefore, it can be stated that in this study, FLI significantly improved the learners' WSE since it helped them to prepare themselves for their writing tasks and facilitated their feedback-oriented writing performance.

In regard to OLI, the results corroborate the results of Bond and Bedenlier (2019) and Tarchi et al. (2022). Bond and Bedenlier (2019) argued that OLI was effective since it provided them with a flexible learning environment. As they noted, OLI helped the learners to spend additional time on challenging writing concepts at their own pace, enhanced their understanding of the relevant concepts, and improved their confidence. Likewise, Tarchi et al. (2022) considered OLI a viable approach, as it provided the learners with access to various resources. They reported that learners' access to the online resources, including interactive activities, videos, and writing prompts, enabled them to utilize materials compatible with their learning styles and preferences, improved their writing skills, and enhanced their self-efficacy. As a result, it can be stated that in this study, OLI significantly improved the learners' WSE since it provided them with a flexible learning environment and facilitated their access to useful learning resources.

Lastly, the findings for the fourth research question revealed that, among FLI, OLI, and in-person writing instruction, FLI proved most effective in enhancing EFL learners' WSE. This supports the results of Khoshsima (2021), who previously compared these approaches. Khoshsima (2021) attributed the effectiveness of FLI to its tailored support and real-time feedback. He observed that FLI enabled teachers to focus on the learners' individual needs since they did not have to lecture on the instructional content. As a result, they offered tailored support for learners, addressed their unique challenges, encouraged them to take risks in their tasks, and provided them with real-time feedback that boosted their self-confidence. Hence, it can be argued that the outperformance of FLI over OLI in enhancing learners' WSE in this study can be due to its

interactive nature and individualized feedback, which created a supportive learning environment that fostered learners' confidence and self-efficacy.

6. CONCLUSION

The present study made an effort to determine the effects of FLI, OLI, and in-person writing instruction on Iranian EFL learners' WM and WSE. In addition, it compared the impacts of these instructional approaches on the above-mentioned affective factors. The results indicated that FLI and OLI significantly ameliorated the participants' WM and WSE. In addition, FLI proved to be more efficacious than OLI in this regard.

The results can have implications for EFL teacher-education course developers in the context of Iran. First, the results highlight the need for teacher educators to take part in professional development programs that provide them with adequate information about state-of-the-art technological advancements, such as LMSs and software in language teaching, along with approaches such as FLI and OLI. In this way, the educators can include such approaches in their teacher education courses, familiarize teachers with technology-enhanced language instruction, and guide them in implementing it in their classes.

Moreover, the results accentuate the need for the development of FLI and OLI courses along with in-person courses in the foreign language context of Iran to improve the learners' affective factors, including WM and WSE. At the present time, the lack of infrastructure and the limited number of trained EFL teachers may prevent the syllabus designers and teachers from implementing FLI and OLI courses effectively in the Iranian context. Nonetheless, informed planning and teacher education can solve these problems over the course of time. Accordingly, syllabus designers are required to develop internet-based materials, including diverse types of audio-visual files, tutorials, and interactive tasks, along with collaborative language learning platforms such as discussion platforms that underlie the implementation of both FLI and OLI. Additionally, in regard to FLI, the syllabus designers need to develop EFL materials such as textbooks that enable the learners to take advantage of their online materials in collaborative and interactive tasks of the in-person classes.

Meanwhile, Iranian EFL teachers need to integrate the main principles of FLI and OLI into their in-person classes to improve their learners' WM and WSE. To this end, they can provide their learners with specific online resources on free platforms (e.g., Google Meet) in order to help them prepare themselves for their in-person classes and to dedicate the in-class time to collaborative writing tasks that have beneficial effects on the above-mentioned learner factors.

Besides, EFL teacher educators, syllabus designers, and teachers should be aware of the challenges of implementing FLI and OLI. These challenges stem from the fact that many students may not have access to the internet or to the necessary technology to implement FLI and OLI. Moreover, they may not be able to engage with online materials due to their lack of knowledge about digital platforms. In addition, a number of students may struggle with self-directed learning of FLI and OLI and may need additional teacher support. Finally, teachers may need more time to provide the learners with personalized feedback in FLI and OLI and may not be able to use traditional assessment procedures effectively to assess the learners' understanding of the virtual materials.

This study suffered from a number of limitations that may negatively influence the generalizability of the results. These limitations arose from the use of convenience sampling, the lack of ability to control the effects of learner factors (e.g., language background) on the results, the focus on male learners at one language institute, the lack of ability to gather qualitative data, and the scrutiny of the effects of FLI, OLI, and in-person writing instruction on WM and WSE without dealing with the other affective factors such as learners' self-esteem among the others.

Thus, future studies should address these issues to further validate the findings. In addition, they should use mixed-methods designs and focus on the learners in different academic settings, such as schools, in order to challenge the existing findings in an effective way. Furthermore, these studies are recommended to gather different types of qualitative data, including student journal data, to be able to interpret the findings beyond statistical significance. Lastly, they have to be carried out in both the second and foreign language contexts to determine the generalizability of the results of the present study.

References

Ahmadabadi, A., Safari, M., & Alizadeh Amin, H. (2020). The flipped teaching method: Innovative approaches to reduce shyness in students. *Journal of Educational Research*, *22*, 37-49.

Ahmed, M. A. E. A. S. (2016). The effect of a flipping classroom on writing skill in English as a foreign language and students' attitude toward flipping. *US-China Foreign Language*, *14*(2), 98-114.

Akbari, H., & Heidari, F. (2023). The effect of online Quizlet flashcards and student-created Quizlet flashcards on vocabulary learning and retention. *Applied Linguistics Inquiry*, *1*(2), 60-73. https://doi.org/10.22077/ali.2023.2704

Al-Ghamdi, M., & Al-Bargi, A. (2017). Exploring the application of flipped classrooms on EFL Saudi students' speaking skill. *International Journal of Linguistics*, *9*(4), 28-46.

Al-Harbi, S., & Alshumaimeri, Y. (2016). The flipped classroom impact in grammar class on EFL Saudi secondary school students' performances and attitudes. *English Language Teaching*, *9*(10), 60-80.

Alhamami, M., & Khan, M. R. (2019). Effectiveness of flipped language learning classrooms and students' perspectives. *Journal on English as a Foreign Language*, *9*(1), 71-86.

Allan, D. (2004). *Oxford Placement Test*. Oxford University Press.

Arifani, Y., Asari, S., Anwar, K., & Budianto, L. (2020). Individual or collaborative WhatsApp learning? A flipped classroom model of EFL writing instruction. *Teaching English with Technology*, *20*(1), 122-139.

Arsyad, S., Waluyo, B., & Maisarah, I. (2024). Enhancing TOEFL performance and student motivation through integrated flipped and gamified learning in online settings. *Human Behavior and Emerging Technologies*, *2024*(1). https://doi.org/10.1155/2024/1054242

Aslan, M., & Tütüniş, B. (2024). The impact of blended mobile learning on EFL students' vocabulary development. *Journal of Theoretical Educational Science*, *17*(4), 897-917. https://doi.org/10.30831/akukeg.1483178

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

Basaran, M. (2021). Meta-thematic analysis of flipped classroom applications. *European Journal of Education Studies*, *8*(10), 61-88. https://doi.org/10.46827/ejes.v8i10.3929

Berga, K. A., Vadnais, E., Nelson, J., Johnston, S., & Olaiya, B. (2021). Blended learning versus face-to-face learning in an undergraduate nursing health assessment course: A quasi-experimental study. *Nurse Education Today*, *96*, 104622. https://doi.org/10.1016/j.nedt.2020.104622

Bond, M., & Bedenlier, S. (2019). Facilitating student engagement through educational technology: Towards a conceptual framework. *Journal of Interactive Media in Education*, *11*(1), 1-14. https://doi.org/10.5334/jime.528

Challob, A. I. (2021). The effect of flipped learning on EFL students' writing performance, autonomy, and motivation. *Education and Information Technologies*, *26*(4), 3743-3769.

Chang, C., & Lin, H. C. K. (2019). Classroom interaction and learning anxiety in the IRS-integrated flipped language classrooms. *The Asia-Pacific Education Researcher*, *28*(3), 193-201.

Clark, K. R. (2015). The effects of the flipped model of instruction on student engagement and performance in the secondary mathematics classroom. *Journal of Educators Online*, *12*(1), 91-115.

Csizér, K., & Tankó, G. (2017). English majors' self-regulatory control strategy use in academic writing and its relation to L2 motivation. *Applied Linguistics*, *38*(3), 386-404. https://doi.org/10.1093/applin/amv033

Dehham, S. H., Bairmani, H. K., & Shreeb, M. A. (2022). Developing Iraqi EFL preparatory students' performance in reading comprehension by flipped learning strategy. *Journal of Language and Linguistic Studies*, *18*(1), 640-651.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, *49*(1), 5-22. https://doi.org/10.1177/0047239520934018

Engin, M. (2014). Extending the flipped classroom model: Developing second language writing skills through student-created digital videos. *Journal of the Scholarship of Teaching and Learning*, *14*(5), 12-26.

Gerde, H. K., Bingham, G. E., & Wasik, B. A. (2012). Writing in early childhood classrooms: Guidance for best practices. *Early Childhood Education Journal*, *40*, 351-359. https://doi.org/10.1007/s10643-012-0531-z

Ghufron, M. A., & Nurdianingsih, F. (2019). Flipped teaching with CALL in EFL writing class: How does it work and affect learner autonomy? *European Journal of Educational Research*, *8*(4), 983-997.

Han, J., & Hiver, P. (2018). Genre-based L2 writing instruction and writing-specific psychological factors: The dynamics of change. *Journal of Second Language Writing*, *40*, 44-59.

Kartali, A., Rezaei Zadeh, M., & Alamolhoda, J. (2023). Flipped classes in Iranian higher education: With an emphasis on the benefits for learners. *Journal of Higher Education Curriculum Studies*, *13*(26), 105-134.

Khanahmadi, A., & Nasiri, S. (2022). The effect of flipped classroom approach on the Iranian high school EFL learners' performance. *Journal of Research in Techno-Based Language Education*, *2*(2), 49-61.

Khoshsima, H. (2021). The comparison of the use of data-driven learning in flipped, blended and conventional classes on students' grammar learning. *Journal of English Language Teaching and Learning*, *13*(28), 285-296. https://doi.org/10.22034/ELT.2021.48829.2462

Kirmizi, Ö., & Kömeç, F. (2019). The impact of the flipped classroom on receptive and productive vocabulary learning. *Journal of Language and Linguistic Studies*, *15*(2), 437-449.

Lee, L. (2021). Exploring learners' attitudes towards technology-enhanced flipped language instruction. *International Journal of Computer-Assisted Language Learning and Teaching*, *11*(1), 81-98.

Lo, C. K., & Hew, K. F. (2020). A comparison of flipped learning with gamification, traditional learning, and online independent study: The effects on students' mathematics achievement and cognitive engagement. *Interactive Learning Environments*, *28*(4), 464-481.

Neisi, L., Hajijalili, M., & Namaziandost, E. (2019). The impact of using inverted classrooms on promoting extensive versus intensive reading comprehension among Iranian upper-intermediate EFL learners. *Theory and Practice in Language Studies*, *9*(12), 1513-1523. https://doi.org/10.17507/tpls.0912.07

Nolen, S. B. (2007). Young children's motivation to read and write: Development in social contexts. *Cognition and Instruction, 25*, 219-270. https://doi.org/10.1080/07370000701301174

Nugroho, A., & Fitriati, R. (2021). Flipped learning instruction and pragmatic competence: A case of English for accounting students. *English Learning Innovation, 2*(1), 1-9.

O'Flaherty, J., Phillips, C., Karanicolas, S., Snelling, C., & Winning, T. (2015). The use of flipped classrooms in higher education: A scoping review. *The Internet and Higher Education, 25*, 85-95.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. McGraw-Hill, Open University Press. https://doi.org/10.4324/9781003117452

Qader, R. O., & Yalcin Arslan, F. (2019). The effect of flipped classroom instruction in writing: A case study with Iraqi EFL learners. *Teaching English with Technology, 19*(1), 36-55.

Sazegar, Z. (2025). Investigating EFL learners' perspectives on online education and its relationship with their personality traits. *Journal of New Advances in English Language Teaching and Applied Linguistics, 6*(2), 105-126. https://doi.org/10.22034/Jeltal.2024.6.2.5

Schrodt, K., FitzPatrick, E., Brown, M., & Hover, A. (2022). Examining the validity of the writing challenge task: An assessment tool for measuring writing motivation in kindergarteners. *Reading & Writing Quarterly*, 1-16. https://doi.org/10.1080/10573569.2022.2109227

Sheerah, H. (2022). The use of flipped learning as technology enhanced pedagogic tool to support EFL students' writing skills in Saudi context. *The Turkish Online Journal of Educational Technology, 21*(1), 187-201.

Shin, H. W., & Sok, S. (2023). Student satisfaction and perceived learning in an online second language learning environment: A replication of Gray and DiLoreto (2016). *ReCALL, 35*(2), 160-177. https://doi.org/10.1017/S0958344023000034

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988–2018). *American Journal of Distance Education, 33*(4), 289-306. https://doi.org/10.1080/08923647.2019.166308

Skar, G. B., Graham, S., & Huebner, A. R. (2023). Efficacy for writing self-regulation, attitude toward writing, and quality of second grade students' writing. *Frontiers in Psychology, 14*, 1265785-1265785. https://doi.org/10.3389/fpsyg.2023.1265785

Tanis, C. J. (2020). The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning. *Research in Learning Technology, 28*. https://doi.org/10.25304/rlt.v28.2319

Tarchi, C., Brante, E. W., Jokar, M., & Manzari, E. (2022). Pre-service teachers' conceptions of online learning in emergency distance education: How is it defined and what self-regulated learning skills are associated with it? *Teaching and Teacher Education, 113*, 103669. https://doi.org/10.1016/j.tate.2022.103669

Traga Philippakos, Z. A., Wang, C., & MacArthur, C. (2023). Writing motivation of college students in basic writing and first-year composition classes: Confirmatory factor analysis of scales on goals, self-efficacy, beliefs, and affect. *Journal of Learning Disabilities, 56*(1), 72-92. https://doi.org/10.1177/00222194211053238

Trautner, M., & Schwinger, M. (2020). Integrating the concepts self-efficacy and motivation regulation: How do self-efficacy beliefs for motivation regulation influence self-regulatory success? *Learning and Individual Differences, 80*, 101890. https://doi.org/10.1016/j.lindif.2020.101890

Van Alten, D. C. D., Phielix, C., Janssen, J., & Kester, L. (2019). Effects of flipping the classroom on learning outcomes and satisfaction: A meta-analysis. *Educational Research Review*, *28*, 1-18.

Waller, L., & Papi, M. (2017). Motivation and feedback: How implicit theories of intelligence predict L2 writers' motivation and feedback orientation. *Journal of Second Language Writing*, *35*, 54-65.

Yang, Y. F., & Kuo, N. C. (2021). Blended learning to foster EFL college students' global literacy. *Computer Assisted Language Learning*, *36*(1-2), 81-102. https://doi.org/10.1080/09588221.2021.1900874

Yelamarthi, K., & Drake, E. (2015). A flipped first year digital circuits course for engineering and technology students. *IEEE Transactions on Education*, *58*(3), 179-186.

Yick, K. L., Yip, J., Au, S. C., Lai, Y. Y., & Yu, A. (2019). Effectiveness of blended learning in the first year of fashion education. *International Journal of Fashion Design, Technology and Education*, *12*, 178-188. https://doi.org/10.1080/17543266.2018.1546910

Yu, Z. (2021). The effects of gender, educational level, and personality on online learning outcomes during the COVID-19 pandemic. *International Journal of Educational Technology in Higher Education*, *18*(1). https://doi.org/10.1186/s41239-021-00252-3

Zumbrunn, S., Marrs, S., Broda, M., Ekholm, E., DeBusk-Lane, M., & Jackson, L. (2019). Toward a more complete understanding of writing enjoyment: A mixed methods study of elementary students. *AERA Open*, *5*, 233285841985079. https://doi.org/10.1177/2332858419850792