Research Paper
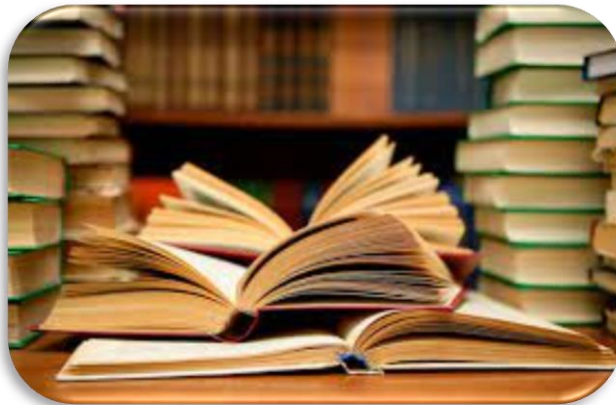
Ubiquitous Flipped Instruction and Iranian EFL Learners' Writing Bolster

Marzieh Rezaei Khatouni [1], Mohammad Javad Riasati [2*], Fatemeh Behjat [3]

[1] *PhD candidate, Department of English, Shiraz Branch, Islamic Azad University, Shiraz, Iran*
Marmarrkh82@gmail.com

[2] *Assistant Professor, Department of English, Shiraz Branch, Islamic Azad University, Shiraz, Iran*
mjriasati@yahoo.com

[3] *Assistant Professor, Department of English, Shiraz Branch, Islamic Azad University, Shiraz, Iran*
Fb-304@yahoo.com

ABSTRACT

Many researchers endeavor to solve the problems of modernizing education by rational combination of traditional methodologies with modern information and communication technologies. Against the background of the expanding use of online learning in education, also more recently flipped instruction, few of them investigated the effects of this Collaborative learning on EFL learners' writing. Fulfilling this gap is the ambitious goal of this study. This research was conducted on Iranian university students, ages 20-35, both males and females. Among many candidates, only 60 advanced students were chosen through written test by the teacher researcher. They were divided into two groups: control and experimental groups. In this study, a pre-test/post-test design was applied with two groups. After conducting the flipped instruction on the experimental group, the results showed a significant difference in the mean scores of post-test of the experimental group which was due to the effects of flipped instruction that made ubiquitous learning more palatable. However, there was not any significant difference in the mean scores of the post-test of the control group. In contrast to some limitations of the flipped instruction, this innovative approach brings good implications for EFL teachers to enhance learners' writing skills.

Keywords: Flipped instruction, Ubiquitous learning, Writing bolster

بسیاری از محققان تلاش می کنند تا مشکلات مدرن کردن آموزش را باتلفیق منطقی روشهای قدیمی با اطلاعات جدید و فناوری اطلاعات حل کنند. برخلاف پیشینه استفاده فراوان یادگیری آنلاین در آموزش،همچنین اخیرا آموزش معکوس، تعداد کمی از آنها تاثیرات این نوع یادگیری گروهی را برنوشتار دانشجویانی که زبان انگلیسی برای آنها زبان خارجی است بررسی کرده اند. هدف نهایی این تحقیق رفع این شکاف می باشد. این تحقیق بر دانشجویان دختر و پسر ایرانی۲۰-۲۵ ساله انجام شد. از بین بسیاری از دانشجویان فقط ۶۰ نفر دانشجویان سطح پیشرفته توسط محقق از طریق آزمون نوشتاری انتخاب شدند. آنها به دو گروه کنترل و آزمایشی تقسیم شدند. دراین تحقیق، با هردو گروه روش پیش آزمون/پس آزمون اجرا شد. پس از اجرای روش معکوس برگروه آزمایشی، نتایج تفاوت معناداری را درنمرات میانگین پس آزمون گروه آزمایشی نشان داد که نتیجه ی تاثیر روش معکوس بود که یادگیری در هرکجا و در هر زمان را لذت بخش کرد. اما تفاوت معناداری در نمرات میانگین پس آزمون گروه کنترل وجود نداشت. علی رغم برخی محدودیت های آموزش معکوس، این روش خلاقانه پیامدهای خوبی برای مدرسین زبان انگلیسی به عنوان زبان خارجی جهت پیشرفت توانایی های نوشتاری دانشجویان به ارمغان می آورد.

کلمات کلیدی: آموزش معکوس ، آموزش همه جا حاضر ، تقویت نوشتاری

INTRODUCTION

Ubiquitous learning or U-learning is supported by ubiquitous computing technologies. Anecdotally portable devices like laptops, cell phones, and IPad have changed the ways of life by appearing everywhere. They can improve learners' autonomy by changing their ways of personal or academic life. They changed the traditional teacher-centered classroom setting to a learner-centered one to increase learners' engagement in the classroom.

With the advent of technology a traditional instruction, where the teacher is in the center of the learning process, has become insufficient in meeting different learning demands. Innovative flipped instruction (FI) supplies these demands. Although FI, is becoming a very common approach in language teaching, it is still nascent area for empirical research. In this model which is dynamic and interactive learning, learners are not passive during the learning process. They are exposed to some videos at home then in the classroom they take time to assimilate that knowledge through discussion, problem-solving, or debates. This kind of instruction creates opportunities for learners to learn according to their own learning styles and at their own pace (Muldrow, 2013; Strayer, 2007).

According to the National Commission on Writing (September 2004), by developing technology, writing has become the most crucial aspect of human life. Since writing reinforces grammatical structures, vocabulary, and idioms that have been taught to the students, it is considered an essential language skill that leads to learners' academic success. Dyson (1995), believed in writing as a social interaction rather than merely individual activity. *Engagement* is a common element shared in learning and teaching settings, especially in an online academic context which is enhanced by flipped instruction. Many studies confirm the positive effects of FI on learners 'performance. Hung (2015) in his research found the students' academic improvement using flipped instruction since 80% of the participants in flipped classrooms engaged more than the students in traditional classes and spent more time and effort. Despite widespread research about the effects of FI on learners' accomplishments, few of them attempted to investigate the effects of the flipped classroom model on Iranian EFL students' writing skills, one of the most complicated productive skills in learners' opinions. To this end, the following research question was created:

Is there any significant difference between the effect of traditional and flipped instructional models on writing performance of EFL learners?

LITERATURE REVIEW

Today technology affects younger generations' social and even recreational lives. The educational setting has been improved tremendously by the new generation of technology. The value of learners' cell phones has improved through the storage of educational materials, PDF files, slideshows, audio, and videos to facilitate learning by convenient access to learning materials.

With the advent of new technology, learning style has progressed from electronic learning (E-learning) to mobile learning (m-learning) and from mobile learning to ubiquitous learning (u-learning). A broad definition of u-learning is "anywhere and anytime learning". This definition refers to an environment that allows learners to access the learning and teaching contexts via mobiles or any other wireless devices in any location at any time.
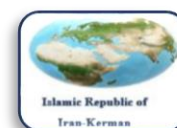
According to Yahya, Ahmad & Jalil (2010), five characteristics of u-learning based on researchers' ideas are: *Permanency*: The information remains unless the learners purposely remove it. *Accessibility*: The information is always available whenever the learners need to use it. *Immediacy*: The information can be retrieved immediately by the learners. *Interactivity*: The learners can interact with peers, teachers, and experts efficiently and effectively through different media, and *Context-awareness*: The environment can adapt to the learners' real situation to provide adequate information for the learners." These definitions assist researchers to understand the concept of u-learning to promote an effective design for language learning and teaching, also they help application designers to plan and develop beneficial applications for u-learning.

Individuality versus Collaboration in L2 Writing

According to Savasci & Kaygisiz (2018), most L2 writing is considered an individual activity rather than pair work or group work. Since Nguyen, (2015) identified writing as a "laborious process", individual writing brings many challenges for writers in each stage of the arduous writing process particularly in pre-writing, while brainstorming and organizing their ideas. Lack of any background knowledge of the given topic causes serious difficulties for novice writers in solitary writing also, they may not write fluently and accurately in individual writing, so collaborating writing helps learners to improve their L2 writing more.

Collaborative writing refers to "the co-authoring of a single text by two or more writers, where the coauthors are involved in all stages of the composing process and have a shared ownership of the text produced" (Storch, 2013, as cited in Storch, 2018, p. 1), and differs from brainstorming in pairs and/or groups and from peer feedback in terms of the active involvement of the coauthors throughout the entire writing process rather than in the pre-writing or post-writing stages (Storch, 2018).

Zhang, (2018) believes in many benefits of collaborative writing, especially increasing learning opportunities. Two perspectives of benefits of collaborative writing are: (1) a *theoretical* perspective and (2) a *pedagogical* perspective. (McDonough, 2004). Based on the *theoretical* or *sociocultural* perspective, Vygotsky (1978), believes in social interaction and collaboration as important factors in learning by highlighting the distance between the actual and the potential development (ZPD, the zone of proximal development) with appropriate assistance provided. From a *pedagogical* perspective, collaborative writing helps to improve learners' autonomy. The advantages of collaboration in writing would be summarized as:" ...enhancing student interaction, lowering the anxiety associated with completing tasks alone, raising students' self-confidence, and increasing motivation, risk-taking, and tolerance among learners" (Mulligan & Garofalo, 2011, p. 5).

Many studies indicated the flipped model as an active learning strategy (Kim, Jin, & Lim, 2015). Besides learners' engagement and active learning in this hybrid design, sending video lectures and podcasts by the instructor before class facilitates learning (Milman 2012). Instead of just presenting the information, teachers concentrate on the salient gaps that the students encounter during their learning process and help them connect the information gathered before class into meaningful chunks. (Lasry et al. 2014).

Reasons for Using the Flipped Classroom Approach

Flipping can happen because of various reasons. To begin with, students today are "digital natives" (Downes & Bishop, 2012) who have been exposed to information technology since a tender age. It is believed that our traditional institutions do not meet the needs of these 'tech-savvy' learners who think, behave, and learn differently due to the continuous and pervasive exposure to modern technology. Unlike previous generations, according to Roehl, Reddy, and Shannon (2013b), today's students have less tolerance for lecture-style ways of teaching and therefore, there is an urgent need to increase the possibility of engaging these students in the classroom. As a flipped classroom supports collaborative and active learning, it might be a better way to engage these students. Prensky (2010) pointed out that "it is not our students' attention capabilities that have changed, but rather their tolerance and needs" (p.2). Furthermore, flipping meets the needs of students of the 21st century by allowing them to have some control over time, place, path, and/or pace (Staker & Horn, 2012) to improve the 4Cs which are critical thinking, communication, creativeness and completion of homework (Ahmed, 2016). This is particularly important for low proficient L2 students who are struggling to understand the input from their lecturer in a restricted learning environment such as the classroom. With flipping, they can pause, rewind, fast-forward and/or replay the digital video lectures and learn at their own pace to meet their levels of comprehension. In class, their lecturer can work with them in a one-on-one tutorial mode (Hamdan, et al., 2013) and devote the class time to develop their critical thinking, allow them to communicate and work collaboratively with their peers and give them a platform to be creative in their work through group activities in class. They can also complete their writing homework in class without the frustration of doing it on their own at home. Additionally, with internet access widely available on most university campuses, not only can students view web-based instructions in their own time and at their own pace, but educators can also have easy access to flipped classrooms. This new approach to teaching and learning is possible as a result of technological developments.

The opponents of FCM may argue that it is not very different from the traditional language classroom (Findlay-Thompson & Mombourquette, 2014) where students are assigned passages or texts to be read at home so that in class, they can engage in discussion on the topic of the reading assignments. However, this is not an example of the flipped classroom because when a student takes a text and reads it at home, the teacher has no idea about the student's ability to understand or comprehend the material. Flipping, however, moves the amount of teacher-talk to outside the classroom through the recording of a brief lecture material that the teacher thinks the students need to be aware of (Berrett, 2012). In the traditional writing classroom, grammar is not taught explicitly, especially at the university level, which comes as a sudden shock for the low-proficient L2 students. With explicit teaching of genre structure and grammar using flipping, students are given the individualized instruction, which is one of the biggest challenges for teaching language, to build students' resources and fill the English writing gap (Myhill, Jones, & Watson, 2013). Therefore, given the nature of students today and the nature of language learning, the flipped classroom might be an effective approach to address the constraints of time, the constraints of language proficiency and the constraints of English writing gap.

Theories Supporting Flipped Classroom

In a flipped classroom, opportunity is provided for students to use their new factual knowledge and, at the same time, obtain immediate feedback from peers and the instructor so that they can correct their misconceptions and organize their new knowledge for future use.

The theoretical foundation supporting the use of flipped classroom is grounded in four main learning theories which are Constructivism (Kanjug et al., 2018), Active Learning (Roehl et al., 2013b), Bloom's Revised Taxonomy (Sarawagi, 2014), and Cognitive Apprenticeship (Wallace et al., 2014). It is grounded in an understanding of the social and intellectual learning environment. In this environment, learners actively engage knowledge in ways that act as catalysts for deep and meaningful learning (Noddings, 2002; Piaget & Inhelder, 2008). Flipped classroom is also grounded in consideration and respect for individual and diverse learning needs. Using flipped classroom allows teachers to motivate and guide learners to specific understanding via innovative methods of teaching with technology. Constructivism and Active Learning theories shed light on principles to enhance the learning process. Student-centered learning tells us that responsibility to initiate learning could be shared by the student and the instructor (Ozuah, 2016). Students must direct their learning and seek expert input from the instructor. Based on these theories, the instructor could be guided by and respond to student needs to ensure learning occurs. In a flipped classroom, this process begins with student-initiated learning outside class. At the beginning of the class meeting, after students have reviewed new topics, the instructor asks if students have questions. The instructor responds to student questions and often takes the form of mini-lectures to fill in gaps in student understanding. Learners do not passively receive information; instead, they need to draw a connection between what is learned and the current information to build their understanding and interpretation (Von Glasersfeld, 2001). Constructivist theory is defined as a framework that activates the learners' previous experiences and creates new ones to build other experiences that they can base on in the future. Scaffolding is a temporary support given to the learners by the teacher or their more knowledgeable peers in the classroom (Samana, 2013). Faraj (2015) commented that scaffolding is very important for L2 learners as this teaching strategy "met the students' needs in EFL writing, and then it has improved their writing skill, while most of them have had difficulty in the elements of writing, e.g. grammar. Learners could more confidently express their ideas in their writings" (p. 131).

According to Ritchhart, Church and Morrison (2011, p.7), educators and researchers have come to realize the "complexities of teaching and learning for understanding as opposed to just knowledge retention". If the purpose of teaching is to enhance understanding, then educators ought to move from "surface learning" which is rote memorization of knowledge and facts to "deep learning" where understanding is developed through an "active and constructive process" (Ritchhart et al., 2011, p.7). Prince (2004) defined active learning as any instructional method that engages students in the learning process. According to Zayapragassarazan and Kumar (2012), there are four essential instructional approaches that should be used in an active learning classroom. They are (a) *individual activities*, (b) *paired activities*, (c) *informal small groups*, and (d) coope*rative student projects*. These methods entail many activities such as brainstorming, both individual and collaborative writing,

cooperative learning, role-playing, simulation, project-based learning, and peer teaching (Zayapragassarazan & Kumar, 2012).

Mori (2018) pointed out that the main problem in many active learning classes is that students are expected to externalize their learning actively without being given sufficient time for preparation. In other words, students do not have the content knowledge (internalization) before they are expected to externalize their understanding in a class activity. Thus, flipped classroom is a type of deep active learning as students' understanding deepens through repeated internalization and externalization. For example, internalization happens when students view the videos. When students turn to the videos again after they still do not understand something, it is a repeated internalization. In class, they look at and discuss the essay topic (externalization). When they learn from their teacher and their classmates through discussion and activities, externalization happens. Flipped classroom provides a two-way path between internalization and externalization, allowing students to move back and forth between the content knowledge and themselves.

Creating a positive learning environment where students are satisfied and motivated can result in high behavioral engagement from both the instructor and the students (Ayedoun, Hayashi & Seta, 2019) such as completing their tasks and integrating themselves in learning (Kahu, 2013). When the instructor demonstrates high behavioral engagement and acts responsibly by providing thorough, personalized and effective feedback on the students' writing (Dawson et al., 2019, p. 33), they are more willing to participate actively and learn. It was well demonstrated in the studies of both Bouchefra (2017) and Leis, Cooke, and Tohei (2015) that timely immediate feedback contributed to the rapid improvement in the proficiency of the flipped group. The extra time spent on providing students feedback had benefitted students significantly. Students from the survey research of Fauzan and Ngabut (2018) perceived the flipped learning approach as a flexible learning environment where they were encouraged to join various learning activities such as individual writing, group writing and project presentation while having the opportunity to access online materials and videos on the internet outside the classroom. They appreciated the immediate feedback and attributed their improvement in writing to the classroom interactions and the supportive learning environment in the flipped learning classroom.

Benefits of Flipped Classroom

Proponents of FCM suggested that it is advantageous for a number of reasons. First of all, it allows students to engage with electronic resources at their own pace before in-class sessions that focus on more interactive and higher-order thinking activities such as problem-solving, discussions, and debates (Bergmann et al., 2012; Bergmann & Sams, 2012; Davies et al., 2013; Fulton, 2012; Hughes, 2012). Students benefit from out-of-class learning as they can pace their technological learning to match their levels of understanding (Kim et al., 2014). Another major benefit for teachers is to free up time and increase student engagement outside the classroom by moving the delivery of content to the out-of-class portion of the course so that they can devote their energy to observation, feedback, and formative assessments (Marshall & DeCapua, 2013). Formative assessment involves frequent, interactive checking of student progress and understanding to identify learning needs and adjust teaching appropriately (Clark, 2012). Classroom formative assessment entails three components: observation, diagnosis, and feedback. Teachers first observe the flow of classroom activities and then use their knowledge to diagnose students'
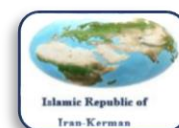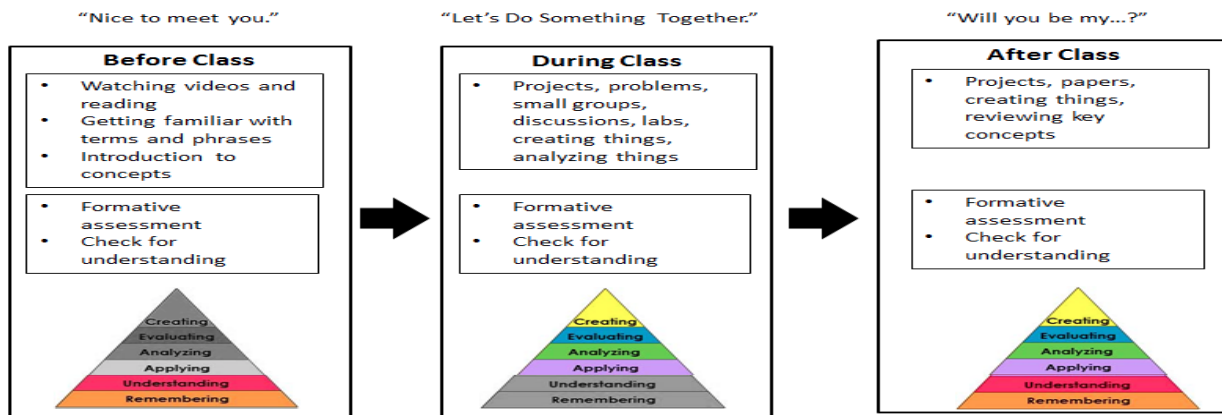
learning progress. Later the teachers use the information from the diagnosis to provide students feedback to foster their learning. Moreover, parents can get involved in their children's education since they can watch the videos together (Keene 2013).

Further benefits of a flipped classroom model include the possibility for the class to move on in the absence of both the instructor and the students (Roehl et al., 2013a). According to Roehl et al. (2013a), FCM has the potential to address situations in which students miss lectures due to illness and for students who are engaged in university-support activities such as athletics. It allows absent students to stay on track without lengthy interaction with the instructor. Similarly, it is beneficial for teachers as it allows students to move forward with course material even when the teacher is absent. This feature enables the course to proceed as scheduled without unnecessary delays.

Although flipped instruction, is becoming a very common approach in Language teaching, still there is no single flipped instruction model. Figure 2 is a model reproduced by Etale (2013) which is shown below.

Figure 2

The flipped classroom. A visual representation. Reproduced with permission of the author, Etale (2013).

Retrieved from http://i2.wp.com/etale.org/main/wp-content/uploads/2013/02/beforeduringafter-flip.png.

Empirical Studies on the Effect of Flipped Instruction on writing skill

Exploring the effectiveness of the flipped classroom model has been the subject of research by many researchers. Mirzaei and Hosseini (2017) investigated the impact of blended learning on the productive skills of EFL learners in Iranian high schools. Blended learning combines traditional F2F instruction with online learning activities, offering students a mix of in-classroom and digital learning experiences. The participants engaged in both classroom-based activities and online learning modules designed to enhance their productive language skills. The findings revealed positive outcomes of blended learning on EFL learners' speaking and writing proficiency. Students reported increased motivation and engagement with the course material, as well as improved self-regulation and autonomy in their learning process. The integration of technology into language instruction provided students with additional opportunities for practice, feedback, and collaboration, ultimately leading to enhanced language proficiency.

In another study Karimi and Khodabandeh (2020) investigated the influence of ubiquitous learning on the writing proficiency and autonomy of EFL learners. The study examined how ubiquitous learning environments, characterized by access to learning resources anytime and anywhere through mobile devices and digital platforms, affect students' writing skills and their ability to take control of their learning process. The results of the study revealed a positive impact of ubiquitous learning on EFL learners' writing proficiency and autonomy. Participants demonstrated improvements in various aspects of writing, including organization, coherence, vocabulary usage, and grammatical accuracy. Moreover, learners reported feeling more empowered and self-directed in their writing process, attributing this increase in autonomy to the flexibility and accessibility afforded by ubiquitous learning technologies. Karimi and Khodabandeh's findings suggested that integrating ubiquitous learning into EFL writing instruction can foster a more dynamic and learner-centered approach, leading to enhanced writing skill. The study underscores the potential of technology-enhanced learning environments to transform language education and empower learners to take ownership of their learning journey.

Mahmoudi and Amerian (2021) investigated the impact of FCM on the writing proficiency of Iranian learners of EFL. The study utilized a quasi-experimental design, involving a pre-test and post-test for both control and experimental groups to evaluate the outcomes. In this research, the experimental group received flipped instruction, where learners engaged with video lectures, reading materials, and writing exercises at home before class sessions. Class time was then dedicated to collaborative writing activities, peer feedback, and direct interaction with the instructor for personalized guidance. Conversely, the control group followed a traditional instructional approach, with in-class lectures and limited out-of-class assignments. The results demonstrated that the experimental group exhibited significant improvements in various aspects of writing, including organization, coherence, vocabulary usage, and overall writing quality. They concluded that flipped instruction is highly effective in enhancing the writing skills of Iranian EFL students. They recommended its broader implementation in language education to leverage its benefits in promoting active engagement, improved writing proficiency.

Also, Farhadi and Zarei (2022) investigated the impact of ubiquitous learning environments on the development of productive skills among Iranian EFL learners. The study employed a research design that involved implementing ubiquitous learning tools and resources to create a learning environment where access to educational materials is available anytime and anywhere through mobile devices and digital platforms. Through a series of experimental activities and assessments, the researchers examined the effectiveness of ubiquitous learning in enhancing learners' productive skills, the study compared the performance of participants who engage in ubiquitous learning environments to those who receive traditional instruction.

The findings of the research suggested that ubiquitous learning environments positively contributed to the development of writing skill among Iranian EFL learners. Participants exposed to ubiquitous learning tools demonstrated significant improvements in their writing ability compared to those in the control group receiving traditional instruction. The studies highlight the flexibility and accessibility offered by ubiquitous learning, enabling learners to engage in continuous practice and feedback, which leads to enhanced language proficiency learning experiences. They advocate for further integration of ubiquitous learning approaches in language education to meet the diverse needs of learners and facilitate their progress in acquiring writing skill.
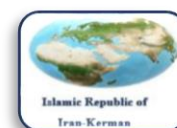
Despite many benefits of flipped instruction, there are some challenges in teaching and learning by this model. First, the inaccessibility of computers and internet. Second, the students should be motivated to watch the videos or observe a presentation. Third, videos, may not necessarily be the best tools for learning. Fourth, it is not rational to expect students to watch videos outside of the class for every subject every night. Fifth, many of the instructors don't have enough time and knowledge to construct all the online lessons that the students need to watch. (Siegle 2014). According to Roehl et al. (2013), teachers should spend about two hours to create videotaped lectures and digital slide presentations. This time-consuming procedure would be problematic for instructors.

In sum, contradictory results in the literature persuaded us to examine the effects of flipped instruction on Iranian EFL learners to know whether this method will be effective on their writing skills or not. It is hoped that the outcomes will fill the gap and help teachers and researchers to add novelty to the educational community.

METHODOLOGY

Research design

The present research was done through an experimental study design to investigate the impact of ubiquitous, flipped instruction on Iranian EFL learners 'writing skill. The participants' selection method was based on non-random convenience sampling. They were then randomly assigned to one of the two groups of experimental group which experienced ubiquitous, flipped instruction, and the control group experienced traditional instruction.

At the outset of the study, the researcher conducted initial assessments of writing skill using standardized test. Both groups went through an intervention. The instructional methods (ubiquitous, flipped for the experimental group; traditional for the control group) lasted over the 12 weeks. Ultimately, the researcher reassessed writing skill using the same instrument employed in the pre-tests.

Participants

The research was conducted on 60 advanced university students of Payam e Nour University in Shiraz. Their ages were between 20 to 35 years old. Their genders were both male and female students. They were chosen by online interview and written test since it was the pandemic situation and there were not any in-person classes at the university. About one hundred students were volunteers to take part in this study but many of them were dropped, due to low proficiency levels. The 60 selected students were divided into two control and experimental groups equally.

Materials and Instruments

The instruments used in this study were: IELTS writing rubrics to determine learners' writing band scores before and after the flipped instruction. Video lectures prepared by the instructor to handle flipped instruction, and Pre-and post-test writing to investigate the effects of flipped instruction.

DATA COLLECTION PROCEDURE

In this research the participants were selected based on their mean scores on OPT to determine their homogeneity. They were randomly categorized into two groups of experimental and control. The pre-test at the beginning of the study and the post-test after the instruction were conducted equally on control and experimental groups. The pre-test and post-test design took twelve weeks, and 24 sessions; each session lasted for 90 minutes. The students were informed about the purpose of the study at the outset of the research. A writing pre-test was held to evaluate learners' abilities in writing, among the students of two groups. In the first stage, the traditional offline teaching and examining writing was conducted on control group. After the instruction of writing by the teacher researcher, as well as teaching the process of writing (planning, drafting, revising, and editing), the teacher asked the students to write a paragraph individually about the title which was written on the board and the students wrote a paragraph through prearranged time. The teacher determined the students' band scores based on IELTS writing rubrics.

The results of traditional ways of teaching and evaluating English on control group were registered by the teacher to compare with the results of flipped instruction of the experimental group. Learners in experimental group were exposed to a video lecture by their teacher three days before the class time. Video downloaded from YouTube by the teacher based on learners' favorite subjects. Three days before each lesson, the teacher uploaded the corresponding video to a Whatsapp group which was created by the teacher, also the teacher invited all the participants of the experimental group here. The students watched the video on their own time outside the classroom. The students could able to comment on the video and post questions for the teacher. The teacher discussed the video with the students at the beginning of each session so that the teacher could figure out whether all the students had watched the video or not. During the discussion, the teacher clarified any misunderstandings and answered the students' questions. Afterward, a collaborative activity or a game was assigned to the students to do in groups, pairs, or individually.

The results taken from the experimental group were recorded by the teacher to compare with the control group. After conducting the post-tests on both control and experimental groups, independent-sample t-tests were conducted to compare and contrast learners 'performances to evaluate the impact of FI on students 'language learning and to examine whether FI had any impact on learners' writing skills or not. The results showed a significant difference in the mean scores of the control group's writing post-test and experiment group post-test.

Data analysis and Results

Table 1 shows the descriptive statistics of all the participants of the research.

Table 1

Descriptive Statistics of all participants' writing skills

N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error

	N	Range	Minimum	Maximum	Sum	Mean	Std. Error	Std. Deviation	Variance	Skewness	Std. Error	Kurtosis	Std. Error
Writing pre-test	60	2.50	3.50	6.00	258.00	4.3000	.06422	.49745	.247	.782	.309	.914	.608
Writing post-test	60	3.50	3.50	7.00	294.00	4.9000	.11072	.85767	.736	.176	.309	-.933	.608
Valid N (listwise)	60												

Table 2 shows the descriptive statistics of the control group.

Table 2

Descriptive Statistics of the control group's writing scores

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Writing pre-test	30	1.50	3.50	5.00	128.00	4.2667	.08555	.46855	.220	.301	.427	-.817	.833
Writing post-test	30	2.00	3.50	5.50	129.50	4.3167	.09433	.51668	.267	.420	.427	-.515	.833
Valid N (listwise)	30												

Table 3 illustrates the descriptive statistics of the experimental group.

Table 3

Descriptive Statistics of the experimental group's writing scores

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Writing pre-test	30	2.50	3.50	6.00	130.00	4.3333	.09689	.53067	.282	1.106	.427	1.930	.833
Writing post-test	30	3.50	3.50	7.00	164.50	5.4833	.13236	.72497	.526	-.811	.427	1.075	.833
Valid N (listwise)	30												

Table 4 shows the independent sample t-test of pre-tests of both control and experimental groups. It shows the descriptive statistics which proved that there are no significant differences in the means of these two groups and they were almost the same before the treatment.

Table 4

Independent Samples t-Test of pre-test (Group Statistics)

group		N	Mean	Std. Deviation	Std. Error Mean
Writing pre-test	control	30	4.2667	.46855	.08555
Experimental		30	4.3333	.53067	.09689

According to Table 5, the two groups of pre-tests were statistically the same and there is no statistical difference between the two groups. (Mean score=-.06)

Table 5

Independent samples t-test of pre-test (Inferential statistics)

Learners' Test for Equality of Variances

t-test for Equality of Means

Writing pre-test	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Std. Error Difference			95% Confidence Interval of the Difference			
		Lower		Upper		
Equal variances	.080	.778	-.516	58	.608	-.06667
.12925	-.32538	.19205				
			assumed			
Equal variances	-.516	57.124	.608	-.06667	.12925	-32547
.19214						
			not assumed			

According to table 6, the mean score of control and experimental groups were 4.31 and 5.48 in post-test, respectively. In order to find if this difference is statistically significant or not an independent t-test was run which result is reported in table 7.

Table 6

Independent samples t-test of post-test (Descriptive statistics)

Group Statistics					
	group	N	Mean	Std. Deviation	Std. Error Mean
Writing post-test	control	30	4.3167	.51668	.09433
	experimental	30	5.4833	.72497	.13236

As table 6 implies, there was a significant difference in the mean scores of control group's writing post-test (M=4.31, SD=.51) and experiment group post-test (M=5.48, SD=.72); t (58) = -7.17, p = .000. Table 7 shows that the independent sample t-tests of post-test, control group, and experimental group are not statistically difference. This means that this difference is meaningful. That was due to the positive effect of flipped instruction on learners in the experimental group. So, the null hypothesis which assumed that there was not any statistically significant difference between traditional and flipped instructional model in writing performance of Iranian EFL learners, was rejected.

Table 7

Independent Samples t-test of post-test (Inferential statistics)

		Learner's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Writing post-test	Equal variances assumed	1.513	.224	-7.178	58	.000	-1.16667	.16253	-1.49202	-.84132
	Equal variances not assumed			-7.178	52.418	.000	-1.16667	.16253	-1.49276	-.84058

DISCUSSION AND CONCLUSION

This study examined the use and effectiveness of flipped instruction on learners' writing progress. As shown in the current study there was no significant difference between the experimental and control groups' writing skills according to pre-test results. Although there was a significant difference between the two groups in the post-test. It was due to the effects of flipped instruction by the teacher that created some chances for the students to collaborate with their friends and teachers to ask their questions at different times in different places beyond the time of their classes.

This study confirmed Muldrow's research (2013) that FI helps learners to learn according to their own pace and learning styles which leads to learning success. Also, it validated Bergmann's reviewing research (2012) about the benefits of flipped instruction that caused learners' achievements due to having more chances to ponder and work on their projects individually and collaboratively. This kind of instruction increased learners' engagement and collaboration and changed passive learners to be active in their writing learning process. This engagement and satisfaction were signified by many students' improvement in their grades on the writing test who participated in flipped classroom instruction. These findings were in line with the results of Mireille's (2014) study, which found that FCM could contribute to improving learners' grades on English writing skill.

The results of this study is also consistent with studies conducted in Turkey that investigated flipped classroom instruction in the Turkish EFL context (Ekmekci, 2017). The findings showed that the students who studied under the new model of teaching outperformed those who studied under the traditional teaching method. The current results also are in accordance with a study conducted in Japan by Leis et al. (2015), who flipped their English writing teaching classroom to investigate the effectiveness

of flipped instruction. In sum, it has been proven that flipped instruction results in substantially greater enhancements in the writing abilities of EFL learners. Additionally, the current research aligns closely with the findings of Mahmoudi and Amerian (2021) and Karimi and Khodabandeh (2020), reinforcing the effectiveness of the flipped instructional model in improving writing skills among Iranian EFL learners.

While the current study, along with the studies by Mireille (2014), Ekmekci (2017), and Leis et al. (2015) demonstrated positive outcomes for the flipped instructional model in EFL contexts, it is important to consider contrasting studies to gain a holistic view. For instance, a study by Zainuddin and Halili (2016) reviewed various flipped classroom implementations and found that while many studies reported positive outcomes, some highlighted challenges such as students' initial resistance to the new model and the increased preparation time required for instructors.

Additionally, a study conducted by Thai et al. (2017) in a non-language learning context found that the flipped classroom model did not always lead to significant improvements in learning outcomes. Their research suggested that the effectiveness of flipped instruction might depend on several factors, including the subject matter, the quality of the instructional materials, and the student's learning preferences.

Flipped instruction paved the way for successful learning for those with less time to engage in in-person classes by utilizing technology. Accordingly, it helps learners with low self-confidence to work on the projects before their class by pre-shared videos. It aids learners with high anxiety by using ubiquitous instruction to relieve their fear and anxiety of face-to-face discussions. This study helps English teachers deal with the difficulties of collaborative endeavors with the aid of ubiquitous technology. Since employing absolute technology in the teaching and learning community, brings some problems for teachers and learners, especially in the EFL context, teachers are on the way to re-conceptualizing their teaching methods, thus flipped instruction is a paramount way of teaching to invert traditional and line teaching modes. Besides many limitations of this study which was conducted in Covid-19 pandemic situations, teachers encountered some problems in choosing videos due to different learners 'interests to motivate them and attract their attention. This issue was the main concern of the instructor. The other major limitation for the students was inaccessibility to the internet in some areas of our country which caused some problems for teachers and the students.

In light of the findings of the current study, further research can be done based on the following suggestions:

In the case of problems accessing the internet by the students, course contents should be provided in the form of CD, DVD, or other portable devices.

Both teachers and students should be informed about this instruction and motivated to use technology.

Further research will be done based on different skills in English and the levels of the students in different courses.

Future studies will be conducted to examine learners' beliefs about this model or their parents' engagements and opinions.

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Biodata

Ms. Marzieh Rezaei Khatouni is a PhD candidate at Islamic Azad University, Shiraz branch, Iran. She has been teaching language testing, research methodology, teaching language methodology, translation and general English at graduate level. She has published three IELTS books also, she has published some articles in international and national journals. She presented her papers in some national conferences.
Email: *marmarrkh82@gmail.com*

Dr. Mohammad Javad Riasati (corresponding author) is an assistant professor at Islamic Azad University, Shiraz branch, Iran. His area of interest is language education, critical thinking and academic writing performance. He is the director in charge of Journal of Studies in Learning and Teaching English.
Email: *mjriasati@yahoo.com*

Dr. Fatemeh Behjat is an assistant professor at Islamic Azad University, Abadeh branch, Iran. Her area of interest is blended and collaborative learning, mother tongue in EFL context, emotional intelligence and motivation and vocabulary learning.
Email: *Fb-304@yahoo.com*

Islamic Republic of
Iran-Kerman