Exploring the effect of flipped classroom on EFL learners' reading achievement and self-efficacy

Jalil Fathi[*]
(corresponding author)
Assistant Professor in TEFL, University of Kurdistan, Sanandaj, Iran
Email: j.fathi@uok.ac.ir

Jamal Barkhoda[**]
Assistant Professor of Educational Management, University of Kurdistan, Sanandaj, Iran
Email: barkhoda.jamal@yahoo.com

ABSTRACT
The body of research on second language (L2) teaching has documented and reported the usefulness of flipped instruction in enhancing foreign language development. Nevertheless, little research has explored the impact of flipped teaching on L2 reading comprehension. The aim of this study was to investigate the effect of flipped classroom on EFL learners' reading achievement and self-efficacy. In so doing, a total number of 48 Iranian EFL learners served as participants and were randomly assigned to an experimental group (N = 25) and a control group (N = 23). Employing a quasi-experimental design, the researchers utilized an experimental group that received flipped instruction via electronic materials and a control group that were instructed based on the regular method for a period of three months. The reading component of Cambridge Preliminary English Test (CPET) and the Reading Self-Efficacy Questionnaire (RSEQ) were administered to measure the reading comprehension reading self-efficacy of the participants. The outcomes of the study revealed that the students in the flipped group substantially performed better than those of the non-flipped group regarding both L2 reading achievement and reading self-efficacy. Overall, it may be concluded that EFL practitioners can incorporate flipped instruction into their reading classrooms in order to aid students to gain both confidence and competence in doing reading tasks more properly.

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[*] Jalil Fathi has received his Ph.D. degree in TEFL from Allameh Tabataba'i University, Tehran, Iran. He is currently an assistant professor at University of Kurdistan.
[**] Jamal Barkhoda is currently an Assistant Professor of Educational Management at University of Kurdistan, Sanandaj, Iran

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Fathi, J., Barkhoda, J. (2021). Exploring the effect of the flipped classroom on EFL learners' reading achievement and self-efficacy. Foreign Language Research Journal, 11 (3), 435-452.

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Introduction

English teaching has taken precedence throughout the world. However, methods of instruction have not been updated so that they can meet the dynamic needs of various learners, leading to English teaching as a traditional element of curriculums. Creative practitioners have found pedagogic procedures in order to enhance language learners' motivation and their learning quality (Johnson, Becker, Estrada, & Freeman, 2014; Rahimi & Fathi, 2021).

We might remember our school days when we were lazily sitting and reluctantly listening to our instructors who were just delivering lectures in front of us. Being unable to get engaged in the classroom learning, students were just passive, bench-bound listeners who were required to just receive information in such teacher-fronted contexts.

But the rapid development of technology in learning resulted in the advent of a new method of teaching, known as blended learning. This innovative type of instruction combines the traditional teaching with online activities, providing a cooperative, learner-fronted milieu (Bonk & Graham, 2006). Considered as a key type of blended instruction, flipped instruction provides the learners with greater learning time prior to, while and after the class time because of its reordered learning mechanism (Bergmann &

Sams, 2012; Kushairi & Ahmi, 2021; Fathi, Naghshbandi, & Mohamadi, 2021).

Flipped mode of instruction, as an innovative pedagogic approach, inverts classroom instruction and take-home assignments. In traditional teaching, pupils learn new information inside the classroom through teacher's lecturing, and do the exercises at home as assignments. However, flipped classroom inverts the order so that the learners learn new information in advance through watching teacher-made videos and then get engaged in doing the assignments inside the class where the instructor can guide students and give them feedback. In other words, flipped instruction provides the learners with input materials such as video lectures either prepared by the instructor or taken from the websites before the class and the time of the class is assigned to cooperative tasks and conversations (Bergmann & Sams, 2012; Chen Hsieh, Wu, & Marek, 2017). As learners get ready prior to class by covering the content of videos, they will be able to acquire new knowledge at their own speed since they can pause, backtrack, and replay the videos. This provides the students with the opportunity to get more exposed to materials and other learning sources, thereby consolidating their learning.

The learning materials can then be studied and practiced more precisely during in-class tasks (Chen Hsieh et al., 2017). The nature of flipped instruction is similar to the

teaching procedure introduced by Morrison, Ross, Kalman, and Kemp (2011) since the teacher does several tasks, such as selecting the content and activities, designing the lessons, and developing the media required for instruction.

This type of instruction can be considered as an effective instructional technique for useful employment of class time, further interaction, learner freedom and involvement, chances for active learning, adaptability to revise materials, increased practice time, and fostering pair work, cooperation and collaborative learning (Davies, Dean, & Ball, 2013; Ferreri & O'Connor, 2013; Polat & Karabatak, 2021; Strayer, 2012).

The beneficial influences of flipped instruction have been acknowledged by several practitioners (Bergmann & Sams, 2012; Lockwood & Folse, 2014; Strayer, 2012; Zhu, 2021). However, further empirical studies are needed to ensure if this type of instruction is able to really enhance learners' language learning. The appropriateness of flipped teaching for second language (L2) instruction seems to be warranted as this method is in line with recent developments in language learning theories.

Mehring (2016) champions the plausible significance of flipped instruction in L2 learning contexts by providing a communicative and learner-fronted setting,

and recommends different devices for flipped instructions in L2 contexts. Flipping the classroom allows for peer assessment, collaborative learning, further engagement, and helpful conversations among pupils, which results in encouraging them to internalize their own knowledge and take the agency of their learning (Butt, 2014; Hawks, 2014; Lee, 2021; Talbert, 2012). Providing learners with direct teaching before attending the class might enhance consciousness-raising and boost more in-depth learning, as highlighted by cognitivist approaches in education (Leow & Mercer, 2015). The flipped classes' fundamental objective of giving class time to significant cooperation is consistent with the position taken in socio-social theory that learning occurs during regulation as well as mediation and is advanced with scaffolding learning and boosting students' responsibility (Lantolf, 2011). Unlike ESL contexts, EFL learning settings offer few chances to utilize English beyond the class walls. In addition, much class time is spent uselessly by educators who clarify ideas, typically through giving lectures, as students remain reticent and there isn't adequate collaboration (Littlewood, 1999). As a result, making input materials can help language students in delivering output prior to attending the class (Pica, Lincoln-Porter, Paninos & Linnell, 1996).

Overall, the flipped teaching method in English contexts is claimed to enhance L2 learners' performance (Hung, 2015; Jiang et

al., 2021; Mehring, 2016). Nevertheless, as a remarkably novel technique, few empirical studies have been carried out to explore the impact of flipped instruction (Goodwin & Miller, 2013; Lee & Wallace, 2018), particularly on EFL reading comprehension competencies. In addition, some research evidence has questioned the usefulness of this type of instruction over the conventional instruction (McClelland, 2013).To fill these gaps, this study examines the effect of the flipped model approach in an EFL reading course on reading achievement and reading self-efficacy. More precisely, it intended to address the following research questions:

1. Does flipped classroom significantly improve reading achievement of Iranian EFL learners?

2. Does flipped classroom significantly enhance reading self-efficacy of Iranian EFL learners?

Literature Review

Parallel with the development of computer technology, the flipped instruction as an innovative type of blended learning was suggested as an effective approach for learning contexts in which educators were able to save some class time by assigning the key learning materials outside the classroom. As far as EFL context is involved, flipped instruction is considered as a means of improving communicative tasks within the class by helping the students get ready before the class time. Relatively few

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studies have investigated flipped instruction in EFL settings.

One of the latest studies has zeroed in on the impacts of flipped instruction on EFL students' learning outcomes in an English course in Taiwan at a college level where Web Quests were utilized as the internet learning devices (Hung, 2015), the effect of LINE Smartphone application in learning a wide range of English idioms (Chen Hsieh et al., 2017), the performance of intermediate-level English learners without any online platforms (Hung, 2015). O'Flaherty and Phillips (2015) revealed much evidence of improved academic performance and students' satisfaction in a flipped classroom. They claim that flipped classroom has the capacity for building lifelong skills for 21st-century students in both under-graduate and post-graduate education. Guo (2019) maintains that flipped instruction is an instructional method which prompts learners' active engagement, enhances support from instructors and peers to do the assignments, and provides greater free time in class. This type of instruction underscores learners' preparation prior to class time. It necessitates blended learning—an amalgamation of traditional in-class learning and online or remote learning by employing existing instructional videos from different websites (Hung, 2015). The flipped teaching appears to allow instructors to eliminate the unnecessary and laborious section of instruction to provide them with

further time to concentrate on learner-fronted and active learning.

The literature has reported various benefits associated with flipped instruction. The key advantage of flipped instruction is concerned with adaptability that allows students to learn easily at their own pace anytime by studying the previously created contents before the class (Karabulut-Ilgu et al., 2018). As far as Iranian EFL context is concerned, Abaeian and Samadi (2016) investigated the effect of flipped instruction on the development of Iranian EFL students' L2 reading comprehension with various degrees of competency. In so doing, the study was carried out with 100 EFL female students. The findings indicated that the flipped group performed significantly better than the control group. Overall, it was found that the flipped instruction was more useful for the intermediate learners than the advanced ones.

In another study, Abeysekera and Dawson (2015) revealed that as the flipped instruction requires both in-class and outside-the-class tasks, it makes the instruction become individualized so that it can meet the needs of various learners with different proficiency levels, which in turn reduces the cognitive load of learning. During a flipped instruction, learners work jointly on the learning contents which have been already prepared and they are required to acquire the main ideas and process the necessary information. Learners with various ability levels can apply and internalize what they have learned in flipped classroom through negotiation of meaning. In the group learning activities of the flipped classroom, learners do the learning tasks collaboratively via out-of-class and inside-class tasks to minimize the difficulty of learning (Tucker, 2012). The activities which are done outside the class may be presented online via the platform of WebQuest to allow convenient access to previously-created learning materials.

In another study, Hsieh, Wu, and Marek (2016) examined the advantages of the flipped instruction for EFL students. 48 English-major students served as the participants. They were the learners of two oral skill classes who were trying to learn different English idioms. To this end, a mixed methods study was employed. The data were gathered using idioms, questionnaires, observations, and semi-structured interviews. The analysis of the quantitative and qualitative data indicated that the flipped instruction encouraged the learners to learn English idioms and enhanced their oral competencies. Additionally, it contributed to developing the idiomatic knowledge and oral skill of participants. Also, flipped instruction enhanced participants' engagement in the learning activities.

Likewise, Wu, Hsieh, and Yang (2016) probed the usefulness of a flipped instruction supported by an online learning

community on EFL students' oral skills. In addition, learners' attitudes were explored. In so doing, 50 university students in Taiwan served as the participants in this research. Data collection was carried out through giving various techniques such as teats, self-report scale, and interview. After data analysis, the findings indicated that flipped instruction improved engaging and effective cooperation. It also improved the learners' oral skills, leading to greater involvement in cooperative learning tasks, such as telling stories, dialogues, conversations, and collective presentations.

In another study, Hung (2015) integrated flipped teaching into language classrooms using a WebQuest active learning strategy. The purpose of this study was to explore the possible effects of flipping the classroom on English language students' academic performance, learning attitudes, and degree of participation. The results revealed that the structured (i.e. presenting video clips in WebQuest, as a structured learning environment) and semi-structured (i.e. presenting video clips in TED-Ed, as a semi-structured video sharing platform) flipped lessons were more effective than the non-flipped lessons. Furthermore, both the structured and semi-structured flipped lessons helped students achieve better learning outcomes, developed positive attitudes towards their learning experiences, and invested more effort in the learning process.

Kim, Park, Jan, and Nam (2017) explored the impacts of the flipped instruction in a content-centered pedagogic setting by exploring L2 students' discourse in flipped and non-flipped instruction with regard to (a) degree of participation, (b) content of messages, (c) reasoning competencies, and (d) teaching patterns. Students in two intact classes took part in the research and they were instructed based on either a flipped teaching or a non-flipped, conventional teaching. The students of the flipped group were given an online lecture prior to class time and partook in group discussion inside the class. Nevertheless, the participants of the conventional non-flipped group listened to a lecture delivered by the teacher inside the class and then immediately took part in group conversations in class. The students' conversations were sound recorded. Quantitative and qualitative investigations demonstrated no distinction in participation rates; nevertheless, the participants in the flipped group gave greater feedback regarding learning process and abstract mental competencies and demonstrated further conversational patterns than the participants of the conventional group. Overall, the findings revealed that flipped instruction significantly enhanced higher-order thinking and L2 learning process.

In a study more related to the purpose of the current study, Namaziandost and Çakmak (2020) investigated the effect of flipped instruction on learners' self-efficacy. To this

end, fifty eight intermediate students were randomly assigned to a flipped group and a non-flipped group. Self-efficacy scale was administered to collect the data. The findings revealed a substantial improvement in self-efficacy of the flipped group. In another study, the impact of the WebQuest-oriented flipped instruction on the L2 students' inferential reading comprehension competencies was investigated. The participants were a group of learners who enrolled in an IELTS preparation course. The findings revealed that the flipped mode of instruction significantly contributed to improving learners' inferential reading comprehension abilities. Also, the findings of semi-structured interviews indicated that the participant generally held positive perceptions of the flipped instruction.

Method

Participants

To achieve the objectives of this study, a sample of 48 Iranian EFL students took part in the current research. The sample, in fact, was comprised of two intact groups from a private Iranian language institution. The participants included both male and female learners with their age ranging from 20 to 25 with the average age of 23.42. The two classes were randomly assigned to an experimental (flipped) group (N = 26) and a control (non-flipped) group (N = 24). The flipped group was instructed via flipping the reading course whereas the non-flipped

group underwent the conventional reading teaching. The aim of the EFL course was to enhance participants' EFL reading skills. The proficiency level of students was intermediate. To ensure the homogeneity of the participants regarding general English skills, "Oxford Placement Test" (OPT) (Allan, 2004) was given to the students of the flipped and non-flipped groups.

Instruments

English Proficiency Test

Because global English ability of the students influences their reading comprehension, the EFL learners were first homogenized regarding their English proficiency. Consequently, OPT was administered to both flipped and non-flipped groups to examine the homogeneity of the learners. OPT is considered as a useful measure for assessing the English language ability of various learners with different ability levels (Allan, 2004). OPT includes a 6 rating scale: students whose scores lie between 0-17 are categorized as basic (A1), and students with the scores falling between 18-29 are labeled as elementary (A2). Testees with scores lying between 30 and 39 fall at the lower intermediate group (B1). Those with the scores of 40-47, are viewed as upper intermediate (B2) and the learners with the scores 48-54, and 54-60 are considered as advanced (C1) and very sophisticated (C2) levels. The internal consistency of OPT as assessed by

Cronbach's alpha was reported to be 0.84 in this research.

Reading Self-Efficacy Questionnaire (RSEQ)

To measure L2 reading self-efficacy of the EFL learners, Reading Self-Efficacy Questionnaire (RSEQ), taken from Ghezlou, Kordi, and Nasri (2014), was administered to the participants. This questionnaire was developed based on Li and Wang"s (2010) Reading Self- Efficacy Questionnaire, Ghonsooly and Elahi"s (2010) EFL Learners" Self-efficacy in Reading Comprehension, and Horwitz"s (1988) Beliefs about Language Learning (BALL) Reading Strategies Questionnaire. RSEQ includes 16 items in Likert-scale format varying from (1=strongly disagree) to (5=strongly agree). The reliability and validity of this scale has been approved in Iranian context (Fathi & Soleimani, 2020). The reliability coefficient of RSEQ in this study, calculated by Cronbach's alpha, was estimated to be 0.80 in the current research.

Procedure

The selected participants were randomly divided them into two groups, namely; one experimental group (flipped classroom) and one control group (traditional classroom). Before beginning the intervention, the EFL students were informed of the purpose and procedure of the study and were assured that the collected data remain confidential. In session one, the reading pretest and reading

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self-efficacy scale were given to assess the reading comprehension and self-efficacy of the learners of both groups before conducting the treatment. The experiment lasted for about 13 weeks.

For the flipped classroom, the e-learning (electronic version) materials were employed whereas the printed format of materials was used for the traditional face-to-face classroom. However, the chosen reading texts were the same in both classes. The only distinction between the flipped and non-flipped groups was the lack of availability of the online materials for the non-flipped group. The sessions were held twice per week.

The experimental group was provided with a presentation of the teaching resources and exercises, an explanation or clarification of the guidelines in the form of pre-constructed pedagogical videos, voice annotated PowerPoints, and other electronic tools. These students were also provided with helpful links to reliable websites about the lessons' contents before attending the class. Telegram and WhatsApp were used as platforms for posting course materials in the flipped group. As a result, flipped group participants were endowed with this opportunity to have access to the materials and contents before coming to the class, providing them with more free time to have cooperation with their peers in the learning process and carry out their reading tasks. The students in the flipped group were also

provided with the audio file of each text before the class through Telegram or WhatsApp groups.

In addition, the students of the flipped group were asked to go through the reading passages before attending the class. Furthermore, the participants were required to listen to the audio files of the passages numerously at home through their cell phones. Once the learners came to the class in the flipped group, the instructor asked them some information pertaining the passages, raised some questions and gave them a test. The teacher also randomly requested some learners to read a part of the passage and mention its main idea. As the flipped instruction is considered as a kind of blended learning where "teaching" precede the time of class, the EFL students of the flipped group were exposed to the instruction before coming to the class. In other words, the instructor in the flipped group facilitated the learning process.

After teacher's initial discussion, the learning content were given in the group and some tasks were carried out. The tasks included brainstorming, questions /answers, identifying the main idea, and simplifying the texts for the learners. During class, the teacher explained the new points and information about reading skills in the sent videos or PowerPoints. The instructor also created and delivered a summary of the outcomes and question/issues raised in every session to the students. After the session, the students created small groups and provided a summary or report about what they had acquired and shared it with other group members at the class as a overall overview of the learning materials.

Nevertheless, the students of the non-flipped group were instructed conventionally in which all the instruction was carried out inside the class. Prior to the instruction of each passage, the instructor activated the schema of students by providing background information for the learners and after the instruction of each passage, the learners were requested to respond to some questions regarding the text. This presses lasted until the final session. As previously stated, the conventional face-to-face method of reading instruction was used for the non-flipped group in which the printed format of teaching material was employed to develop their reading comprehension competencies.

At the end of the course, to assess the participants' reading comprehension and their level of self-efficacy in reading after the instruction, the second test of reading and reading self-efficacy scale were given as the posttests of the study.

Data Analysis

To address the research questions of the current research and to explore the impact of the flipped instruction on the participants' reading achievement and reading self-

efficacy, two one-way between-groups analyses of covariance (ANCOVA) were conducted to explore the impact of the two kinds of L2 interventions (i.e., traditional versus flipped) employed on the two dependent variables in this study. As stated by Pallant (2013), ANCOVA is employed when a pretest/posttest design is used (e.g., comparing the impact of two different treatments, taking before and after measures for each group). Pretest scores are considered as a covariate to 'control' for previous discrepancies among the groups. As far as ANCOVA is concerned, the kind of intervention (i.e., flipped or traditional) was the independent variable, and the scores on reading comprehension test given at the end of the research were the dependent variables. Participants' scores on the pretests of each instrument were regarded as the covariate.

Before conducting ANCOVAs, preliminary checks were performed to make sure that the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate have not been violated.

4. Results and Discussion

4.1. Results

Concerning the data analysis for the OPT scores, an independent-samples t-test was performed to make a comparison between the experimental and control groups. As indicated in Table 1, the findings revealed

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that no statistically significant difference was found in the OPT scores for the flipped group (M = 46.86, SD = 11.28) and the non-flipped group (M = 47.95, SD = 11.16); t (48) = -.618, p > 0.05), indicating that the two groups were of the same level of global English proficiency before beginning the treatment.

Table 1

Results of the OPT for Each Group

Groups	M (SD)	T	Sig.
Experimental	46.86 (11.28)	-.618	.531
Control	47.95 (11.16)		

To investigate if flipped classroom significantly enhanced reading achievement of Iranian EFL learners, ANCOVA was carried out. As observed in Table 2, the reading mean score of the flipped group was 17.84 as assessed by the pretest and it rose to 25.34 on the reading posttest. Similarly, the mean score of reading pretest for the non-flipped group was 16.50, which increased to 20.29 on the posttest. Thus, it appears that both interventions were effective in boosting reading achievement of the participants in both groups.

Table 2

Descriptive Statistics for Pre- and Posttest Scores

Groups

Scales Pretest Posttest

M   SD   M   SD

Experimental

Control   Reading

Self-efficacy

Reading

Self-efficacy   17.84

44.69

16.50

46.58 4.77

12.14

4.69

11.06 25.34

56.15

20.29

49.91 5.58

12.23

5.37

11.13

However, after adjusting for the pretest scores of reading comprehension, there was a statistically significant difference between the two groups on scores of L2 reading posttests, $F(1, 47) = 17.01$, $p = 0.000$, partial eta squared $= 0.266$) (see Table 3). This result indicates that the students in the flipped group enhanced their L2 reading comprehension substantially more than the participants in the non-flipped group, pointing to the fact that flipped instruction has been effective in enhancing the reading comprehension of the EFL participants.

Table 3

The Results of ANCOVA on Reading Achievement

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate (pretest)	961.671	1	961.671	93.545	.000	.666
Between-subjects	174.901	1	174.901	17.013	.000	.266
Within-subjects	483.172	47	10.280			

Concerning the research question two and exploring the impact of the flipped classroom on the reading self-efficacy, the descriptive statistics (see Table 2) demonstrated that the mean score of the flipped group for reading self-efficacy was 44.69 in the pretest and it rose to 56.15 on the posttest of reading self-efficacy. Similarly, the reading self-efficacy mean

score for the non-flipped group was 46.58 on the pretest and this value reached 49.91 on the posttest. Therefore, it can be concluded that both interventions aided EFL learners in improving their reading self-efficacy. However, after adjusting for the pretest scores of reading self-efficacy, the results of ANCOVA (see Table 4) revealed that there a statistically significant difference was observed between the two groups on posttest scores of reading self-efficacy, $F(1, 47) = 3.94$, $p = 0.000$, partial eta squared $= 0.815$). This result revealed that flipped instruction substantially improved reading self-efficacy of EFL participants.

Table 4

The Results of ANCOVA on Reading Self-Efficacy

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate (pretest)	6403.807	1	6403.807	1623.308	.000	.972
Between-subjects	815.980	1	815.980	206.844	.000	.815
Within-subjects	185.411	47	3.945			

Discussion and conclusion

This research intended to examine the impact of a flipped classroom on EFL students' reading achievement and reading self-efficacy. The findings of the study revealed that flipped instruction significantly contributed to improving the reading achievement of the participants. In addition, it was found that the students of flipped group significantly performed better than those of the non-flipped group on the post-test of reading self-efficacy. These findings might be attributed to various reasons. First, the finding might be justified in light of the instructional value of flipped teaching contexts. The learners in the flipped class were given the teaching content before the class, and the class time began with cooperation and interaction between the students and the teacher. Since the students had watched the instructional videos and online resources prior to attending the class, they had improved their reading skills. But, in the non-flipped group, the EFL participants carried out their assignments individually after the class. In other words, the assignments were done autonomously. In this group, there was no interaction with the instructor, other learners, and the content outside the class. Moreover, the learners were not usually able to self-assess their activities. These results are in line with the studies carried out by Adnan (2017), Amiryousefi (2017), Chen Hsieh et al. (2017), Fathi and Rahimi (2020), Hung (2017), Lee and Wallace (2017), and Wagner and Urhahne (2021) in

which learners in the flipped class performed better than those in the non-flipped class.

The beneficial influence of flipped classroom may be justified in light of what Silberman (1996) named as active learning in which actuating higher-order mental activities including critical reflection, problem-solving, and decision-making while doing learning tasks can motivate L2 learners to relate their previous knowledge to their current learning and processing. As a result, such variables can result in better learning performance. Regarding the flipped instruction, the inverse nature of the instruction encouraged the participants to cover the learning materials in the form of video lectures before coming to the class. In fact, the participants in the flipped group had studied the learning materials at home since they had been endowed with the opportunity to watch the videos frequently as they wished (Faulkner & Green, 2015). This is precisely interconnected with both inside- class and outside-class activities, which provide the =learners with the ability to acquire language at their convenient time and place. Furthermore, in contrary to the traditional group, the flipped classroom provided the EFL participants with further opportunities to have interaction with the learning materials, their classmates, and the teacher (Mehring, 2014), as they were able to see the videos as much as they could and at their own convenient time and became ready for the class activities (Mok, 2014).

Unlike the inactive role which the students might play in Iranian language contexts, the role of students in the flipped instruction is very active. One other main variable for the better performance in the flipped instruction is the high-quality time which is devoted to the exercises and teacher feedback inside the class. The instructor of the non-flipped classroom might have assigned greater time to explaining the reading texts and answering the comprehension questions inside the class. Therefore, less time has been given to giving feedback to students. On the other hand, the students of the flipped group were given further time to do the tasks that enhanced students' reading comprehension.

Additionally, it can be argued that the flipped group became more engaged with learning materials inside and outside the classroom since the learners of the flipped classroom were given the chance to go through the materials before coming to the class. Then they began the inside-class time with collaborative dialogues and group activities. This is in line with Wen's (2008) model of out-put driven/input-enabled which points to the fact that when L2 classes initiates with output, students become more prompted to acquire the language and to actively apply what they have learned.

Furthermore, the findings of this study indicated that the participants of the experimental group significantly outperformed those of control group in

reading self-efficacy, suggesting that the reading strategy instruction contributed to improving L2 reading self-efficacy of the Iranian EFL learners. This is in line with the findings of some studies which found significant improvements in self-efficacy of the students after experiencing flipped classrooms (Enfield 2013; Lai & Hwang 2016; Namaziandost & Çakmak, 2020). In the light of this finding, it can be argued that the availability of videos and materials before attending the class might have given further competence, confidence, and self-assurance to the participants of the experimental group. In addition, further interaction and feedback during the class time could have provided the students with further experiences of mastery, verbal persuasion, and favorable self-affirmation, all of which have contributed to increasing the students' reading self-efficacy. In other words, this self-efficacy was grounded in students' sense of further agency while doing the tasks and the assignments. In other words, the flipped instruction might have improved EFL learners' motivation and engagement in the course content. This is in line with Lee and Wallace's (2017) findings in which it was revealed that the learners in the flipped course had further engagement in the classroom tasks than the learners in the control group.

In the same vein, the presentation of the materials about reading strategies in the form of video clips before the class has

given students a kind of vicarious experience for the L2 readers. This vicarious experience gained from observing the videos and other online resources might have increased reading self-efficacy of the participants. Additionally, cooperation among the students can increase self-efficacy of the participants. From Strayer's (2012) perspective, the greater achievement of the flipped group can be ascribed to the chances for the students to have collaboration in doing tasks and to have further cooperation via interactions. Furthermore, in case learners have less responsibility to monitor and direct learning multimedia content, their mental competencies may be stretched. Conversely, having access to learning content before the class time and studying it at one's convenient time might have provided the students with the opportunity to control their own learning and adjust the pace and competence required for more favorable learning outcomes, thereby increasing their sense of efficacy. This study offered similar outcomes to that of Kurt (2017) in which the flipped instruction led to greater degree of self-efficacy of pre-service instructors who took a classroom management course in comparison with their colleagues who took an identical conventional course. Furthermore, as Hamdam et al. (2013) pointed out, students in a flipped classroom "explore topics in greater depth and creating richer learning opportunities" (p. 5). This kind of meaningful learning atmosphere

may inculcate a strong motivation in succeeding to carry out tasks, which in return can foster heightened self-efficacy.

Taken together, the results of the present research might offer a number of pedagogical implications. First, the findings demonstrated that flipping the classroom is a useful method to improve L2 learners' reading comprehension via their further engagement in collaborative activities and conversations. As a result, the integration of flipped instruction into the regular EFL classes courses may contribute to enhancing the L2 learning in general and reading comprehension in particular. In addition, flipped teaching might have given sufficient opportunities for EFL students to employ the language in a more communicative way. In other words, this type of instruction has created a motivating learning context in which educators not only take the responsibility of monitoring their pupils' learning, but also prompt, involve, and organize their learning. Apart from the significant gains in L2 reading comprehension, the students were also endowed with a sense of greater comfort, competence, and confidence in their EFL reading comprehension competencies, all of which contributed to improving the reading self-efficacy of students. Taking the results of this study into consideration, policymakers can create an effective learning context for L2 instructors and learners so that they can better practice their reading competencies via flipped teaching.

L2 teacher educators may also prompt practitioners to employ flipped instruction, and also notify the instructors of the techniques and strategies required to run a useful flipped reading course in order to improve L2 learners' reading skills.

Finally, this study is not without limitations. This appears to be among the few studies which have explored the impact of flipped instruction on EFL learners' reading comprehension. Although the findings empirically advocated the use of flipped classroom in reading courses, further similar studies should be carried out to generalize findings to other EFL contexts. It is likely that some contextual variables in this particular sample of the study influenced the outcomes of the research. In addition, limited number of students took part in this study because the course registration was constrained. Consequently, researchers were not able to use random sampling, hindering the generalization of the findings. Thus, future studies with larger sample sizes are required to verify the beneficial impact of flipped teaching on reading comprehension improvement. Furthermore, employing different data collection techniques such as achievement tests' scores, teacher's observation checklists and field notes, video recordings, and interview may shed more light on the usefulness of flipped classroom for reading instruction.

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