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The Impact of Flipped Learning on Learners' Foreign Language Anxiety

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ABSTRACT

Flipped learning has become a popular approach in different educational fields, including foreign language learning. The present study investigated the impact of teaching vocabularies via flipped classrooms on Iranian EFL learners' foreign language anxiety (FLA). A total of 90 pre-intermediate Iranian EFL learners participated in this study. One class was randomly assigned to the flipped group as the experimental one (N=45) and the other was non-flipped as the control group (N=45). The anxiety of learners was determined by the Foreign Language Classroom Anxiety Scale (FLCAS) before and after the treatment in flipped and non-flipped groups comparatively. The results of this study showed a significant reduction in FLA levels in the flipped group. However, there was no significant change in the non-flipped group.

1. Introduction

Flipped learning as an instructional strategy inverted traditional teaching methods. While students receive direct instruction during class time in traditional classrooms and are expected to complete assignments at home, in flipped learning students access instructional content typically in the forms of pre-recorded videos or readings, outside of the classroom. Class time is then dedicated to collaborative activities, problem solving, and individualized support (Tucker, 2012).

Flipped learning have enjoyed popularity for their communicative-based and learner-centered approach to teaching and learning (Wanner & Palmer, 2015). In flipped classes modern technology are used. Bergmann and Sams (2012) promoted the flipped classrooms in the educational area. Learners' engagement is multifaceted, multidimensional and dynamic construct dependent on the unique context of learning and teaching. Different definitions presented for flipped learning. Novak (2011) defined it in which teachers arrange instructional materials before class for stimulating learners' interest to promote them for doing classroom learning tasks.

According to Bishop and Vrleger (2013) a flipped classroom have computer-based pre-class individual instructions to prepare learners for classroom's activities which are mostly interactive-based, and group learning. The role of teachers in flipped classroom is as guiders and facilitators that support learners (Li, 2021). Flipped instruction is an inventive teaching methodology that reverse the order of doing assignments and classroom activities (Herrald & Schiller, 2013). The primarily beneficial function of flipped classroom is the fact that promotes the management of class time and engagement of the learners in class activities (Buitrag & Diaz, 2018; Clark, Nguyen & Sweller, 2011)

In traditional methods learners often try to learn the teachers' materials immediately but they can't stop teaching process for better understanding. In this way, they miss most points because their attention is on teacher. In flipped learning, students can control teaching of their teachers by using audio files and videos. They can watch the teaching one or more and skipped parts they know and don't need to watch again. The possibility of repeated watching is useful for foreign language learners. In addition, group activities help learners interact each other and facilitate learning.

Flipping the classroom is usually connected with the employment of technology for learning outside the class like asking learners to watch videos or podcasts prepared by the instructor (Herreid & Schiller, 2013). This type of learning lends support to a number of studies highlighting the instructional advantages of mobile technology and mobile-assisted language learning (MALL) in L2 learning (Chen, Hsieh, & Kinshuk, 2008; Stockwell, 2010, 2013).

Review of literature:

Flipped classrooms

Flipped learning leads us to reconsider how to organize and connect learners' in-class activities and out-of-class efforts in an integrated fashion with technology (Hung, 2015). Even though a growing number of studies have claimed its effectiveness in language classrooms (e.g. Hung, 2017a, 2017b, 2017c; Kim, Park, Jang, & Nam, 2017; Lin & Hwang, 2018; Moranski & Kim, 2016; Shyr & Chen, 2018), more detailed and specific techniques concerning flipped classroom practice are yet to be investigated, such as how language teachers determine which content knowledge and materials are to be studied out-of-class and which are suitable for in-class higher order activities.

Basal (2015)'s analysis of 47 pre-service language instructors' perspectives suggested that flipped language classrooms promote students' learning at their paces, enhance their preparation and engagement, and remove time-relevant issues in the classrooms. Chen Hsieh et al. (2017)'s mixed-methods study with 48 second-year student participants suggested flipped language classrooms had positive effects on idiomatic knowledge acquisition and learner engagement and motivation. Regarding the skills involved in second language learning, researchers have assessed the flipped approaches' effects on different language learning outcomes, for example, flipped interventions targeting writing performance contribute to increased writing achievement and student engagement (e.g., Afrilyasanti et al., 2017; Leis et al., 2015). Regarding speaking courses, flipped approaches have been found to improve second language oral proficiency and cultivate autonomous learners to gain an in-depth understanding of course content (e.g., Amiryousefi, 2019; Wang et al., 2018). Researcher focusing on flipped grammar learning (e.g., Thaichay & Sitthitikul, 2016; Webb & Doman, 2016) has highlighted flipped approaches' potential for promoting grammar performances and making students feel comfortable and confident about second language grammar use. Several studies focusing on flipped vocabulary learning concluded that flipped language classrooms motivate learners to develop both receptive and productive vocabularies effectively for communication interaction (e.g., Arslan, 2020; Kirmizi & Kömeç, 2019; Zhang et al., 2016).

The results of these studies demonstrate flipped language classrooms' significance in encouraging learning at one's own pace by taking self-learning responsibilities (Amiryousefi, 2019). Flipped language classrooms' potential for promoting learners' language learning achievement and engagement, lowering their cognitive load by virtue of flexible time and dynamic and interactive learning environments, and facilitating learners' in-depth understanding of concepts (Amiryousefi, 2019), has been well evidenced in the literature. Given the flexibility of the approach, flipped language classrooms have gained increasing attention in recent years (Bergmann & Sams, 2012) and have been applied predominantly in higher education to promote in-depth discussions and knowledge applications (Lundin et al., 2018).

The review indicated increasing interest in the investigated field. Furthermore, most of the studies

had college students as their participants. Additionally, flipped instruction's positive effects on learners' language learning, such as enhancement of writing and speaking skills, were commonly reported. However, an examination of the effectiveness of flipped foreign language on pre-intermediate learners' Foreign Language Anxiety (FLA) is lacking.

Foreign Language Anxiety

Foreign Language Anxiety (FLA) is regarded as a main affective factor influencing English as a Foreign Language (EFL) learning. Anxiety defined as "the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system" (Spielberger, 1983, p.1). Horwitz (2017) explained FLA as a type of situation-specific anxiety which refers to 'an individual's tendency to be anxious in specific situations,' i.e. a situation of language learning (p. 33). To identify students who tended to be anxious in a specific situation of foreign language learning, Horwitz et al. (1986) designed a Foreign Language Classroom Anxiety Scale (FLCAS). L2 researchers first began investigating the relationship between anxiety and achievement in language learning in 1970s (Teimouri et al., 2018). From that time many SLA researchers have been conducting studies to reveal the effect of anxiety in second language learning. Much evidence, according to literature, has been confirmed that there is a negative relationship between FLA and foreign language learning performance (Hu et al., in press; Teimouri et al., 2019; Zhang, 2019). MacIntyre and Gardner (1994) also showed that students who experienced FLA generally had greater difficulties learning English vocabulary. Wei et al. (2018) revealed that the quality of language learning could not only be related to affective factors such as (FLA) but could also depend on the learning context. In another study, Goda et al. (2017) investigated the effects of a blended learning approach that combines flipped learning with jigsaw method of open educational resources for collaborative learning on English as a foreign language related learning anxiety. By measuring anxiety before and after the flipped jigsaw activities, the results revealed that flipped jigsaw collaborative learning activities may promote learners' preparation outside the classroom and this may lead to decreasing anxiety. Although these studies pointed out that students can benefit flipped learning to reduce their learning anxiety, but they did not address the changes in FLA levels or the role of students' FLA on their English vocabulary learning. The current study attempted to investigate the effect of flipped learning on pre-intermediate Iranian learners' anxiety during learning vocabulary. So the research question of present study is:

RQ: Does flipped learning have an effect on pre-intermediate learners' foreign language classroom anxiety?

Method:

Participants:

The participants of this study were 90 female EFL Iranian pre-intermediate learners from one high school of Ardabil, Iran. All of them were in grade 10 or 11 and their age ranged between 16 to 18 years old. They were bilingual in Azari-Turkish and Persian and were learning English as a foreign language. After a proficiency test to ensure their homogeneity, they randomly divided into two groups: one control group, i.e., non-flipped (n= 45) and one experimental group, i.e., flipped learning (n=45).

Instruments:

Two instruments were applied in the present study. At first, a standardized English placement test, Oxford Proficiency Tests for beginners (OPT), was run to the participants to assess their knowledge of general English. The second instrument that used in this study was the Foreign Language Classroom Anxiety Scale (FLCAS) designed by Horwitz et. al. (1986) as a pretest and posttest to determine the learners' anxiety before and after the treatment. The scale has 33 items scored on a 5-point Likert scale, ranging from strongly agree to strongly disagree. Instrument reliability in this study was estimated to be .73 using the Cronbach alpha coefficient.

Procedure:

To ensure the homogeneity of leaners in language proficiency, PET was conducted in the first session of treatment. FLCAS as a pretest was conducted in second session after randomly dividing participants in two groups. Learners in both groups participated in ten instructional sessions. Each session lasted 90 minutes. Identical syllabus was used for both groups. Treatment lasted four weeks, two sessions in every week. The vocabulary areas taught are as follows:

Type of nouns (week 1)

Type of adjectives (week2)

Environment (week 3)

Travel (week 4)

Experimental group was assigned to watch some videos with target vocabularies and the meaning of words with visuals and plenty of examples in appropriate contexts at home. Also their pronunciation was presented in videos. In class the participants were asked to do vocabulary exercises in pairs or groups. The teacher helped them when it was necessary. The control group was presented the target vocabulary inside the classroom. The teacher explained each word using visuals and example sentences. She also asked them to repeat the words after her to learn correct pronunciations. The students were assigned vocabulary exercises as homework.

Data collection of this study included FLCAS questionnaire as pre- and posttests. It was

conducted to examine if the learners' FLA level had significantly changed between control and experimental groups after participating in flipped classes.

Results:

The independent sample t-test was conducted to examine pre-test scores in flipped and non-flipped groups, by means of SPSS (Statistical Package for the Social Sciences, IBM SPSS Statistics 26). The mean score at pre-test for experimental group was 108.96 incidentally as the same as control group. It indicates that the two groups might have been equal level of FLA before running the treatment. As shown in Table 2, independent sample t-test for performance of the groups in pre-test shows the significance rate is 1.00 which is greater than 0.05 ($p = 1.00 > 0.05$). The results revealed that there was not a significant difference between these two group scores in terms of FLA.

Descriptive statistics of post-test indicated that there was a significance decrease in FLA level in experimental group. The mean score of flipped group in post-test was 85.38, while for non-flipped group was 100.31. (Table 1). The second independent sample t-test was run for the post FLCA test scores of flipped and non-flipped groups after the treatment. Regarding post-test scores in the flipped and the non-flipped groups, the independent sample t-test analysis showed that the flipped and the non- flipped groups' post-FLCA scores differed significantly (t (88) = -6.235, $p = 0.00$), demonstrating that the non-flipped group had a higher level of FLA when it was compared to the flipped group following the intervention (Table 2). In other words, the results demonstrated that the flipped learning affected learners' level of FLA.

Table 1

Descriptive Statistics for Learner Language Anxiety

		N	Mean	Std. Deviation	Std. Error Mean
pretest	flipped	45	108.96	12.421	1.852
	non-flipped	45	108.96	13.104	1.953
Posttest	flipped	45	85.38	11.525	1.718
	non-flipped	45	100.31	11.194	1.669

Table 2

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pretest	Equal variances assumed	.364	.548	.000	88	1.000	.000	2.692	-5.349	5.349
	Equal variances not assumed			.000	87.748	1.000	.000	2.692	-5.349	5.349
posttest	Equal variances assumed	.681	.412	-6.235	88	.000	-14.933	2.395	-19.693	-10.174
	Equal variances not assumed			-6.235	87.925	.000	-14.933	2.395	-19.693	-10.174

Discussion:

The present study aimed to examine the effect of flipped learning on pre-intermediate learners' anxiety. Participants of this study had similar level of FLA at the first of study. It was because of being nervous in foreign language classrooms. That is in favor of previous studies (Tallon, 2009: Gok et al., 2023). On the other hand, there was a significant decrease in the FLA

level of the pre-intermediate learners when they learned in flipped classrooms. In line with these results, Gok et al. (2023) found that the experimental group that engaged in out - of-class technology-based activities were less nervous in FL than the control group that participated in in-class discussions without technology. However, Shams (2006) concluded that the practice of computerized pronunciation did not affect the anxiety of FL classroom students in French. This contrast result is due to pre-class material engagement as highlighted in the flipped classroom.

Learners in flipped classes completed the tasks in groups, that can be a reason for decreasing anxiety in foreign language classes. Similarly, the teacher encouraged them to interact with each other while they are doing these tasks in the class. They shared responsibility that is another reason for decreasing anxiety in foreign language classes (Gok et al., 2023).

The findings of the present study revealed that the flipped learning had a significant effect on learners' autonomy. These findings supported the previous studies (Azevedo & Cromley, 2004; Salmeron, Kintsch & Kintsch, 2010; Ebrahimi et al., 2013; Zainuddin & Perera, 2019). Flipped learning reinforced learning outcomes by expanding learners' engagement in class activities (Li & li, 2022). The dynamic motivation systems theory (Mercer & Dornyei, 2020) and engagement with language (Svalberg, 2018) may offer promising theoretical foundations to study engagement in

flipped classrooms. Gaining confidence and positive attitude towards the FL learning are other advantages of flipped classrooms (McLaughlin et al., 2014). As Critz & Knight (2013) explained reinforcing critical thinking skills and learning autonomy are other results of flipped learning. In addition, the flipped group had the opportunity to prepare in advance, and they could easily express themselves, check and analyze their responses unlike the non-flipped group who could only convey their ideas within the allocated time (Gok et al., 2023). Also, learners who learned before class time and only practice in class are more ready for unexpected situations and this is another reason that reduces their anxiety in FL classes (Davies et al., 2013). According to the results can conclude that in flipped classes learners' anxiety decreases significantly since the main sources of FL learning anxiety are controlled (Gok et al., 2023). However, non-flipped groups had nearly the same level of FLA before and after the treatment. In other words, traditional method had no significant effect on the FLA level of learners. The non-flipped group were able to complete less tasks in the classroom compared to the flipped group due to limited class time, so they couldn't receive enough feedback (Goodwin & Miller, 2013; Roehl et al., 2013). Likewise, Hung (2017) concluded that the flipped classrooms integrated with student response system are more likely to provide interactive learning environments and improve student engagement.

The present research can have some implications for teachers and education planners. Teachers can provide some technology-based instructions for their students that they study before attending in flipped classes. In doing so, learners will have enough opportunity to practice in pairs or groups in class, receive enough feedback from their teacher. In this way teachers can control their learners' FLA and help them to improve their learning. Also, the flipped classroom enables the instructor take on the positions of facilitator and observer and students could be more likely to engage with the instructor and their peers in both the digital and the classroom environments. Thus, the flipped classroom can help to decline anxiety in FL classrooms and encourage self-confidence and performance of the students. Therefore, the flipped classroom can be a solution for highly anxious students who need support for homework and interaction in the FL classroom.

There are some limitations in the current study which need to be addressed in future research. First, this study is limited to pre-intermediate learners who studied in high school. Considering the limited group of participants and the small sample size in this study, future research may investigate flipped classroom paradigm and FL anxiety among larger samples in different learning contexts. Additionally, investigating the effect of different online learning environments comparatively could yield to fruitful results in FL anxiety research. Next limitation of present study is that only quantitative data were used, future studies should consider utilizing both quantitative and qualitative methods to find more detailed information about the perceptions of the FL learners towards the flipped and the non-flipped classes.

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