Research Paper

Effect of the Flipped Classroom Approach and Language Proficiency on Learner Autonomy and Foreign Language Anxiety

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Abstract
This study aimed to investigate the immediate and long-term effects of the flipped classroom approach and language proficiency on the autonomy and anxiety of Iranian EFL learners. A total of 94 learners at the elementary, intermediate, and advanced levels were selected through convenience (availability) sampling procedure from Payam-e-Nour University and split into the experimental and control groups. The research method employed was based on a nonequivalent control group pretest-posttest design. Data were analyzed using a factorial ANCOVA and a sample paired *t*-test. The results of this study reveal that the flipped classrooms had a statistically significant impact on the participants' learner autonomy and language anxiety. However, different language proficiency levels had no statistically significant effect on learner autonomy and language anxiety. Findings also suggest that the flipped classrooms had a long-lasting impact on language anxiety and learner autonomy. It is concluded that, in many English language settings, the flipped classroom may be a suitable option with potentially positive outcomes. The findings of this study have some important implications for syllabus designers, curriculum planners, and language instructors of foreign languages.

Keywords: *Flipped classroom approach, learner autonomy, language anxiety, language proficiency levels*

بررسی تأثیر بلند مدت و کوتاه مدت روش آموزش معکوس بر خودمختاری و اضطراب زبان آموزان ایرانی در سطوح زبانی متفاوت
هدف پژوهش حاضر بررسی تأثیر بلند مدت و کوتاه مدت روش آموزش معکوس بر خودمختاری و اضطراب زبان آموزان ایرانی در سطوح زبانی متفاوت بود. بدین منظور 94 نفر از دانشجویان رشته زبان انگلیسی دانشگاه پیام نور مرکز رودسر در استان گیلانبا روش نمونه گیری دسترس در سه سطح مقدماتی، متوسط و پیشرفته انتخاب شدند و به دو گروه کنترل و آزمایش تقسیم گردیدند. از آنها خواسته شد تا دو پرسشنامه خودمختاری زبان آموزان و پرسشنامه اضطراب زبان خارجه را تکمیل کنند. روش پژوهش حاضر، روش شبه آزمایشی و با پیش‌آزمون و پس‌آزمون همراه با گروه کنترل بود. تجزیه‌وتحلیل داده‌ها از طریق تحلیل کوواریانس دو راهه و آزمون t وابسته با نرم‌افزار SPSS 22 صورت گرفت. نتایج نشان داد که روش آموزش معکوس تأثیر بسزایی در **بهبود** خودمختاری زبان آموزان و کاهش اضطراب آنان دارد؛ درحالی‌که درسطوح زبانی متفاوت اثربخش نبود.نتایج همچنین نشان داد که این روش آموزش تاثیر بلندمدتی بر خود مختاری و کاهش اضطراب زبان آموزان گذاشت در نتیجه این روش می تواند جایگزین مناسبی در بسیاری از محیط های زبانی با نتایج مشابه در محیط های آموزشی و جغرافیایی متفاوت اتفاق بیفتد. یافته‌های پژوهش می‌تواند برای اساتید زبان، مؤلفان کتاب‌های آموزشی زبان و طراحان نظام آموزشی سودمند باشد.

واژگان کلیدی: روش آموزش معکوس، خودمختاری زبان آموز، اضطراب زبانی، سطوح زبانی متفاوت

Introduction

A thorny issue in language teaching, which EFL learners typically undergo, is that modern technology in teaching English is underused (Hariri asl, Marandi, & Maftoon, 2021; Hashemi, 2016). Internet and videos are two sources that can be employed according to students' needs and interests; however, such sources are underused in language classes, especially at the tertiary level (Fariborzi & AbuBakar, 2011). As is evident by now, lots of decisions have been made, new approaches and methods have been implemented, curriculum and many course books have been revised or changed through trial and error in learning and teaching of English language in Iran; however, these attempts do not seem to have yielded important results in this field (Safari & Rashidi, 2015).

Given this challenge, technological developments have allowed modern forms of active learning in recent years. Any of these essential technical advancements include the internet, clip-sharing devices, and mobile and social media devices. One combination between successful active learning pedagogies and advancements in technology is the so-called flipped classroom, a pedagogical approach that includes shifting the lecture portion of a course outside the classroom to synthesize other activities during the classroom period (Strayer, 2012). The flipped classroom is a relatively new model in the education field and focuses mainly on learner-centered instruction. It enables both management and teachers to create a more active and dynamic learning setting. Increased utilization of flipped learning inverted not only the classroom but the entire teaching paradigm (Hobbs, 2013). The flipped classroom provides digitally recorded materials through videos, practice exercises for students to access at home before and after the delivery of lessons (Benson, 2013). It appears to be useful in EFL contexts due to its ability to "combine learning theories once considered incompatible — active, problem-oriented learning practices based on constructivist theory and instructional lectures derived from direct instruction approaches based on behaviorist principles" (Bishop & Verleger, 2013). Available research evidence provides further support for the efficiency of the inverted approach in the EFL context (Bergmann & Sams, 2012; Zainuddin & Attaran, 2016; Zainuddin & Halili, 2016).

Literature Review

Theoretical foundation of flipped classroom

The theoretical rationale often used to explain the flipped approach to the classroom is based on the learner-centered approach to learning which differs from the teacher-centered model. Student-centered learning theories originate mainly from the theories of Piaget and Vygotsky (Bishop & Verleger, 2013), in which the personal construction of knowledge is emphasized. According to Bishop and Verleger (2013, p. 6), "student-centered learning theories and models can explain a change in direct instruction from within the classroom to outside". This leaves more time in class for student-centered learning activities.

The flipped learning model recognizes four main components, or the so-called F-L-I-P four pillars, namely, a flexible climate, culture learning, intentional content, and professional educator (Hamdan et al., 2013). The four pillars, consisting of a set of four design principles, serve as a standard guide for teachers seeking to flip their classes and enhance language learning amongst students. The flipped classroom has the potential to transfer learning responsibility from teachers to students (Baepler, Walker, & Driessen, 2014; Bergmann, Overmyer, & Wilie, 2013; Davies, Dean, & Ball, 2013; O'Flaherty & Phillips, 2015). Bergmann et al. (2013) claim that a flipped approach to the classroom poses a situation in which students take responsibility for their own learning. Most students at different levels of education rely on teachers in the classrooms, and students have little opportunity to control their own learning. Students very rarely obtain the information on their own; as is the case, especially in language education, it is the teacher who provides all the information (Farivar & Rahimi, 2015). As rational it might seem, there is a need for learners to take responsibility for their own learning since independent learning can make them aware of outside the classroom so that they learn and maintain the habit of learning on a continuous basis after completing their formal education (Farivar & Rahimi, 2015). Davies et al. (2013) noted that students in a

flipped or inverted approach could learn at their own pace, which enhances their sense of independence. This may explain why, in this study, we assume that digital lesson practice opportunities at home and outside the classroom can improve learners' independence and lead to more personal responsibility for language learning progress.

Previous researches

Flipped classroom dates back to two rural Coloroda high school chemistry teachers Jonathan Bergmann and Aaron Sams, who drew nationwide attention for uploading the videos that combined lectures and PPT.

In addition, one potential advantage of the on-line environment is that it can enhance learning experiences and improve students' communication capability by suppressing their anxiety (Ataiefar & Sadighi, 2017; Rahimi & Soleymani, 2015). A large number of researchers from the field of educational psychology and language education have investigated the impacts of anxiety on language education (Horwitz, Horwitz, & Cope, 1986; MacIntyre & Gardner, 1991; Webb & Doman, 2019) and their findings indicate that there is a specific kind of anxiety that especially inhibits foreign language education. Literature evidence shows that the internet and technology can be used to curb language learning anxiety (Amiryousefi, 2016; Ataiefar & Sadighi, 2017). Thus, with the use of the flipped approach which is very flexible (Buechler, Sealy, & Goomey, 2014; Hamdan, McKnight, McKnight, & Arfstrom, 2013; Zarrinfard, Rahimi, & Mohseni 2021) and enjoyable like games, contests, and problem-solving activities (Herreid & Schiller, 2013), we may be able to control learners' anxiety experiences in class.

That said, among various factors that influence language learning outcomes, learners' proficiency level has mainly been considered influential (Griffiths, 2003; Lan & Oxford, 2003). Language educators now agree that instructional methods should normally conform to learners' levels of language proficiency. However, the effect of the flipped learning is unclear with respect to different proficiency levels of EFL learners. In fact, it is unknown whether or not the flipped classroom approach works well across different proficiency levels. As Abaeian & Samadi (2016) pointed out, there is a lack of research in terms of acceptability and adaptability of the flipped classroom approach among EFL learners with different proficiency levels. This study could, therefore, contribute to fill this gap.

As noted earlier, research has shown that the flipped learning approach has shown to enhance students' performance (Baepler et al., 2014; Hung, 2015). For instance, Hung (2015) found that the flipped learning approach in the context of EFL classrooms boosted the educational outcomes, educational behaviors, and participation levels of the learners. Moreover, Guo (2017) examined the effect of the inverted classroom approach on college students in Taiwan. The results of his study revealed that the flipped approach had a positive effect on language proficiency levels, topical knowledge, and participation willingness in class.

In a recent study, Tsai (2019) investigated the impact of flipped classrooms on the autonomy of EFL learners in a content-based instructional context. The results showed that learning autonomy was enhanced in terms of technique usage, content interaction, use of social capital, and self-management of language learning. Additionally, in the Iranian EFL context, Ebrahimi, Eskandari, and Rahimi (2013) conducted a study about the impact of language learning enhancement by technology on students ' perceptions of their EFL classroom environment. The results showed that technology improves learner autonomy. Similarly, Rahimi and Bigdeli (2014) investigated the impact of educational technology, and they found that the improved language education setting by technology proved to be effective, learner-centered, and enhanced learning facilitation.

In another study, Parvaneh, Zoghi, and Asadi (2020) conducted a study about the effect of flipped classroom approach on learner autonomy and language anxiety of Iranian EFL learners in which autonomy of learners increased and language anxiety of them decreased.

As the literature indicates, the flipped approach in combination with language proficiency levels have remained an under-researched, or rather unexplored area in the Iranian EFL context. We believe that

investigating the flipped approach, language proficiency levels, learner autonomy, and language anxiety could make a significant contribution to language education, as the flipped approach creates opportunities for greater participation and content involvement in the classroom (Johnson, Becker, Estrada, & Freeman, 2014); it may in turn lead to an increase in learner autonomy and also a decrease in learners' classroom anxiety. Although effective, it is still unknown how it works among EFL learners with different language proficiency levels. Since the present study was undertaken in a typical EFL context, the findings and implications may be generalized to other similar EFL contexts.

Thus, investigating the flipped approach in a variety of settings with EFL learners at different proficiency levels are needed so that we could tailor evidence-based, context-appropriate instructional approaches like the flipped approach in addressing such variables as language anxiety and learner autonomy. With this in mind, the following research questions were developed to investigate different aspects of the issues stated above.

RQ1. Does the flipped classroom approach affect the autonomy and foreign language anxiety of Iranian EFL learners across different language proficiency levels (elementary, intermediate, and advanced)?

RQ 2. To what extent does the flipped classroom approach have an effect on the autonomy and foreign language anxiety of Iranian EFL learners across different language proficiency levels (elementary, intermediate, and advanced)?

RQ 3. Does the flipped classroom approach have a durable effect on the autonomy and foreign language anxiety of Iranian EFL learners who benefit from this approach?

Method

Participants
For the purposes of the current research, university English language students at Payam-e-Nour University were selected. Both female and male participants were included in this study. The 94 participants were selected through the convenience sampling procedure. The Cambridge ESOL Preliminary Test was used to measure their levels of English language proficiency. Their ages ranged from 18 to 24.

Materials and Instruments
Three instruments were applied in the present study: Cambridge ESOL Preliminary Test, Learner Autonomy Questionnaire, and Foreign Language Classroom Anxiety Scale. As noted earlier, a Proficiency test known as the Cambridge ESOL Preliminary Test was used to measure the participants' knowledge of general English. This test is an intermediate-level qualification and is intended for students who have become proficient the basics of English and currently have practical language skills for everyday use.

We also employed the Learner Autonomy Questionnaire developed by Zhang and Li (2004) as a pre-test and post-test. The questionnaire consists two parts. The initial part contains 11 items which has five options, ranging from never to always and the second one contains 10 items, which is in multiple-choice format and the participants are anticipated to choose the closest answer to their attitudes, from A (1 point) to E (5 points), a total of 21 items. Instrument reliability in this study was estimated to be .61 using the Cronbach alpha coefficient. Furthermore, Zhang and Li (2004) reported that this questionnaire enjoyed high validity.

Another instrument which was used as a pre-test and post-test was the Foreign Language Classroom Anxiety Scale (FLCAS), developed by (Horwitz et al., 1986). 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.

Design

The study drew on a pretest-posttest quasi-experimental design with a control group and a delayed posttest (Mackey & Gass, 2015). It included two groups in which 94 EFL learners at the elementary, intermediate, and advanced levels participated; accordingly, we could examine the impact of flip teaching on students' autonomy and anxiety with a particular focus on English language students' proficiency levels in the flipped classroom. After conducting the posttest, the delayed posttest was employed two month later to check whether the results had a durable effect.

Procedure

To carry out the study, the Cambridge ESOL Preliminary Test (PET) was administered among the study sample for the purpose of their proficiency check. The participants were then divided into two groups, i.e., the experimental and control groups. The flipped class was viewed as the experimental group and the non-flipped class as the control group. As a pre-test, the above-mentioned questionnaires were administered among all the study participants in the groups at the start of the study. Throughout the 10-week semester, both flipped, and non-flipped classrooms were formed twice a week with the same teacher. Accordingly, the treatment took 20 sessions in total.

In the experimental group, the learners first studied the topic by themselves, typically using video clips prepared by the teacher. To this end, the teacher gave short video clips materials for students to view at home before attending the class. Since students were required to preview materials before coming to the flipped classroom, we created a checklist on the Telegram app to recognize students who did the full amount of assignment and came to class prepared each day. Students in the flipped classroom learned how to watch video clips from home and later convened again to participate in group discussions and activities in the classroom. Flipped teaching in the class included tasks in and out of the school. The activities out of the classroom included sharing clips for learners on the Telegram app before they came to the class. The classroom activities included a 30-minute listening task, a 45-minute speaking activity, and interactive session feedback of 15 minutes.

The non-flipped class was held in a conventional manner. In the non-flipped class (the control group), certain learning tasks were chosen; these assignments had to be completed at home without access to any online course content. The materials were delivered as a course book to students throughout teaching sessions. Class activities for the control group included 30 min assignments done by students, a 30 min conversational activity based on the content, and a 30 min activity for teaching new lessons for the next session by the teacher. Students were expected to focus on their textbook for their out-of-class activities, internalize the learned information, and complete their homework assignments before they came to class.

Results

Once all the necessary data were collected, various data analyses were performed. Descriptive (means and standard deviations) and inferential statistics were used. Two-way factorial analysis of covariance (ANCOVA) was conducted to compare the experimental and control groups' posttest mean scores; a paired samples t-test was also run to compare the durability of the treatment. The statistical software program SPSS version 22 was employed to analyze the data.

As for descriptive statistics, Table 1 displays the Mean and *SD* of the groups in learner autonomy and language anxiety with their proficiency levels at three points in time, i.e., at pretest, posttest, and delayed test.

Table 1

Descriptive Statistics for Learner Autonomy and Language Anxiety

Variables	Levels		Group			
			Treatment		Control	
			Mean	SD	Mean	SD
Learner Autonomy	Pre-test	Beginner	60.90	11.37	65.85	8.44
		Intermediate	70.26	7.93	66.50	8.46
		Advanced	65.25	11.61	67.07	7.28
	Post-test	Beginner	71.15	8.33	68.70	7.35
		Intermediate	76	7.11	69.42	6.86
		Advanced	82	7.09	60.07	9.04
	Delayed-test	Beginner	75.85	3.84	–	–
		Intermediate	81.93	7.12	–	–
		Advanced	82.66	5.36	–	–
Language Anxiety	Pre-test	Beginner	100.80	12.88	99.45	10.59
		Intermediate	105	13.70	103.21	12.77
		Advanced	99.50	11.19	97.46	9.53
	Post-test	Beginner	85	15.96	96.10	11.58
		Intermediate	89.46	13.56	100.42	12.07
		Advanced	84.58	10.38	100.38	6.30
	Delayed-test	Beginner	78.35	14.54	–	–
		Intermediate	72.66	9.24	–	–
		Advanced	77.33	9.35	–	–

Given the results of learner autonomy posttest scores in this sample, it is evident that the learners in the flipped classroom at the beginner level (M= 71.15, SD= 8.33), the intermediate level (M= 76, SD= 7.11), and the advanced level (M= 82, SD= 7.09) fared better than their counterparts in the non-flipped classroom, i.e., at the beginner level (M= 68.70, SD= 7.35), the intermediate level (M= 69.42, SD= 6.68), and the advanced level (M= 60.70, SD= 9.04). Overall, the descriptive findings suggested that learning in the flipped classroom was more likely to lead to an increase in learning autonomy in the classroom than would otherwise have been the case. The results of learner autonomy delayed test scores in this sample showed that the learners in the flipped classroom at the beginner level (M= 75.58, SD= 3.84), the intermediate level (M= 81.93, SD= 7.12) and the advanced level (M= 82.66, SD= 5.36) fared better as compared with their posttest scores.

The results of foreign language anxiety posttest scores in this sample indicated that the students in the flipped classroom at the beginner level (M= 85, SD= 15.96), the intermediate level (M= 89.46, SD= 13.56), and the advanced level (M= 84.58, SD= 10.38) experienced less foreign language anxiety than those participating in the non-flipped classroom at three levels, i.e., at the beginner level (M= 96.10, SD= 11.58), the intermediate level (M= 100.42, SD= 12.07) and the advanced level (M= 100.38, SD= 6.30). Moreover, the results of foreign language anxiety delayed test scores in this sample showed that in the flipped classroom the learners at the beginner level (M= 78.35, SD= 14.54), the intermediate (M= 72.66, SD= 9.24), and the advanced level (M= 77.33, SD= 9.35) felt still less anxious as compared with their posttest scores.

To address the hypotheses of this study, we ran a two-way factorial analysis of covariance (ANCOVA). In this analysis, the groups (the treatment group and the control group) and proficiency levels (Beginner, Intermediate, and Advanced) were considered as fixed factors; participants' pre-test scores of learner autonomy and foreign language anxiety were regarded as covariates. The study

participants' post-test scores of learner autonomy and foreign language anxiety were also included in the model as dependent variables. To proceed with this statistical test, the assumption of normality was first checked; results showed that the data were normally distributed. In addition, the assumptions of homogeneity of variances and homogeneity of regression slopes were met.

The results as shown in Table 2, revealed that flipped classroom had a significant effect on learners' autonomy, $F (1, 87) = 108.44$, $p = .001$, partial $\eta^2 = 0.55$. This large effect size indicates that the flipped learning accounted for 55 percent of the variance in the dependent variable, after controlling the autonomy pre-test of the learner (i.e., Hypothesis 1 is supported). Moreover, the proficiency levels did not have any significant main effect on learner autonomy, $F (2, 87) = 0.12$, $p = 0.88$ (i.e., Hypothesis 2 is not supported). Furthermore, the flipped classroom approach and EFL learners' proficiency levels had an interaction effect on learner autonomy, $F (2, 87) = 30.22$, $p = 0.001$. The large effect size indicates that 41 percent of the variance in the dependent variable was accounted for by the flipped learning and the proficiency levels, after controlling for the pre-test of learner autonomy. (i.e., Hypothesis 3 is confirmed).

Table 2
ANCOVA Results of Between-Subjects Effects for Learner Autonomy

Source	Type III Sum of Squares	df	Mean Square	F	P	Partial Eta Squared	Observed Power
Learner Autonomy. Pre-test	3038.87	1	3038.87	122.16	.001	.58	1
Group	2697.70	1	2697.70	108.44	.001	.55	1
Levels	6.22	2	3.11	.12	.88	.003	.06
Group * Levels	1503.97	2	751.98	30.22	.001	.41	1

A paired sample t-test was conducted to assess the durability of the treatment on the learners' autonomy at the follow-up test (Table 3).

Table 3
Paired Samples t-Test of Posttest And Follow-Up Test Scores of Learner Autonomy

		Paired Differences						
		Mean	SD	95% Confidence Interval of the Difference		t	df	P (2-tailed)
				Lower	Upper			
Pair 1	Autonomy post-test and Autonomy delayed test	-2.54	6.63	-3.90	-1.18	-3.71	93	.001

Considering the results shown in Table 3 (mean difference= -2.54, $t = -3.71$, $p = 001$), it can be said that the treatment was durable and the learner autonomy of the participants in the flipped classroom was improved over time.

In addition, the results (Table 4) showed that flipped classroom had a significant main effect on foreign language anxiety $F (1, 87) = 73.81$, $p = .001$, partial $\eta^2 = 0.45$. The large effect size indicates that the flipped learning accounted for 45 percent of the variance in the dependent variable, after controlling for the language anxiety pre-test (i.e., Hypothesis 4 is supported). Moreover, the proficiency level did not

have any significant main effect on language anxiety of the participants, $F (2, 87) = 1.37$, $p= 0.25$ (i.e., Hypothesis 5 is not supported). Similarly, the flipped classroom approach and EFL learners' proficiency levels did not have any statistically significant interaction effect on foreign language anxiety, $F (2, 87) = 1.02$, $p = 0.36$ (i.e., Hypothesis 6 is not confirmed).

Table 4
ANCOVA Results of Between-Subjects Effects for Language Anxiety

Source	Type III Sum of Squares	df	Mean Square	F	P	Partial Eta Squared	Observed Power
Language Anxiety. Pre-test	8317.39	1	8317.39	138.84	.001	.61	1
Group	4421.87	1	4421.87	73.81	.001	.45	1
Levels	164.39	2	82.19	1.37	.25	.03	.28
Group * Levels	122.72	2	61.36	1.02	.36	.02	.22

Considering the results (Table 5) based on a paired sample t-test (mean difference= -5.60, $t= 5.54$, $p= 001$), it can be said that the treatment was durable and foreign language anxiety of the participants in the flipped classroom improved over time.

Table 5
Paired Samples t-Test of Posttest And Follow-Up Test Scores of Language Anxiety

		Paired Differences						
		Mean	SD	95% Confidence Interval of the Difference		t	df	P(2-tailed)
				Lower	Upper			
Pair 1	Anxiety post-test & anxiety delayed test	5.60	9.79	3.59	7.61	5.54	93	.001

Discussion

As for the first research hypothesis, the findings of the present study revealed that the flipped approach to the classroom had a significant impact on learner autonomy. These findings corroborated the previous studies considering the effect of a flipped approach on the autonomy of EFL learners (Abeysekera & Dawson, 2015; Davies et al., 2013; Doman & Webb, 2017; Ebrahimi et al., 2013; Tsai, 2019; Zainuddin & Halili, 2016; Zainuddin & Perera, 2019). One possible explanation for this finding is that providing more lecture-based lessons and materials outside of the classroom via video clips and creating more learner-centered tasks inside the classroom could help learner autonomy. However, most of the previous studies used students of elementary schools as their participants, whereas the age range of the participants of this study was 18 to 24 and conducted at university level. Additionally, The above-mentioned research did not conduct on different language proficiency levels which is the gap of this study. Simply put, the acceptability and adaptability of flipped learning on learner autonomy across different proficiency levels is unclear.

The results of the study concerning the second hypothesis revealed that English language proficiency might not contribute significantly to learner autonomy. What we found in our study was in line with (Zarei & Zarei, 2015). However, in some studies, there were significant differences among learners from different proficiency levels, which were not in line with our study (Dafei, 2007; Zhang & Li, 2004). In Iran, the educational system appears to be more teacher-centered, and students might not play a major role in the classroom. As a results, their tendency towards autonomy seems to be weak particularly among students at lower levels of proficiency. This issue might have contributed to the results in this study.

The study findings related to the third hypothesis were in line with previous findings and showed that the flipped classroom approach and language proficiency levels have an interaction effect on students' autonomy (Guo, 2017; Hung, 2015). Flipped learning targets learner's needs and let students have control over their learning and therefore enhances their autonomy. The significant interaction between the flipped classroom's outcomes and the learners' proficiency levels could be attributed to the learners' common need for being benefited from a learner-centered instruction instead of a lecture based teacher-centered one. Further, the flipped class and the students' English proficiency levels were significantly and positively related to their learner autonomy. As a result, one might conclude that the flipped classroom and proficiency levels were mutually enhanced and possible effect of learners' autonomy on each of them indirectly affected the other.

The fourth hypothesis of this study was also accepted, meaning that the flipped classroom approach has a significant impact on EFL learners' anxiety. Although few or no empirical studies have focused on learners' psychological aspects in flipped learning, this study purposed to identify learners' anxiety in flipped learning.This finding is in line with a study conducted in a similar EFL context (Webb & Doman, 2019; Ataiefar & Sadighi, 2017). We reached that delivering content through the Internet may reduce the stress that was similar to the study. Further, it can be concluded that the relaxing and encouraging atmosphere via the use of technology in the experimental group provided a productive environment for learning and decreased the level of anxiety among the students. However, the potential link between the flipped classroom approach and language anxiety has not been empirically investigated.

The fifth hypothesis concerning the possibility of the effect of EFL learners' proficiency level on their foreign language anxiety was not supported. This finding runs counter to the finding of Marcos-Llinás and Garau's (2009) research. They found that language anxiety differed across different language proficiency levels, and advanced learners showed higher levels of anxiety than the beginners and intermediate learners. The difference between this study and the previous one might be social and cultural differences in the field of education, which may have brought about such findings. From the findings of the present study, it can be concluded that learners and teachers should be ensure not to abandon the development of traits such as autonomy and anxiety to occur as a by-product of proficiency development. In other words, if language teachers want to have less anxious and more autonomous students, they cannot accomplish this objective by concentrating on improving the students' proficiency alone, which would leave too much room for chance. As a result, they should start using techniques which are aimed at directly developing these variables and which cannot be supported by a proficiency enhancement technique.

Finally, the sixth hypothesis stating the interactive effect of the flipped classroom approach and the EFL learners' proficiency levels on their foreign language anxiety was disconfirmed. The experimental group had a significantly lower mean on the posttest of language anxiety than control group. This means that the flipped approach does not interact with proficiency levels to affect language anxiety. Although the effect of flipped teaching on decreasing language anxiety (hypothesis 4) was supported, in the sixth hypothesis the inter active effect of flipped teaching and language proficiency levels did not affect on decreasing anxiety. One possible reason could be that Iranian students seem to have been unaccustomed to teaching and learning with technology before their exposure to the flipped classroom. However, the potential interactive link between the flipped classroom approach, proficiency levels, and language anxiety has not been empirically investigated. Again, this finding may add further evidence to the marginal role of language learning for this study sample.

Conclusion

This study shows that the flipped model may be viable in many ELL environments with similar results across a variety of geographical and educational contexts. Of particular interest is that Iranian students have significantly less anxiety about technology-enhanced language learning as a result of a flipped

learning course. Further, One of the significant results states that students learning with technology need more reassurance that they are "on the right track" during the learning process, suggesting that the rules, division of labor, and structure of the community are all significantly affected (and changed) when students use a different major tool (technology) to learn content when compared to a traditional lecture course.

The flip-class approach used in this EFL classroom also supports students' learning need for autonomy. The flipped model successfully integrates a flexible learning environment, established student-centered learning, and develops autonomous learners. Students learned that their EFL flip class had trained them to study independently, at their own pace. They are also aware that, as university students, they need to explore their knowledge independently and not always depend on their instructors.

That said, the integration of the flipped classroom approach into the learning and teaching process involves some technical and organizational challenges. It requires a lot of technological considerations before the introduction of the flipped approach to the classroom in educational institutions. It is imperative to develop EFL teachers' technological pedagogical knowledge (TPK) in the design of materials and activities and use different types of computer-based equipment or software and converting these materials and activities into effective classroom practices. Furthermore, as effective education considers the context in which learning and teaching take place, further investigations can clarify which courses benefit more from the flipped classroom approach. Additionally, creating a variety of social networking platforms can make it possible for students to receive feedback faster. Dealing with these issues needs academic endeavors and further research so as to establish a new education setting based on the technology of the flipped approach.

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