Flipped Presentation of IELTS Reading: Impacts on Grit, Autonomy, and Reading Achievement in an EFL Context

Masoud Khabir (massoud.khabir@gmail.com)
Department of Language and Literature, Yazd University, Safaie, Yazd, Iran.

Ali Akbar Jabbari (jabbari@yazd.ac.ir)*Corresponding Author
Department of Language and Literature, Yazd University, Safaie, Yazd, Iran.

Ali Mohammad Fazilatfar (afazilatfar@yahoo.com)
Department of Language and Literature, Yazd University, Yazd, Iran

Mohammad Hasan Razmi (hasanrazmi2000@gmail.com)
Department of Language and Literature, Yazd University, Iran

Abstract

Utilizing a quasi-experimental design, this study sought to investigate the effect of flipping IELTS readings on the participants' enhancement of reading achievement, grit and autonomy. To this aim, 46 upper-intermediate students were selected from the English institutes of Kerman through non-random sampling and assigned to two control group classes (CG1 = 10n & CG2 =11n) and two experimental group classes (EG1 = 12n & EG2 = 13n). All the participants sat an oxford quick placement test to make sure the level-homogeneity principle was followed. There were two administrations of academic IELTS reading tests from Cambridge 16 (tests 2 & 4), grit and autonomy scales as pre- and post-tests. Both groups received the same IELTS reading instructions and materials from Cambridge English Mindset for IELTS 2. The CG1 and CG2 received the materials through a traditional presentation, whereas for EG1 and EG2 the materials were flipped. The teacher-researcher, being CELTA certified, was responsible for CG1, CG2, EG1, and EG2. The 16-session intervention lasted 8 weeks with intervals of two sessions per week. After the collection of data through post-tests of IELTS reading exam, grit, and autonomy scales, the data were analyzed. The results showed that flipping IELTS reading had a significant impact on the improvement of participants' grit and autonomy as well as their reading achievement. Finally, a semi-structured interview was conducted with 13 participants from EG1 and EG2 to evaluate their perceptions of the use of the flipped classroom. All the participants showed positive opinions toward flipping the materials. The findings show that implementing flipped classrooms in EFL contexts not only improves grit and autonomy but also consequently enhances the reading achievement of language learners.

Keywords: Flipped classroom, Reading comprehension, Autonomy, Grit, ILETS

Introduction

In academic settings, one of the most central components of English performance is English reading ability. Reading significance in higher education is often not recognized by either students or lecturers, perhaps because it is the outputs from reading which are assessed not the process per se (Dreyer & Nel, 2003). Levine et al. (2000) contend that reading academic texts is crucial for ESL and EFL students to possess. Comprehension encompasses understanding the text's vocabulary, uniting ideas, identifying the author's ideas, making a judgment, and assessing the meaning construction (Hashemifardnia et al., 2018). Reading comprehension involves activating the reader's prior knowledge, and using meta-cognitive strategies in dealing with texts (Abusaeedi & Khabir, 2017; Kırmızı, 2010; Rastegar et al., 2017; Tican Başaran & Dinçman, 2022).

To improve learners' ability in reading comprehension skills which is one of the four crucial skills measured in IELTS, a universal view containing convenience of learning, higher exposure, learner's autonomy and grit development, encouragement, self-regulated learning, authentic materials and Technology-Enhanced language learning (TELL) in teaching and learning reading needs to be considered. Benson and Voller (2014) reported that the ultimate goal of EFL/ESL has been to develop learners' autonomy.

Utilizing authentic materials in EFL classrooms improves learners' performance and communicative competence (Akbari & Razavi, 2016). Not only authentic input but also authentic audio-visual materials, combining images and sound (Khabir et al., 2022), facilitate the improvement of foreign language skills (Baltova, 1999; Namaziandost et al., 2022) where teachers bridge the gap between the two incidental flipped and intentional conventional learning practices by using excerpts from media (Kuppens, 2010; Renzulli, 2020) whose convenience and ubiquity can guarantee more autonomous learning (Bian, 2021; Chen Hsieh et al., 2017).

Regarding the importance of a universal view and the effectiveness of flipped classrooms (FC), it is believed that FC can enhance EFLers' reading comprehension (Hashemifardnia et al., 2018; Shafiee Rad et al., 2022). In parallel, the pedagogical relevance of the FC is reinforced by a number of student-centered learning theories in the area of collaborative learning (Goodsell et al., 1992), and peer-assisted learning (Topping & Ehly, 1998), including cooperative learning (Slavin, 1981), and active learning. Developments in TELL and Computer-Mediated Communication have simplified a transition from mainly text messaging to multi-modal environments(Namaziandost et al., 2021). Moreover, one way to implement TELL in educational programs to fulfil the partial social distancing suggested during COVID-19 is through technology-supported flipped classrooms (Toquero, 2020). Miceli et al. (2010) argue that the personalization, authentic communication, and communal support available via peer collaboration in the blogosphere provide a less intimidating platform for shy or anxious students in face-to-face classrooms. Information and Communication Technology (ICT) is a core component of the flipped classroom since a great deal of knowledge in the FC is delivered via pre-recorded video clips offered online prior to the course, allowing the students to learn at their own pace due to being able to pause, rewind, and replay (Chen Hsieh et al., 2017) improving their independence, and being available to them 24/7 (Elrayah, 2022; Tsai, 2021).
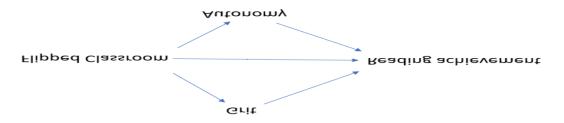
Furthermore, the mobility and availability of materials permit students to gauge their learning more flexibly (Tsai, 2021), leading to more active self-regulated learning (Galway et al., 2015). Flipped learning encourages autonomy more than traditional lectures especially when their abilities in problem-solving via activity-based instruction in classrooms are considered (Baepler et al., 2014; Chen et al., 2014). In these environments, students may be anywhere to interact with teachers/students and learn (Singh & Thurman, 2019), enhancing their autonomy.

In e-learning environments, learners need to self-control learning, use e-teaching-learning materials, and handle distant learning settings (COVID-19 suggested protocol) without decreasing effort or interest (Aparicio et al., 2017), two elements of grit (Duckworth et al., 2007). To be successful in learning, learners need high levels of grit which is defined as patience and enthusiasm for long-term goals (Duckworth et al., 2007). People higher in grit levels show constant effort and do not alter the direction of a goal even if no positive feedback is viewed (Duckworth & Quinn, 2009) and perform better in learning contexts where what is required is self-directed learning, such as in an FC (Aparicio et al., 2017; Duckworth et al., 2007; Khan et al., 2011).

FC, by encouraging self-regulated learning, presupposes interest and self-control over learning (Yoon et al., 2020). Interest and self-control relate to grit and autonomy, respectively. On the other hand, higher levels of grit and autonomy can foster factors needed for better learners' performance in an FC, namely, self-regulated learning and eagerness to keep going. On the whole, there is a reciprocal between FC and grit, FC and autonomy, and grit and autonomy, the improvement of each of which is expected to enhance the other. Moreover, as FC is supposed to lead to better language learning skills such as reading, and as grit and autonomy may render enthusiastic and autonomous learners, the combination of whose improvement is supposed to enhance reading achievement. The hypothetical relationship between FC, grit, autonomy, and reading achievement is depicted in Figure 1. Several studies addressed the variables of this study separately, though there was a shortage of studies on FC, grit, autonomy, and the implementation of FC in terms of its effect on the IELTS reading achievements of EFL learners. Therefore, the novelty of this research is to shed more light on the promising effect of FC in an EFL context.

Considering the importance of grit, autonomy, and reading achievement and the effect of flipping the materials this study sought to investigate the effect of the flipped classroom on grit, autonomy, and reading improvement of EFL learners. Moreover, the students' perceptions of the application of technology in a flipped setting were another objective of the present investigation. In what follows, the theoretical framework of the study, the review of related literature, as well as the research questions, are presented.

Figure 1
Hypothetical relationships among FC, grit, autonomy, and reading achievement

Theoretical Framework

The theoretical framework for the flipped classroom in this study is based on the principles of Yarbro et al. (2014). Yarbro et al. (2014) contend that flipped instruction should be based on four pillars, namely flexible environment, intentional content, learning culture, and professional educator. First, to the extent that a flexible environment is concerned, FC in this study was conducted using the researcher's website (www.englishpaths.ir), in which learning opportunities could be created in and outside the class, accompanied by the Adobe Connect platform. Second, regarding learning culture, FC provided rich digital materials for students to learn individually, as well as to reflect on their learning process. Third, this study used videos containing intentional content created by the teacher to optimize students' understanding of the subject matter. Finally, as the instructor of this study was a Cambridge CELTA Cert. professional educator, he constantly monitored students' learning progress, modified teaching styles accordingly, helped students resolve problems, provided proper feedback, and assessed students' learning.

The theoretical framework for presenting reading is multifold. Regarding the literature, there are various strategies underlying reading comprehension. According to Paris et al. (1991) what enhances reading, and comprehension is activating prior knowledge, and predicting and monitoring comprehension. Among many, some strategies include setting goals, previewing, guessing, monitoring, clarifying, visualizing, and drawing inferences (Duke et al., 2011), and the gradual release of responsibility (Pearson & Gallagher, 1983). Schumm and Mangrum (1991) proposed the acronym FLIP in which F, L, I, and P stand for *friendliness, language, interest, and prior knowledge,* respectively, integration of which helps students develop strategic reading.

As IETLS reading is not merely reading for comprehension purposes, but also test purposes, this research used CELTA Trainer's Manual (Thornburry & Watkins, 2007) as the ground for teaching reading. CELTA Trainer's Manual suggests that to teach reading effectively certain pre- while- and post-reading steps (i.e., activating schemata, pre-teaching vocabulary, doing gist reading tasks, working on more detailed questions, attending to specific language features of the text, and internalizing the text) need to be generally followed. Generally, the activities mentioned above are in line with activities (e.g., skimming and scanning) necessary for achieving a good IELTS reading score.

Considering in-class activities, concepts of community of practice (Vygotsky, 1978), situated learning, legitimate peripheral participation and learning, and the importance of social interactions preceding learning development (Lave & Wenger, 1991), as well as scaffolding apprentices, more knowledgeable other (MKO), zone of proximal development (ZPD), collaborative learning and reciprocal teaching-learning (Vygotsky, 1978) were carefully considered.

Literature review

This section pays special attention to the literature significant to our research.

Flipped Classroom effectiveness

In a study, Khabir et al. (2022) found a positive impact of the flipped classroom on intercultural sensitivity and effectiveness in an EFL context. In conventional classrooms, students are passive receivers of instructions, while FC enforces classes to be student-centered (Akçayır & Akçayır, 2018). Applying FC is encouraged by several studies due to its student-teacher-student interactivity (Enfield, 2013; Lage et al., 2000; Thorne et al., 2009), empowerment of learners to self-regulate their learning and therefore be more autonomous (Enfield, 2013; Han, 2015; Johnson & Marsh, 2014; Tsai, 2021), improvement of students learning performance (Akçayır & Akçayır, 2018), and multimodality and ubiquity of teaching and learning (Tsai, 2021).

Moreover, some scholars (Johnson & Marsh, 2014; Mehring, 2016) reported that by forming a cooperative learning environment and incorporating reinforcement activities, FC can be effective in EFL education. In parallel, Wu et al. (2017) indicated that students' oral proficiency grounded on the IELTS assessment criteria improved significantly after FC instruction. In a quasi-experimental design, Sahragard et al. (2020) explored the effect of flipped instruction on IETLS writing and revealed that FC had a positive significant relationship with participants' writing scores. Some other researchers found that the administration of FC fostered opportunities for learners to structure their knowledge, deliver their ideas, and then experiment with their interpersonal communication skills (Adnan, 2017; Arnold-Garza, 2014).

Flipped classroom and academic subjects

The promising impact of FC on academic settings has been well reported in many different subjects (Baepler et al., 2014), including foreign language education (Turan & Akdag-Cimen, 2020). Yu and Wang (2016) indicated the improved performance of students undergoing FC in business English writing.

Flipped classroom and reading

Hashemifardnia et al. (2018) indicated that the students receiving instruction through FC performed better compared to those being trained in conventional classrooms. Karimi and Hamzavi's (2017) findings revealed that FC positively affected the reading comprehension ability of EFL students. In their research Abaeian and Samadi (2016) investigated the effect of FC on Iranian EFL learners' reading comprehension with different proficiency levels. They found out that although upper-intermediate and intermediate level learners in EG outperformed those in CG, intermediate learners benefited from FC more than upper intermediate students in EG.

The flipped classroom, autonomy, and grit

Some research found that flipped-classroom settings encouraged autonomous learning and peer interaction in participants (Strayer, 2012; Zainuddin & Perera, 2019). Tsai (2021), to study the impact of the FC on EFL learners' autonomy in a content-based context, revealed that learners' autonomy improved regarding strategy use, interaction with the materials, social resources, and self-management of e-learning. Furthermore, Du (2020) and Han (2015) indicated that FC cultivated college students' autonomous learning abilities and their autonomous learning behavior. In a recent study, Du (2020)

investigating the self-constructed flipped classroom teaching model revealed that flipped classroom could significantly enhance the students' English comprehension levels as well as their autonomy.

Flipped classroom and perception

The findings of Zainuddin and Attaran (2016) and Karimi and Hamzavi (2017) depicted that not only did students possess positive attitudes toward FC but also they recommended FC for other courses. This was because the students believed that FC catalyzed learning. Shy and quiet as well as full-time international students were positively impacted by FC, though part-time students faced challenges (Zainuddin & Attaran, 2016). Galway et al.'s (2015) post-survey data indicated positive perceptions of students towards FC. Another study (He et al., 2016) found out that students had bipolar opinions toward FC.

The current study

As mentioned in the review of the literature above, there are a plethora of studies that investigated the effects of FC separately on education, autonomy, and reading; however, the studies on the impact of FC on grit are scarce. Moreover, the EFL context is lacking in research. Additionally, in some research, the perception of the participants is well reported. What is more to say is that, to the best knowledge of the researchers, there were no studies which investigated the impact of FC on grit, the autonomy of the students which are supposed to play important roles in self-regulated learning and eagerness to delve more into learning in general and reading in particular. As a result, this study sought to shed more light on the reading achievement of the students strengthened by FC instruction and empowered by the development of grit and autonomy in an EFL context with a view to IELTS.

Research questions

1. Are there any significant differences between pre-tests and post-tests of grit, autonomy, and IELTS reading scores in each control group and experimental group?
2. How does a flipped English classroom intervention impact experimental group students' grit, autonomy, and IELTS reading scores?
3. In what ways will the students' perception be compared at the initial and final stages of a flipped classroom?

Method

Research design

This study used a quasi-experimental method in which the control group underwent non-flipped instruction of the IELTS readings, while the experimental group received flipped instructions. Changes in the IELTS reading, grit, and autonomy scores of the participants after the second administration of IELTS reading test, grit, and

autonomy scales are expected to be the result of the flipped intervention. Both within-group differences using paired samples t-test and between-group differences using independent samples *t*-test were run. It is worth saying that this research was a part of a wider study containing qualitative and quantitative sections which could not be reported here due to the word count and publication limitations.

Participants

This study was conducted with upper-intermediate female and male students in selected Kerman institutes. The participants were selected through convenience non-random sampling. The groups were intact due to the consideration of the language institutes. Moreover, to ensure the homogeneity of the participants in terms of the level of L2 proficiency, Oxford Quick Placement Test (OQPT) was conducted. A total of 46 participants participated in the study. The participants were assigned to 4 classes, two control group classes (CG1=10n & CG2=11) and two experimental group classes (EG1=12n & EG2=13n). The rationale behind selecting upper-intermediate students was that they were supposed to possess satisfactory English proficiency to deal with IELTS readings more effectively. Prior to the administration of the placement test, informed consent was given to the samples following the APA ethical guidelines. The descriptive statistics of the participants are shown in table 1. Before conducting the treatment, a number of independent sample *t*-tests were run to ensure the homogeneity of the participants in groups considering the pre-tests assessments. The results did not show any significant differences between control group and experimental group in terms of autonomy, $t(44) = -.919$, p = .36; grit $t(44) = .560$, p = .579 and IELTS reading *t(44) = -.893, p = .377.*

Table 1
The descriptive statistics of the participants by group, gender, age and OQPT.

	Gender			Age				OQPT			
	Male	**Female**	**Total**	**Min**	**Max**	**Mean**	**SD**	**Min**	**Max**	**Mean**	**SD**
Control Group	12 (57.1%)	9 (42.9%)	21	21	39	26.76	4.04	47	56	50.85	3.22
Experimental Group	14 (56.0%)	11 (44.0%)	25	22	41	29.92	5.55	46	56	51.20	2.87
Total	26 (56.5%)	20 (43.5%)	46	21	41	28.47	5.12	46	56	51.04	3.01

Instruments

The following instruments were used to gather the required data.

Oxford Quick Placement Test

The placement test used for the study was the 60-item OQPT (2001). This test which is divided into two parts is devised by Oxford University Press (OUP) and the University of Cambridge Local Examinations Syndicate (UCLES). Part One and two

contain questions 1–40 and 41–60, respectively. This test is reported to be standardized, and thus its validity, reliability, and item difficulty are at a satisfactory level. The score-level criteria proposed by Afshinfar and Shokouhifar (2016) were used. Based on the criteria, the students whose scores fell between 37-44 were considered upper-intermediate level students.

Grit Scale

This research used the grit scale developed by Duckworth, et al. (2007) as post- and pre-tests to measure the participants' grit improvement after the intervention. It includes 12 items in a 5-point Likert style. The first 6 items measure perseverance of effort. items 7 to 12 measure the consistency of interests and are reverse-coded so that a larger value shows higher consistency of interests. Duckworth, et al. (2007) reported high internal consistency $\alpha = (0.85)$ for the overall scale and for each factor (Consistency of Interests, $\alpha = 0.84$; Perseverance of Effort, $\alpha = 0.78$). Regarding the validity of the scale, the 12 items were developed based on theoretical and empirical literature on grit on 1,545 samples (Duckworth et al., 2007). Duckworth et al. (2007) ran exploratory and confirmatory factor analyses to validate a second-order factor model with two specific factors (consistency of interests and perseverance of effort) and then a general grit factor. They then considered item-total correlations, internal reliability coefficients, and redundancy to eliminate 10 items. On the remaining 17 items, they conducted an exploratory factor analysis on half of the observations chosen at random (n = 772). They reported items with loadings of at least .40, yielding internally consistent factors. Further, the results of confirmatory factor analysis that tested the two-factor model showed satisfactory indexes (RMSEA = .06 - .10 and CFI = .86 -.96) (Duckworth & Quinn, 2009).

Autonomy Scale

To investigate learners' autonomy Tsai's (2021) questionnaire was used. The questionnaire contains five constructs: Tsai (2021) adapted items used in Sanprasert (2010). The questionnaire was validated through rigorous statistical analysis and yielded 5 subcomponents, namely, learner autonomous strategy, learner autonomous behavior, learner independence, learner confidence, and characteristics of autonomous learners. The items were incorporated into a five-point Likert scale from strongly disagree to strongly agree. The questionnaire has been used in most studies related to autonomy in SLA research. The estimated reliability indexes (Cronbach's alpha) were placed at 0.89 for overall strategy items, 0.87 for the subsection of learner autonomous strategy, 0.91 for learner autonomous behavior, 0.86 for learner independence, 0.88 for learner confidence, and 0.93 for characteristics of autonomous learners.

IELTS Reading Tests

To fulfil the purposes of this research, academic tests 2 and 4 of Cambridge IELTS 16 were selected. They are standardized tests. The reason why Cambridge 16 was selected over other Cambridge IELTS 1-15 was because the participants expressed they had not taken its IELTS tests. Each reading test included three reading passages and 40 questions covering a number of task types. All conditions were the same as the real IELTS tests.

The script was read, the steps were followed, the PowerPoint was shown, 60 minutes was allocated, the OMRs were scored according to the answer key at the end of the book, and the real IELTS reading scores were calculated accordingly. Regarding reliability and validity, as Cambridge IELTS 16 is produced by Cambridge exams publishing its reliability and validity are at satisfactory levels.

Perception semi-structured interview

Considering the effect of positive perception on learning for shy and quiet students a semi-structured interview was used. Group interviews were conducted with randomly selected individuals from experimental group participants during the 2 online sessions to assess the perception of participants towards the flipped classroom. Various questions were prudently devised as a guide for the interviewer to help contextualize and elicit the required data according to the four pillars of FC Yarbro et al. (2014). The questions were then reviewed by one scholar skilled in qualitative research methodology as well as teaching English to provide feedback regarding their accuracy and suitability to obtain the related information. Both yes/no and open-ended questions were used to allow for a more profound understanding of the phenomenon under study.

Model of Presenting Reading

For experimental group participants, focusing on the topic of the unit and the strategies used, two days prior to each session the researcher uploaded a related video on the companion website. The participants watched the videos and answered 10-item quizzes to make sure they had watched them to the end. On class day, the researcher asked a few students to recite what they remembered from the recordings. This way their schemata were activated more. As CELTA Trainer's Manual (Thornburry & Watkins, 2007) suggests, eliciting and pre-teaching of some important vocabulary was conducted afterward. The researcher followed the steps recommended in the Mindset for IELTS 2 teacher's book as well as the steps in Mindset for IELTS 2 student's book to keep all the non-flipped teaching procedures the same in all four classes as much as possible. This way the researcher hoped to have controlled other intervening variables so that the results might reflect the effect of flipping. One other reason to use the teacher's book as the reference book for teaching was that the units in Mindset for IELTS books do not contain the same exercises with similar strategies. Each unit focuses on certain strategies for a variety of IELTS reading question types.

Procedure

Prior to data collection, an informed consent form was filled out by the participants. Having completed the demographic information, the participants sat the OQPT (30-35 mins) to assure their proficiency homogeneity after the analysis of the scores. The next day the participants completed autonomy and grit scales. They then took the IELTS academic reading test 2 from Cambridge 16 one week later. The IELTS reading OMRs were scored carefully based on the Academic IELTS reading scoring.

After scoring OQPT and allocating the participants into CG & EG classes, the teacher-researcher started presenting materials two sessions per week to each of the four

classes for 4 weeks. Each reading unit was taught in 2 sessions per week. The exam skill of each reading was taught on Thursdays. All classes received the same materials; however, the CG underwent the intervention in a non-flipped manner. The participants in the experimental group experienced flipped classroom instructions using the researchers' personal website (www.englishpaths.ir). After having watched the flipped-wised prepared videos, the participants answered 10-item quizzes, for the researcher to make sure they had watched them to the end. In flipping the classes, the teacher-researcher followed all 4 FC pillars Yarbro et al. (2014).

At the end of the course, autonomy and grit scales were given to all the participants of both EG and CG again to draw comparisons. IELTS reading test 4 from Cambridge IELTS 16 was administered to participants in CG and EG as well. A semi-structured interview was presented to 13 participants, randomly selected from EG classes. The interviews were conducted in Persian. The data were recorded and content analysis was performed via MAXQDA 2020. Furthermore, the qualitative data were analyzed using narrative content analysis. After that, the first author accompanied by a qualified research assistant transcribed the audio-taped files and the discussion notes into an MS Word file. All the transcriptions were translated into English afterward. The translated data were transferred to MAXQDA 2020 software. Regarding McCrudden and Barnes (2016), thematic analysis was performed in 5 steps. In the beginning, the two researchers read and re-read the manuscripts independently to familiarize themselves with the data. Secondly, both researchers compared each individual's qualitative data with their quantitative data (pre-test and post-test). In the third step, initial codes were produced. Fourth, both researchers created categories by combining similar codes. In the final step, the themes were recognized and the relevant relationships according to participants' replies were compared and then examined. The first and second researchers finally discussed the emerged codes and themes to ensure inter-rater agreement. Any disagreements or disconfirming evidence were then reanalyzed and resolved. Inference quality, reliability, validity, credibility, transferability, dependability, and confirmability assumptions were closely met throughout the study. The results are reported below.

Results

The descriptive statistics of the variables are shown in Table 2. In what follows the quantitative results followed by the qualitative results are presented.

Table 2
The descriptive statistics of the variables

		N	Min	Max	Mean	SD
Control Group	Autonomy Pre-test	21	90.00	118.00	103.09	7.79
	Autonomy Post-test	21	100.00	126.00	108.38	6.77
	Grit Pre-test	21	43.00	53.00	48.19	3.12
	Grit Post-test	21	43.00	55.00	48.61	3.13
	IELTS reading Pre-test	21	22.00	28.00	24.95	1.56
	IELTS reading Post-test	21	24.00	29.00	26.76	1.54
Experimental Group	Autonomy Pre-test	25	95.00	120.00	105.12	7.13
	Autonomy Post-test	25	107.00	126.00	116.48	5.97
	Grit Pre-test	25	40.00	56.00	47.56	4.29
	Grit Post-test	25	49.00	57.00	53.08	2.28

IELTS reading Pre-test	25	22.00	28.00	25.36	1.52
IELTS reading Post-test	25	28.00	34.00	30.64	1.52

Differences between pre-tests and post-tests of grit, autonomy, and IELTS reading scores in CG and EG

To answer RQ1, a paired samples *t*-test analysis was run (Table 3). The assumptions of normality and homogeneity of variance were explored before conducting the main statistical analyses. The results did not show any deviations from the presumed assumptions.

Table 3
Paired-samples t-test analyses of autonomy, grit, and IELTS reading test

			Mean	N	SD	SE Mean	*r*	*t*	df	Sig. p
Control Group	Pair 1	Autonomy Pre-test	103.09	21	7.79	1.70	.74	-4.60	20	0.000
		Autonomy Post-test	108.38	21	6.77	1.47				
	Pair 2	Grit Pre-test	48.19	21	3.12	.68	.93	-1.75	20	0.095
		Grit Post-test	48.61	21	3.13	.68				
	Pair 3	IELTS reading Pre-test	24.95	21	1.56	.34	.14	-4.06	20	0.001
		IELTS reading Post-test	26.76	21	1.54	.33				
Experimental Group	Pair 1	Autonomy Pre-test	105.12	25	7.13	1.42	.56	-9.10	24	0.000
		Autonomy Post-test	116.48	25	5.97	1.19				
	Pair 2	Grit Pre-test	47.56	25	4.29	.85	.62	-8.19	24	0.000
		Grit Post-test	53.08	25	2.28	.45				
	Pair 3	IELTS reading Pre-test	25.36	25	1.52	.30	.61	-19.71	24	0.000
		IELTS reading Post-test	30.64	25	1.52	.30				

In the control group, considering the first research question, the participants did not obtain significantly different scores on autonomy post-test ($M = 108.38$, $SD = 6.77$, $SE = 1.47$) compared to their pre-test scores ($M = 103.09$, $SD = 7.79$, $SE = 1.70$), $t (20) = -4.60$, $p = 0.000$, $r = .74$. Likewise, the participants did not gain significantly different scores on grit post-test ($M = 48.61$, $SD = 3.13$, $SE = .68$) compared to their pre-test scores ($M = 48.19$, $SD = 3.12$, $SE = .68$), $t (20) = -1.75$, $p = 0.095$, $r = .93$. Similarly, the participants' scores on IELTS post-test ($M = 26.76$, $SD = 1.54$, $SE = .33$) did not indicate a significant difference compared to their pre-test scores ($M = 24.95$, $SD = 1.56$, $SE = .34$), $t (20) = -4.06$, $p = 0.001$, $r = .14$.

In the experimental group, considering the first research question, the participants obtained significantly higher scores on autonomy post-test ($M = 116.59$, $SD = 5.97$, $SE = 1.19$) compared to their pre-test scores ($M = 105.12$, $SD = 7.13$, $SE = 1.42$), $t (24) = -9.10$, $p = 0.000$, $r = .56$. Moreover, the participants obtained significantly higher scores on grit post-test ($M = 53.08$, $SD = 2.28$, $SE = .45$) compared to their pre-test scores ($M = 47.56$, $SD = 4.29$, $SE = .85$), $t (24) = -8.19$, $p = 0.000$, $r = .62$. In a similar manner, the participants obtained significantly higher scores on IELTS post-test ($M = 30.64$, $SD = 1.52$, SE = .30)

compared to their pre-test scores (M = 25.36, SD = 1.52, SE = .30), t (24) =-8.19, p = 0.000, r = .62.

In sum, the results indicate that the treatment had a significant effect on participants' autonomy, grit, and IELTS reading scores in the experimental group. Moreover, the results indicated that in the control group both autonomy and IETLS reading scores improved significantly; however, grit scores did not show any significant difference in pre- and post-tests. The qualitative data were also recorded; however, reporting the qualitative data is not within the scope of this study.

FC Effect on Grit, Autonomy, and IELTS Reading

An independent-samples t-test was conducted to compare autonomy, grit, and IELTS reading scores of the participants in the control and experimental groups. (Table 4).

Table 4
Independent samples t-test of autonomy, grit, and IELTS reading scores

| | Levene's Test | | Independent samples *t-test* | | | | |
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	SE Difference
Autonomy Post-test	.016	.90	-4.31	44	.000	-8.09	1.87
Grit Post-test	2.23	.142	-5.564	44	.000	-4.46	.80
IELTS reading Post-test	.001	.977	-8.53	44	.000	-3.87	.45

On average, there was a significant improvement in autonomy scores of experimental group (M = 116.48, SD = 5.97, SE = 1.19) compared to the participants in the control group (M = 108.38, SD = 6.77, SE = 1.47), t (44) = -4.31, p = 0.000. There was also significant enhancement in grit scores of experimental group participants (M = 53.08, SD = 2.28, SE = .80), compared to the participants' scores in the control group (M = 48.61, SD = 3.13, SE = .68), t (44) = -5.56, p = 0.000. Additionally, the results show that the participants in the experimental group obtained significantly higher IELTS reading scores (M = 30.64, SD = 1.52, SE = .45) compared to the participants in the control group (M = 26.76, SD = 1.54, SE = .33), t (44) = -8.53, p = 0.000.

Taken together, the results suggest that the intervention had significantly improved the participants' autonomy, grit, and IELTS reading scores.

The Perception of The Participants in Flipped Classroom

Regarding the third research question which investigated the perception and attitudes of the participants on FC and after a content analysis, several themes emerged. The data are depicted in Table 5.

Table 5

General Themes Developed from Semi-Structured Interviews

Attitudes	General codes	Emerged Themes	Students' example responses
The students' attitudes towards the use of flipped classroom	Flexible environment	Mode of watching videos: Online	It was easy for me to get online and watch videos.
		The time of watching videos: 24/7	As a mother I was free to watch them whenever I wanted.
		Times of watching videos: unlimited	It watched some videos more than once.
		Medium of watching videos: Any electronic device	It was great to watch the videos on mobile, laptop or smart TV.
		The place of watching videos: anywhere	I sometimes watched the materials at home and sometimes at work.
	Learning Culture	Watching videos prior to the class: Activating schemata; feeling confident	I have always wanted to get familiar with topic before classes. I could do so here by watching related videos before classes.
		Class time allocation: exploring topics in great depth	The class time was very fruitful and effective.
	Intentional content	Relatedness of the videos	The videos were really short and to the point.
	Professional educator	Educator's expertise	I think it could not be better to have a teacher like you (teacher-researcher) who helped us improve our reading.

The semi-structured interview was used to explore the participants' attitudes towards FC. The four pillars of Yarbro et al. (2014) were considered while devising the semi-structured interview questions. There were four general codes for the students' attitudes towards the use of the flipped classroom. As the qualitative research may be exploratory, according to the answers of the participants, there came to be 9 emerged themes after the interviews were transcribed and content-analyzed by MAXQDA 2020.

Discussion

This study attempted to investigate the effect of flipping IELTS reading on grit, autonomy, and IELTS reading achievement of EFL students in English language institutes in Kerman. After the two pre- and post-administrations of autonomy, grit, and IELTS reading tests, the results revealed that the participants in EG enhanced in grit, autonomy as well as in IELTS reading. On the contrary, the participants in the control group did not indicate any significant difference in pre-test and post-test grit. However, their scores improved significantly on IELTS reading and autonomy. It is worth mentioning that, although the participants in the control group improved in autonomy and

IELTS reading scores, the participants in the experimental group indicated more improvement which is presumed to be the effect of the flipped intervention.

Regarding the positive effect of the flipped classroom on the enhancement of IELTS reading, the results of this study confirm Abaeian and Samadi's (2016), Hashemifardnia et al.'s (2018), and Karimi and Hamzavi's (2017) findings. In addition, regarding the positive impact of flipped classrooms on autonomy the findings of this study are in line with those of Baepler et al. (2014), Zainuddin and Perera (2019), and Chen et al. (2014). The findings of this study indicated that flipping instructions had significant effects on the improvement of students' grit needed for better academic achievement which is in line with the studies of Duckworth et al. (2007), Duckworth and Quinn (2009) Aparicio et al. (2017). This study confirmed that more autonomous learners, the outcome of FC (Baepler et al., 2014; Chen et al., 2014; Strayer, 2012), will benefit from autonomy's positive effects on their reading involvement which confirms the studies of Tsai (2021), Zainuddin and Perera (2019), and Du (2020). Confirming Paris et al (1991) and Duke et al. (2011) in that activating schema and previewing will result in will improve reading ability, having students watch videos prior to the class in this study is supposed to influence the results. Moreover, regarding autonomy which is delegating the responsibility of learning to the learners, this study was in line with Pearson and Gallagher's (1983) findings.

Unlike reading and autonomy, to the best knowledge of the researchers, limited data were available to correlate the findings of the variable grit to the previous studies sufficiently. On the other hand, the novelty of this study lies in the ground that in EFL and ESL contexts there is not enough research targeting IELTS skills and two important personality traits, namely, grit and autonomy within the context of the flipped classroom. Consequently, further research should examine this issue and unravel its unresolved sides. However, the overall findings confirm the positive impact of incorporating flipped classrooms into the curriculum.

Considering the third research question, the data show positive attitudes of the participants about using flipped classroom which confirm the findings of some other previous research (Galway et al., 2015; Zainuddin & Attaran, 2016). However, He et al.'s (2016) findings showed bipolar attitudes according to which some individuals had positive views which support the findings of this research, while some others had opposite views compared to the current study.

The reason behind this EG's improvement is supposed to be due to the unique features of FC. Firstly, the flexible environment imparted the freedom to learners to manipulate and adjust their learning in terms of flexibility in time, place, medium, and times of watching the materials at their convenience, fostering learners' autonomy. Secondly, learning culture suggests that class time was devoted to more interaction, exploring topics in greater depth, creating rich learning opportunities, and experiencing more effective peer and group work; hence, what the participants experienced were more students' engagement and less teacher's lectures. On the other hand, the third uniqueness of FC, pre-recorded videos and intentional content, effectively and efficiently utilized in-class time in terms of optimizing student-centered activities and active learning strategies, and eliminating some pre-reading strategies such resulted from activating schemata prior to the class. This feature of FC might have had a significant effect on the improvement of grit since the students feel that the class time was effectively involving and efficiently resulting. As the last feature of FC, the professional educator took on a less visibly

prominent role and acted as a facilitative guide for the class to run smoothly, maximizing students' engagement, and self-controlled learning resulting in more autonomy.

The findings in this study can be justified in terms of Moore's (1989) tripartite theory of interaction including learner-content, learner-instructor, and learner-learner interaction. Moore (1989) contends that, firstly, learner-content interaction, without which education will lag behind, results in changes in the understanding, perspective, and the cognitive structures of the learner's mind. This learner-content interaction is intensified due to the prior-to-the-class watching of the materials and while-class content engagement. Secondly, Learner-instructor interaction, is the interaction between the material preparer and presenter, in FC's case the professional educator, which was carefully observed throughout this study. Moore believes that effective learner-instructor interaction will maintain students' interest and motivation, interpreted as grit in this study. Finally, learner-learner interaction, an extremely valuable resource for learning, was utilized to a maximum in this study which fostered both group-work, grit, and autonomy.

Conclusion and Implications

As mentioned before, the positive perceptions of individuals can be reflective of their intrinsic motivation which is in close relationship with grit. Therefore, if individuals develop positivity on the perception continuum, it will lead to better educational achievement through the perseverance of effort and consistency of interests. The findings of this study showed positive attitudes towards flipped classrooms and the use of technology. Consequently, this mutual relationship of positive perception and motivation may give rise to the further achievement of students. This study, hence, encourages the use of flipped classrooms and technology in educational settings.

The findings of this study provide some practical implications for language learners, teachers, as well as curriculum designers. The findings of this study on the impact of FC on the improvement of grit and autonomy leading to the betterment of reading achievement, learners will benefit from the incorporation of FC into the curriculum by the curriculum designers. Not only will the implementation of FC yield more autonomous learners, but also through improving grit the students will become life-long learners. In addition, in the era of technology, teachers can boost students' potentials by experiencing FC as well. It may be expected that students may improve in other skills rather than merely reading, in the light of the fact that by FC grit and autonomy levels are enhanced regardless of the language skill. Therefore, flipping classes will greatly enhance EFL students' cultural understanding.

The findings of the study should be interpreted in the context of some limitations. This research studied the effect of FC on grit and autonomy in the EFL context of Iran, yet the findings are not generalizable worldwide as other EFL contexts might have diverse EFL and ESL textures. Consequently, the mentioned limitations call for the replications of this study in other EFL/ESL contexts and with larger samples.

References

Abaeian, H., & Samadi, L. (2016). The effect of the flipped classroom on Iranian EFL learners' L2 reading comprehension: Focusing on different proficiency levels.

Journal of Applied Linguistics and Language Research, *3*(6), 295–304. http://www.jallr.com/ index.php/JALLR/article/view/442

Abusaeedi, A. A. R., & Khabir, M. (2017). EFL learners' metacognitive reading strategies preferences in relation with their perfectionism regarding gender. *Open Journal of Modern Linguistics*, *7*(2), 108–118. https://doi.org/10.4236/ojml.2017.72009

Adnan, M. (2017). Perceptions of senior-year ELT students for flipped classroom: a materials development course. *Computer Assisted Language Learning*, *30*(3–4), 204–222. https://doi.org/10.1080/09588221.2017.1301958

Afshinfar, D., & Shokouhifar, A. (2016). The Effect of Explicit and Implicit Corrective Feedback on the Narrative Writing of Advanced Iranian EFL Learners. *Journal of Applied Linguistics and Applied Literature: Dynamics and Advances*, *4*(2), 15–41. https://doi.org/10.22049/jalda.2018.26273.1075

Akbari, O., & Razavi, A. (2016). Using authentic materials in the foreign language classrooms: Teachers' perspectives in EFL classes. *International Journal of Research Studies in Education*, *5*(2), 105–116. https://doi.org/10.5861/ijrse.2015. 1189

Akçayır, G., & Akçayır, M. (2018). The flipped classroom: A review of its advantages and challenges. *Computers and Education*, *126*, 334–345. https://doi.org/10.1016/ j.compedu.2018.07.021

Aparicio, M., Bacao, F., & Oliveira, T. (2017). Grit in the path to e-learning success. *Computers in Human Behavior*, *66*, 388–399. https://doi.org/10.1016/j.chb.2016. 10.009

Arnold-Garza, S. (2014). The flipped classroom teaching model and its use for information literacy instruction. *Communications in Information Literacy*, *8*(1), 7–22. https://doi.org/10.15760/comminfolit.2014.8.1.161

Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers and Education*, *78*, 227–236. https://doi.org/10.1016/j.compedu.2014.06.006

Baltova, I. (1999). Multisensory language teaching in a multidimensional curriculum: The use of authentic bimodal video in core French. *Canadian Modern Language Review*, *56*(1), 31–48. https://doi.org/10.3138/cmlr.56.1.31

Benson, P., & Voller, P. (2014). Autonomy and independence in language learning. In *Autonomy and Independence in Language Learning* (1st ed.). London, Routledge. https://doi.org/10.4324/9781315842172

Bian, Z. (2021). Evaluation of sports ads value based on consumer psychology. *Revista De Psicología Del Deporte (Journal of Sport Psychology), 30*(3), 25-36. https://www.rpd-online.com/index.php/rpd/article/view/469.

Chen Hsieh, J. S., Wu, W. C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, *30*(1–2), 1–21. https://doi.org/10.1080/09588221.2015.1111910

Chen, Y., Wang, Y., Kinshuk, & Chen, N. S. (2014). Is FLIP enough? or should we use the FLIPPED model instead? *Computers and Education*, *79*(1), 16–27. https://doi.org/10.1016/j.compedu.2014.07.004

Dreyer, C., & Nel, C. (2003). Teaching reading strategies and reading comprehension within a technology-enhanced learning environment. *System*, *31*(3), 349–365. https://doi.org/10.1016/S0346-251X(03)00047-2

Du, Y. (2020). Study on Cultivating College Students' English Autonomous Learning

Ability under the Flipped Classroom Model. *English Language Teaching, 13*, 13-19. https://doi.org/10.5539/elt.v13n6p13

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6), 1087–1101. https://doi.org/10.1037/0022-3514.92.6.1087

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the short Grit Scale (Grit-S). *Journal of Personality Assessment*, *91*(2), 166–174. https://doi.org/10.1080/00223890802634290

Duke, N. K., Pearson, P. D., Strachan, S. L., & Billman, A. K. (2011). Essential elements of fostering and teaching reading comprehension. In S. J. Samuels & A. Farstrup (Eds.). *What research has to say about reading instruction* (4th ed.) (pp. 51-93). Newark, DE: International Reading Association.

Elrayah, M. (2022). Improving teaching professionals' satisfaction through the development of self-efficacy, engagement, and stress control: a cross-sectional study. *Educational Sciences: Theory and Practice, 22*(1), 1-12. http://dx.doi.org/10.12738/jestp.2022.1.0001.

Enfield, J. (2013). Looking at the impact of the flipped classroom model of instruction on undergraduate multimedia students at CSUN. *TechTrends*, *57*(6), 14–27. https://doi.org/10.1007/s11528-013-0698-1

Galway, L. P., Berry, B., & Takaro, T. K. (2015). Student perceptions and lessons learned from flipping a master's level environmental and occupational health course. *Canadian Journal of Learning and Technology / La Revue Canadienne de l'apprentissage et de La Technologie*, *41*(2), 1–16. http://files.eric.ed.gov/fulltext/EJ1064819.pdf

Goodsell, A. S., Maher, M. R., Tinto, V., Smith, B. L., & MacGregor, J. (1992). *Collaborative learning: A sourcebook for higher education.* University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

Han, Y. (2015). Successfully flipping the ESL classroom for learner autonomy. *NYS TESOL Journal*, *2*(1), 98–109. http://journal.nystesol.org/jan2015/Han_98-109_NYSTJ_Vol2Iss1_Jan2015.pdf

Hashemifardnia, A., Namaziandost, E., & Shafiee, S. (2018). The effect of implementing flipped classrooms on Iranian junior high school students' reading comprehension. *Theory and Practice in Language Studies*, *8*(6), 665–673. https://doi.org/10.17507/TPLS.0806.17

He, W., Holton, A., Farkas, G., & Warschauer, M. (2016). The effects of flipped instruction on out-of-class study time, exam performance, and student perceptions. *Learning and Instruction*, *45*, 61–71. https://doi.org/10.1016/j.learninstruc.2016.07.001

Johnson, C., & Marsh, D. (2014). *Blended language learning: An effective solution but not without its challenges*. *4*(3), 23–41. https://doi.org/10.18870/hlrc.v4i3.213

Karimi, M., & Hamzavi, R. (2017). The effect of flipped model of instruction on EFL learners' reading comprehension: Learners' attitudes in focus. *Advances in Language and Literary Studies*, *8*(1), 95–103. https://doi.org/10.7575/aiac.alls.v.8n.1p.95

Khabir, M., Jabbari, A. A., & Razmi, M. H. (2022). Flipped presentation of authentic audio-visual material: Impacts on intercultural sensitivity and intercultural effectiveness in an EFL context. *Frontiers in Psychology*, (In Press). https://doi.org/https://doi.org/10.3389/fpsyg.2022.832862

Khan, J., Yuen, K.H., Ng, B.H., Wong, J.W., Al-Dhalli, S., Elhassan, G.O., Chitneni, M., Mohammed, K., Hamid, J.A., Yusuf, E., & Fadli, M. (2011). Bioequivalence evaluation of two different controlled release matrix formulations of ketoprofen tablets in healthy Malaysian volunteers. *Latin American Journal of Pharmacy, 30*(10), 1991. http://www.latamjpharm.org/resumenes/30/10/LAJOP_30_10_1_18.pdf

Kırmızı, F. S. (2010). Relationship between reading comprehension strategy use and daily free reading time. *Procedia-Social and Behavioral Sciences*, 2(2), 4752–4756. https://doi.org/10.1016/j.sbspro.2010.03.763

Kuppens, A. H. (2010). Incidental foreign language acquisition from media exposure. *Learning, Media and Technology*, 35(1), 65–85. https://doi.org/10.1080/17439880903561876

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *The Journal of Economic Education*, 31(1), 30–43. https://doi.org/10.1080/00220480009596759

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* In J. S. Brown (Ed.), *Learning in doing: social, cognitive and computational perspectives* (pp. 29-43). Cambridge: Cambridge university press. https://doi.org/10.1017/CBO9780511815355

Levine, A., Ferenz, O., & Reves, T. (2000). EFL Academic Reading and Modern Technology: How Can We Turn Our Students into Independent Critical Readers?. *Tesl-Ej*, 4(4), 1–9. http://www.tesl-ej.org/wordpress/issues/volume4/ej16/ej16a1/?wscr=

McCrudden, M. T., & Barnes, A. (2016). Differences in student reasoning about belief-relevant arguments: A mixed methods study. *Metacognition and Learning*, 11(3), 275–303. https://doi.org/10.1007/s11409-015-9148-0

Mehring, J. (2016). Present research on the flipped classroom and potential tools for the EFL classroom. *Computers in the Schools*, 33(1), 1–10. https://doi.org/10.1080/07380569.2016.1139912

Miceli, T., Murray, S. V., & Kennedy, C. (2010). Using an L2 blog to enhance learners' participation and sense of community. *Computer Assisted Language Learning*, 23(4), 321–341. https://doi.org/10.1080/09588221.2010.495321

Moore, M. G. (1989). Editorial: Three types of interaction. *American Journal of Distance Education, 3*(2), 1–7. doi:10.1080/08923648909526659

Namaziandost, E., Razmi, M. H., Ahmad Tilwani, S., & Pourhosein Gilakjani, A. (2022). The Impact of Authentic Materials on Reading Comprehension, Motivation, and Anxiety Among Iranian Male EFL Learners. *Reading and Writing Quarterly*, 1–38. https://doi.org/10.1080/10573569.2021.1892001

Namaziandost, E., Razmi, M. H., Hernández, R. M., Ocaña-Fernández, Y., & Khabir, M. (2021). Synchronous CMC text chat versus synchronous CMC voice chat: impacts on EFL learners' oral proficiency and anxiety. *Journal of Research on Technology in Education*, 1–18. https://doi.org/10.1080/15391523.2021.1906362

Paris, S. G., Wasik, B. A., & Turner, J. C. (1991). The development of strategies of seaders. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of Reading Research* (Vol. 2, pp. 609-640). Mahwah, NJ: Lawrence Erlbaum Associates.Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary Educational Psychology*, 8(3), 317–344. https://doi.org/10.1016/0361

-476X(83)90019-X

Rastegar, M., Kermani, E. M., & Khabir, M. (2017). The relationship between metacognitive reading strategies use and reading comprehension achievement of EFL learners. *Open Journal of Modern Linguistics*, *7*(2), 65–74. https://doi.org/10.4236/ojml.2017.72006

Renzulli, J. S. (2020). Promoting social capital by expanding the conception of giftedness. *Talent, 10*(1), 2-20. DOI: https://doi.org/10.46893/talent.757477.

Sahragard, R., Ziya, M., Razmjoo, A., & Ahmadi, A. (2020). On the Development of a Tentative Model of a Flipped Classroom Instruction and Its Effect on Iranian Intermediate EFL Learners' General IELTS Writing. *Journal of English Language Teaching and Learning*, *12*(26), 239–261. https://elt.tabrizu.ac.ir/article_11474_42ce458e11a2dc0a0ec60512529861ab.pdf

Sanprasert, N. (2010). The application of a course management system to enhance autonomy in learning English as a foreign language. *System, 38*(1), 109–123. https://doi.org/10.1016/j.system.2009.12.010

Schumm, J. S., & Mangrum, C. T. (1991). FLIP: A framework for content area reading. *Journal of Reading*, *35*(2), 120–124. https://www.jstor.org/stable/40033120

Shafiee Rad, H., Namaziandost, E., & Razmi, M. H. (2022). Integrating STAD and flipped learning in expository writing skills: Impacts on students' achievement and perceptions. *Journal of Research on Technology in Education (In Press)*, DOI: 10.1080/15391523.2022.2030265.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, *33*(4), 289–306. https://doi.org/10.1080/08923647.2019.1663082

Slavin, R. E. (1981). Synthesis of research of cooperative learning. *Educational Leadership*, *38*(8), 655–660. https://www.per-central.org/items/Load.cfm?ID=2901

Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research*, *15*(2), 171–193. https://doi.org/10.1007/s10984-012-9108-4

Syndicate, U., Test, D., Vorkenntnisse, I., Aufgaben, D., Sie, W., Hilfen, W., & Next, L. (2001). *Quick Placement Test, Version 1*, 1–12. https://dokumen.tips/documents/quick-placement-test-55845095060c1.html

Thornburry, S., & Watkins, P. (2007). *The CELTA course: Certificate in English language teaching to adults : trainee book*. Cambridge, United Kingdom. Cambridge University Press.

Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet interest communities and online gaming. *The Modern Language Journal*, *93*, 802–821. https://doi.org/10.1111/j.1540-4781.2009.00974.x

Tican Başaran, S., & Dinçman, B. (2022). Professional development of Turkish preschool teachers during summer holidays. *International Online Journal of Education and Teaching (IOJET), 9*(1). 361-396. https://iojet.org/index.php/IOJET/article/download/1554/762

Topping, K., & Ehly, S. (EDs.) (1998). *Peer-assisted learning* (1st ed.). Routledge. https://doi.org/10.4324/9781410603678

Toquero, C. M. (2020). Challenges and Opportunities for Higher Education amid the COVID-19 Pandemic: The Philippine Context. *Pedagogical Research*, *5*(4), 1–5.

https://doi.org/10.29333/pr/7947

Tsai, Y.-R. (2021). Promotion of learner autonomy within the framework of a flipped EFL instructional model: Perception and perspectives. *Computer Assisted Language Learning*, *34*(7), 979–1011. https://doi.org/10.1080/09588221.2019.1650779

Turan, Z., & Akdag-Cimen, B. (2020). Flipped classroom in English language teaching: a systematic review. *Computer Assisted Language Learning*, *33*(5–6), 590–606. https://doi.org/10.1080/09588221.2019.1584117

Vygotsky, L. (1978). Socio-cultural theory. *Mind in Society*, *6*(3), 23-43. Cambridge, MA: Harvard University Press. http://csieme.us/documents/Example-Annotated-Bib.pdf

Yarbro, J., Arfstrom, K. M., McKnight, K., & McKnight, P. (2014). *Extension of a review of flipped learning*. Flipped Learning Network/Pearson/George Mason University. https://flippedlearning.org/wp-content/uploads/2016/07/Extension-of-FLipped-Learning-LIt-Review-June-2014.pdf

Yoon, S., Kim, S., & Kang, M. (2020). Predictive power of grit, professor support for autonomy and learning engagement on perceived achievement within the context of a flipped classroom. *Active Learning in Higher Education*, *21*(3), 233–247. https://doi.org/10.1177/1469787418762463

Yu, Z., & Wang, G. (2016). Academic achievements and satisfaction of the clicker-aided flipped business english writing class. *Educational Technology and Society*, *19*(2), 298–312. http://www.jstor.org/stable/jeductechsoci.19.2.298%0A

Zainuddin, Z., & Attaran, M. (2016). Malaysian students' perceptions of flipped classroom: a case study. *Innovations in Education and Teaching International*, *53*(6), 660–670. https://doi.org/10.1080/14703297.2015.1102079

Zainuddin, Z., & Perera, C. J. (2019). Exploring students' competence, autonomy and relatedness in the flipped classroom pedagogical model. *Journal of Further and Higher Education*, *43*(1), 115–126. https://doi.org/10.1080/0309877X.2017.1356916.