

## Exploring the perceptions of Iranian Graduate Students about Flipped Learning: The Case of EFL Students of Applied Linguistics

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### Abstract:

Language teaching has benefitted from technology for enhancing teaching and learning quality. Although some language teachers may implement technologies in their general language classes in institutes, technology is rarely used in university classes to facilitate learning academic course procedures and deepen students' understanding of the academic content. The flipped learning model is a popular approach, which according to many scholars, is quite effective in enhancing teaching and learning languages. The current quantitative research attempted to explore the impact of flipped learning model on the TEFL graduate students' perceptions of experiencing this new model. To this end, 34 graduate students majoring in TEFL who had enrolled in a course entitled 'Materials Designing and Development' at Yazd University constituted the participants in this study. Two questionnaires were applied for data collection, including the Technology Acceptance Model (TAM) questionnaire and the Perception of Flipped Learning Experience questionnaire. The findings revealed that most students were engaged in their learning procedures and enjoyed learning their academic course in a flipped classroom. They also reported that flipped learning model is applicable in academic contexts and university classes. The researchers highlight the effects of flipped learning model on teaching academic courses, the students' perceptions of flipped learning model, and their impressions of the online platform used (i.e., Telegram). Findings showed that students found flipped learning model as an effective and enjoyable instrument for improving their academic performance and motivation. Moreover, Telegram was found to be a suitable platform for this approach.

**Keywords:** Computer-assisted language learning (CALL), Flipped learning, Graduate students' perceptions, Mobile-Assisted Language Learning (MALL), Telegram.

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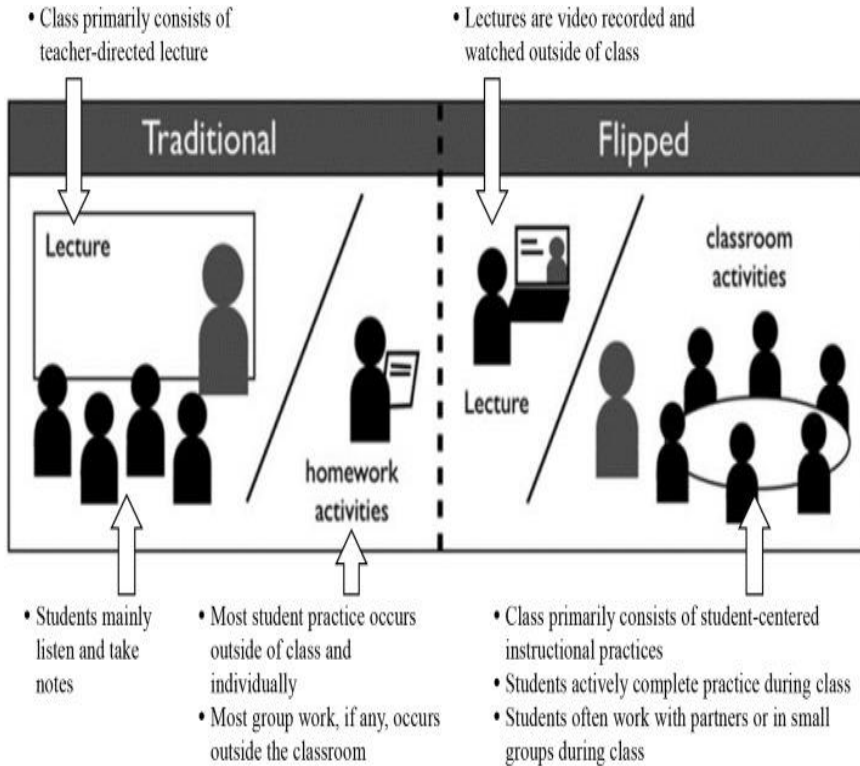
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## 1. Introduction

In the 21st century, one of the most impressive things that emerged in all aspects of people's lives was technology. With its different shapes, technology has become an inseparable part of everyone's life, and living without it would be hard to imagine. For sure, education is not an exception. To date, information technology has dramatically impacted education and made lots of changes to it (Lortie, 2020). Teaching and learning foreign languages are fundamental issues all around the world. Although there have been a lot of efforts made by authorities to make language education developed and up-to-date, some challenges still exist (Wu et al., 2019). Practitioners are interested in using instructional methodologies that can improve students' learning and, therefore, motivate them (Johnson et al., 2014). In recent years, there has been a plethora of studies conducted in the realm of Information and Communication Technology (ICT) and Computer-Assisted Language Learning (CALL) which can tremendously influence students' language learning procedures and outcomes (Butler-Pascoe, 1997; Chirimbu & Tafazoli, 2013; Nunan, 1999). Flipped learning (FL) is a unique approach in CALL. "Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (Flipped Learning Network, 2014, p. 1). It is based on the constructivist learning theory (Bishop & Verleger, 2013), which means that "learners construct their own meaning depending on already existing knowledge" (Saglam & Arslan, 2018, p. 171). It helps the students learn the educational content at their own pace and solve their problems during class time (Chen Hsieh et al., 2016a). In conventional instruction, the teacher teaches the content in the classroom, and the students try to learn that during class time. However, in flipped classrooms, the content will be taught by the teacher in the form of videos, audio, and other possible techniques. The lesson would be shared with the students before the class session (Abeysekera & Dawson, 2015; Dove & Dove, 2015; He et al., 2016; Jungić et al., 2015). Therefore, the students would have adequate time to go through the content at their own pace and at an appropriate time. Next, the class time will be spent on solving students' problems, and the students will participate more in class discussions by receiving feedback from their peers and teachers (Wu et al., 2019). In other words, "inverting the classroom events, which have traditionally taken place inside the classroom, now take place outside the classroom and vice versa" (Lage et al., 2000, p. 32). Figure 1 shows the differences between flipped classrooms and traditional ones.

**Figure 1.**

Flipped classroom vs. traditional one (Jungić et al., 2015, p. 509)



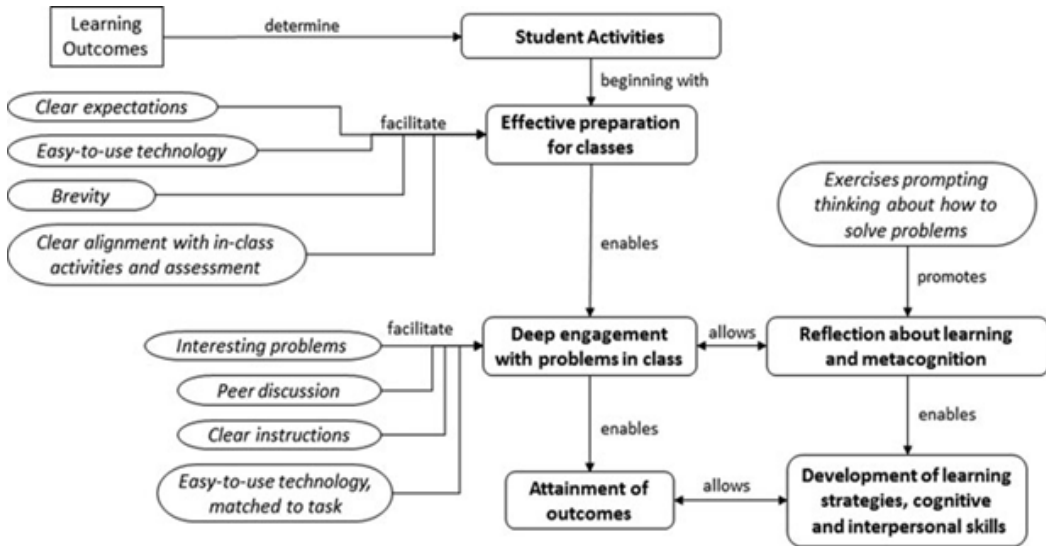
It can be said that, in contrast to traditional classes, in which learning was limited to class time and the teacher was the primary source of knowledge, in flipped classes, this procedure is inverted (LaFee, 2013). In such classes, the teacher is a facilitator, and they can easily monitor the students' activities, give them feedback, and correct their errors and mistakes (Chen Hsieh et al., 2016a). The teacher guides them in the individual and group spaces (Talbert, 2017), and he is not the authority in the class (Zou & Xie, 2019). Having this approach would let us have "a dynamic and interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (Flipped Learning Network, 2014, p.1). In addition, it is an intentional approach that gets all students "involved in dynamic, creative activities that support deep learning" (Talbert, 2017, p. 27). According to McLaughlin et al. (2016, p. 25), the core elements of flipped learning are as follows:

1. Pre-class learning (e.g., video clips, podcasts, and annotated notes)
2. In-class learning (e.g., group activities, scaffolding, class discussions)
3. Assessment (e.g., diverse approaches like audio response systems, essays, and projects)

Figure 2 also shows the concept map of flipped learning model.

**Figure 2.**

*Flipped classroom map of concept (from McLaughlin et al., 2016, p.25)*



**Student behavior** is shown in bold; *instructor behavior* is shown in italics.

There are four pillars for the F-L-I-P learning model, which are a flexible context, culture learning, intentional content, and experienced educators (Hamdan et al., 2013). To date, the interest in researching flipped learning and flipped classrooms is growing fast (Lundin et al., 2018). There are plenty of studies that revealed that flipped learning is a great approach that helps students and teachers to use class time in a better and more effective way, increases students' contribution to in-class discussion and interaction, gives students flexibility in reviewing the educational content, and also helps them to have more group work (Chen et al., 2014; Davies et al., 2013; Ferreri & O'Connor, 2013; Strayer, 2012). Correspondingly, flipped learning improves the students' learning pace (Day & Foley, 2006; Hung, 2015) and students' engagement (Dill, 2012), producing outcomes that have been enhanced (Baepler et al., 2014; Moravec et al., 2010), and it could also improve their motivation (Afzali & Izadpanah, 2021; Strayer, 2012; Traxler & Riordan, 2003). In addition, the studies revealed that the flipped classroom is a good technique that boosts higher-order cognition and active learning (Baepler et al., 2014; Hung, 2015), and also affects students' perception positively and enhance their satisfaction with learning experiences (Adnan, 2017). Moreover, even in online classes, which were

very popular during the pandemic, the combination of online teaching and flipped learning can improve the students learning and attention (Jia et al., 2021; Tang et al., 2020). Language learning is one of the areas that has benefited from flipped learning model. Many studies have investigated the effect of the flipped learning approach on English language learners in informal settings such as language institutes (Afzali & Izadpanah, 2021; Lee & Wallace, 2017; Mehring, 2016). Similarly, the effects of this model have been studied in formal settings, specifically higher education, which is the focus of the present study (Adnan, 2017; Chen Hsieh et al., 2016a; Wu et al., 2019; Saglam & Arslan, 2018), but it is indispensable to mention that although flipped learning is used in many universities around the world for teaching different fields (Mennella, 2016; Nouri, 2016), for teaching language, especially in higher education it's not that popular (AbdelShaheed, 2017; Hung, 2015). The systematic review conducted by Turan and Akdag-Simon (2020) showed that many studies focused on the effect of the FL on enhancing the engagement of learners (e.g., Amiryouse, 2017), learners' speaking skills (e.g., Koroglu & Cakir, 2017) and peer interaction (e.g., Zainuddin & Perera, 2019). According to another systematic review conducted by Kernagaran and Abdullah (2022), from 2014 to 2022, among 29 articles, just one paper dealt with students' and teachers' perceptions of the FL model. Moreover, Turan and Akdag-Simon (2020) reported that in their systematic review, 80% of the studies were on undergraduate students, and none was on graduated students. In Iran, some research studies have been conducted to explore the efficacy of using FL in an EFL environment (e.g., Afzali & Izadpanah, 2021; Amiryouse, 2017; Haghighi et al., 2018; Zarrinabadi & Ebrahimi, 2019). The noticeable point is that in the two so-called systematic reviews, in the first one, there was just one article published in Iran, and in the second one, no paper was extracted and published in Iran. Similarly, the systematic review done by Lundin and his colleagues (2018) highlighted that among 530 articles published from 2010 to 2015, just one study was from Iran.

Interestingly, among the research studies conducted in Iran, even those which dealt with higher education, they investigated the efficacy of the FL in some areas like language skills, motivation, and engagement, and rarely, they explored their perceptions. Moreover, most of the participants were undergraduate students in a General English course, and to date, few studies have been conducted on graduate students of TEFL (e.g., Etemadifar et al., 2020) and not on learning their academic course. Furthermore, as it was mentioned earlier, based on different studies (Bishop & Verleger, 2012; Cohen & Brugar, 2013), if flipped learning approach is applied successfully, the learners would have some elegant characteristics, such as being active recipients of knowledge rather than being passive recipients of knowledge, having high order of intellectual thinking, and increasing their motivation, and participation in the class (Tafazoli, 2022) which are necessary for

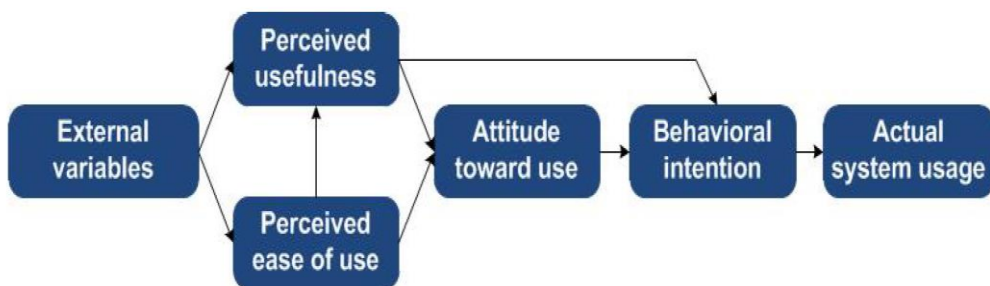
graduate students. Therefore, the current study attempted to fill in this gap by exploring the attitudes and beliefs of TEFL graduate students regarding the FL model utilized by the teacher for one semester.

## 2. Theoretical Framework

Although the technology is solid and effective, it is the user of the technology who decides whether to utilize that or not (Huang & Liaw, 2005). Therefore, learners' willingness or unwillingness to use a technological device or platform is still quite challenging for researchers (Chen Hsieh et al., 2016b). To examine the acceptance or unwillingness to use digital devices, different theoretical models have been presented, e.g., Technology Acceptance Model (TAM), TAM2, or the Unified Theory of Acceptance and Use of Technology (UTAUT) (Chen Hsieh et al., 2016b). Among these theoretical models, TAM, developed initially by Davis et al. (1989), enjoys high reliability and validity (Adams et al., 1992; Chau, 1996), and according to King and He (2006), it is "a valid and robust model" (p. 740). It distinguishes the impact of four variables on the usage of technology. These variables are perceived usefulness, perceived ease of use, attitude toward use, and behavioral intention or willingness to use the technology (Chen Hsieh et al., 2016b). They are represented in Figure 3.

**Figure 3.**

*Technology Acceptance Model (TAM) (Davis et al. (1989) from Chen Hsieh et al., 2016b, p.10)*



As Davis (1989) explains, perceived usefulness can be defined as "the degree to which an individual believes that using a particular system would enhance his or her productivity" (p. 320), and perceived ease of use is defined as "the degree an individual believes that using a particular system would be free of effort" (p. 320). "Two core beliefs, perceived usefulness and perceived ease of use affect an individual's behavioral

intention/willingness to adopt, accept, or use a system, with perceived ease of use having a direct effect on both perceived usefulness and technology usage" (Adams et al., 1992; Davis, 1989; cited in Chen Hsieh, 2016b, p. 9). A learner would adopt a digital device if he finds it beneficial, convenient, and socially accepted (Saga & Zmud, 1994). TAM considers the learner's behavioral intention as the outcome of a cognitive procedure by which decision-making happens (Drucker, 2006; Hughes & Ooms, 2004; Venkatesh et al., 2003). Different learners and users may differ in their types and technology systems which leads to varying weights of those so-called factors (Shroff et al., 2011). "With the popularity of TAM, studies examining factors that influenced the two major constructs (perceived usefulness and perceived ease of use) have been abundant, covering diverse aspects such as personality traits, computer self-efficacy, technology anxiety, prior usage, and experience, self-efficiency, confidence in technology, subjective norm, expectations, user participation, and trust" (as illustrated in Marangunić & Granić, 2015, cited in Chen Hsieh, et al., 2016b, p 10). Abdullah and Ward (2016) did a quantitative meta-analysis focusing on the most commonly used external factors of TAM in e-learning adoption. By analyzing 107 articles, they found out that the most used external factors were Self-efficacy, Subjective Norm, Enjoyment, Computer Anxiety, and Experience. Although technology is widely used in learning, and TAM is the dominant model for exploring the factors affecting the acceptance or rejection of technology by learners, there is still a need for different studies on that (Chen Hsieh et al., 2016b). Although the literature showed that there are lots of findings which confirm that the learners prefer flipped learning model over the conventional model (Butt, 2014; En eld, 2013; Kim et al., 2014; McLaughlin et al., 2013; Sarawagi, 2014), the studies are pretty very different in a special component of flipped courses and in methodological rigor. Therefore, the researchers need to do some research focusing on pieces of evidence supporting this approach and systematic examination of learners' ideas about rejecting or accepting a technology used in education, especially via using TAM (Chen Hsieh et al., 2016b). As it was mentioned before, TAM was initially developed by Davis et al. (1989), and it has been extended several times by different scholars (e.g., Abdullah & Ward, 2016; Chen Hsieh et al., 2016a; Mohammadi, 2015; Ros et al., 2015). The original TAM contained four constructs which were perceived ease of use, perceived usefulness, attitude toward use, and behavioral intention. Later, two more constructs were added to it by Huang et al. (2011) named system characteristics and material characteristics. Chen Hsieh (2016a) and coworkers added 11 more items for expanding the constructs. In this study, we adapt the questionnaire of Chen Hsieh et al. (2016a). It needed to be added that their questionnaire contains 27, but six statements were discarded because they were irrelevant to the focus of our study. Chen Hsieh and his coworkers (2016a) modified the questionnaire to address their participants'

overall perspectives on using the LINE application. In our study, we modify the questionnaire to address the students' overall perceptions of using Telegram as an online platform via a 5-point Likert scale. Our questionnaire was reviewed by two other experts to increase its validity, it was also piloted on 20 university students, and no problems were found. The items related to each construct are presented in Table 3.2. This questionnaire can be found in Appendix 2.

### **3. Review of Literature**

#### **3.1. Previous Studies on Flipped Learning Model**

There are plenty of studies that have been conducted investigating the efficacy of flipped learning model on language learning (Adnan, 2017; Afzali & Izadpanah, 2021; Laura-De La Cruz et al., 2022; Lee & Wallace, 2017; Mehring, 2016; Ng & Lam, 2020; Nugraheni et al., 2022; Shooli et al., 2022; Tang et al., Wu, 2019; 2020; Yulian, 2021) .

The effectiveness of flipped learning is promising (Ng & Lam, 2020). It can optimize the usage of class time (Mehring & Leis, 2018; Voss & Kostka, 2019). It can enhance language learners' engagement and active learning (Afzali & Izadpanah, 2021; Alsowat, 2016; Amiryouse, 2017; Chen Hsieh et al., 2016a; Lee & Wallace, 2017) and improve student-centered learning and autonomy (Amiryouse, 2017; Koroglu & Cakır, 2017; Mehring, 2016; Rakesh Babu & Viveka, 2019). Moreover, it is beneficial for motivating the students (Afzali & Izadpanah, 2021; Boyraz & Ocak, 2017; Chen Hsieh et al., 2016a; Turan & Goktas, 2018; Wu et al., 2019). The effect of the FL model on language skills, i.e., speaking (e.g., Cetin Koroglu & Cakir, 2017), writing (e.g., Ekmekci, 2017; Shooli et al., 2022; Wu et al., 2019), reading (e.g., De La Cruz et al., 2022; Karimi & Hamzavi, 2017; Mo & Mao, 2017; Yulian, 2021) and listening (e.g., Ahmad, 2016) have been studied and it was found out that FL can be beneficial. FL model can even have positive effects on students' higher-order thinking and critical thinking (Etemadifar et al., 2020; Chen & Hwang, 2019; Fulgueras & Bautista, 2020; Yulian, 2021). Different studies also reported positive attitudes of language learners toward the FL model (Adnan, 2017; Chen Hsieh et al., 2016a; Doman & Web, 2017; Lee & Wallace, 2017). The effect of using the FL classroom model in higher education has also been widely investigated (Adnan, 2017; Afzali & Izadpanah, 2021; Amiryousef, 2017; Chen et al., 2018; Chen Hsieh et al., 2016a;



Evseeva & Solozhenko (2015); Hung, 2014; Saglam & Arslan, 2018; Wu et al., 2019) .

In the quasi-experimental study conducted by Afzali and Izadpanah (2021), the effect of the FL model was investigated on 360 intermediate and pre-intermediate English learners' engagement and motivation in learning English grammar. The learners were chosen through multi-stage cluster sampling from four different language institutes. The participants were randomly assigned to the experiment and control group, and the data were collected through pre-test, post-test, and questionnaires. The obtained results showed that the FL model was successful in engaging and motivating the students .

Chen Hsieh and his colleagues (2016a) conducted mixed-method research to explore the advantages of a flipped learning model for EFL learners. They selected 48 sophomore English majors to teach them English idioms. They were divided into two groups, control and experimental. The educational content was taught in a conventional way (control group) and the idioms were taught by using the flipped learning model to the experimental group by using the LINE app. The researchers used several instruments for data collection, including two questionnaires. The results revealed that flipped learning model enhanced the experimental group students' motivation, made them more active in using the idiom, and also enhanced their idiomatic knowledge. The research conducted by Adnan (2017) on senior-year ELT students. His study aimed to investigate the effect of flipped classrooms on students' academic outcomes and also found out the learners' perceptions of the flipped learning experience. Thirty-one students participated in this study, and they were divided into flipped and non-flipped groups. The obtained results showed no significant difference in their midterm grades, but students who experienced flipped classrooms performed better in essay scores. Moreover, the analysis of interviews and students' journals showed that the flipped students had largely positive perceptions about flipped learning, and they were satisfied with the experience .

Quasi-experimental research conducted by Yulian (2021) studied the improvement of critical thinking in reading through the FL model. Thirty-seven second-semester EFL learners in English for Academic Purposes (EAP) participated in this study. Using pre-test and post-test, it was revealed that "the flipped classroom teaching model enhanced students' critical thinking for critical reading in the aspects of accuracy, clarity, precision, depth, relevance, and logic" (p. 508). Moreover, the participants reported their positive perception of the FL

model. Karimi and Hamzavi (2021) explored the impact of the FL on reading comprehension and tried to find out EFL learners' attitudes toward this model at a private language college. The results showed that it is effective in engaging and motivating students in learning activities. Moreover, this model could enhance learners' reading performance. The research done by Wu and his colleagues (2019) investigated the demotivation (negative motivation) factors in EFL writing, and the possible effects of online flipped writing instruction on learners' writing proficiency. Forty-eight sophomore English majors participated in this study, and they were paired with American college pairs. The writing instructions were given to them online before the class, so they had enough time to learn them and then practice them in the classroom. The results showed that online flipped instruction improved the students' writing proficiency, and also the four characteristics of the flipped classroom did not cause any demotivation. Also, it was revealed that the students perceived flipped learning model positively, and this experience improved cross-cultural observation. Haghighi and his colleagues (2018) conducted a study in Iran to examine if flipped classroom model can enhance Iranian EFL learners' pragmatic competence. 60 EFL learners from two universities participated in the study. They were assigned to two groups, control and experimental. The educational content was taught to the control group Conventionally, but the experimental group received the course materials via the Telegram app before class time. The results showed that the students were much more engaged in their learning process, and their performance in the post-test was better than the conventional group. They also perceived Telegram as a good platform for learning the language.

### **3.2. Previous Studies on Using Telegram in Flipped Classrooms**

There are some research studies conducted on Telegram as the online platform in flipped classrooms (e.g., Amiryouse, 2017; Haghighi et al., 2018; Jafarigozar et al., 2019; Jalili et al., 2020). Amiryouse (2017) applied the FL model in 2 universities, and he used Telegram as the online platform in his instructional design. He mentioned that Telegram could prepare a collaborative environment for learners and make them more motivated to learn, but he did not specifically examine the affordance of Telegram for educational purposes and the learners' willingness or unwillingness to use it. Later on, Haghighi et al. (2018) did a study to investigate the impact of the flipped classroom on enhancing EFL learners' pragmatic competence. In this study, they used Telegram, and they used

TAM to check the acceptance or rejection of Telegram by the learners. The participants were 60 freshmen English students from two universities, and the flipped course was conversation 1, which is among the general courses of TEFL. They modified Huang et al.'s (2012) TAM questionnaire to the one related to Telegram. They concluded that Telegram is willing and accepted by learners as an online platform for educational purposes. As it can be seen from the presented literature, it is pretty clear that flipped learning model is beneficial in motivating EFL students and in enhancing their performance in different learning aspects. Although there are many studies conducted in this area and on TEFL students in higher education around the world, the literature shows that there are not lots of studies conducted on higher education students, especially graduate students in Iran .

As it was said before, if this model is utilized successfully, the learners would have some elegant characteristics (e.g., being an active learner rather than a passive one, having high order of thinking, having a class discussion, and learning more through it, asking deep questions and motivate each other (as cited in Tafazoli, 2022)). These characteristics are necessary for graduate students. Having all these in mind, the researchers of the current study came across this gap, and they tended to do research on using the FL model in TEFL graduate students' classes and see how their perception and experience are toward using this in their classes. In addition, although some studies used Telegram in their flipped model many of them did not check the affordance of Telegram or they did not use TAM to check its acceptance or even they did not do that in graduate students' classes. These so-called gaps lead us to seek the answers to the following research questions:

1. What are the Iranian graduate students' perceptions regarding flipped learning?
2. What are the Iranian graduate students' perceptions regarding the selected platform for their flipped learning treatment?

## **4. Method**

### **4.1. Research design**

When dealing with a population sample and we have manipulated one or more variables to and out how this manipulation affects our research outcome, we would enjoy survey design as a part of the quantitative research method (Creswell & Creswell, 2018).

The current study was conducted to elicit the attitudes and beliefs of graduate students regarding the FL model. The instruments used were two questionnaires. Therefore, this study enjoys the quantitative paradigm. Correspondingly, the data were gathered through two questionnaires and analyzed quantitatively using descriptive statistics, which concerns the quantitative nature of the research method.

## **4.2. Participants**

A total number of 34 graduate students of TEFL at Yazd University participated in this study. Most of the students were in the second semester of their M.A. studies. The participants included 27 females and seven males, and their age range was from 23 to 40. All the participants were Iranian except one who was Afghan. All the participants had enrolled in a course entitled 'Materials Designing and Development for one academic semester. The sample consisted of participants who were readily available (Birjandi & Mosallanejad, 2012). They were chosen based on convenience and access (i.e., convenience sampling).

## **4.3. Instruments**

To answer the research questions, two questionnaires were used, entitled 'Perception of Flipped Learning Questionnaire' and 'Technology Acceptance Model' Questionnaire, which are elaborated on in the following section.

### **4.3.1. Perception of Flipped Learning Questionnaire**

The Perception of Flipped Learning Experience questionnaire was administered to evaluate the students' perceptions of the flipped learning approach used in a higher education context and in a graduate students' class (addressing the first research question). This questionnaire was initially developed by Chen Hsieh et al. (2016a), and the reliability and validity were confirmed. The original questionnaire consisted of 14 items considering four constructs: motivation, effectiveness, engagement, and overall satisfaction. We added four more items; item number 14, 15, 16, and 17, to this questionnaire underlying the applicability of flipped learning in university classes. The new questionnaire was reviewed by two other experts to improve its validity, and also it was piloted on 20 university students, and no problems were found. The participants answered via a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" (1 to 5). The items related to each construct are presented in Table 1. This questionnaire can be found in Appendix 1.

**Table 1.**

*The items related to each construct (Perception of Flipped Learning Experience Questionnaire)*

<b>Constructs</b>	<b>Related items</b>
Motivation	1, 2, 3, 4, 5
Effectiveness	6, 7, 8, 9
Engagement	10, 11, 12, 13
applicability in university classes	14, 15, 16, 17
Overall satisfaction	18

### 4.3.2. Acceptance Model

For investigating the second research question, which dealt with the students' attitudes toward the online sharing platform used for this investigation, Telegram, the Technology Acceptance Model (TAM) questionnaire was administered. Telegram is one of the most popular social media all around the World, but there is not that much academic literature about it. We believe that Telegram has the capability of being used in instructional design. Therefore, we conducted this study to check the affordance of this platform. Because of this reason, in the present study, the questionnaire modified by Chen Hsieh et al. (2016) was adopted. Their questionnaire contains 27, but 6 statements were discarded because of their irrelevancy to the focus of our study. Chen Hsieh and his coworkers (2016) modified the questionnaire to address their participants' overall perspectives on using the LINE app. In our study, we modify the questionnaire to address the students' overall perceptions of using Telegram as an online platform via a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" (1 to 5). This questionnaire was reviewed by two other experts to increase its validity, it was also piloted on 20 university students, and no problems were found. The items related to each construct are presented in Table 2. This questionnaire can be found in Appendix 2.

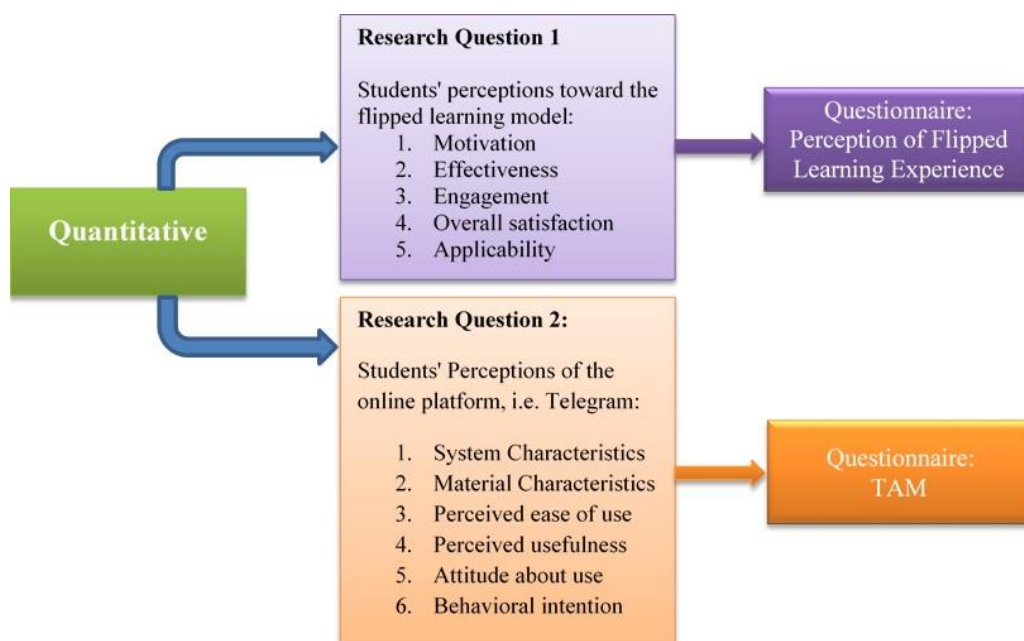
**Table 2.**

*The items related to each construct (Technology Acceptance Model Questionnaire (TAM))*

<b>Constructs</b>	<b>Related items</b>
<b>System characteristics</b>	SC1, SC2, SC3, SC4
<b>Material Characteristics</b>	MC1, MC2, MC3, MC4
<b>Perceived ease of use</b>	PEU1, PEU2, PEU3
<b>Perceived usefulness</b>	PU1, PU2, PU3
<b>Attitude about use</b>	AT1, AT2, AT3, AT4
<b>Behavioral intentions</b>	BI1, BI2, BI3

The data collection procedure is presented in Figure 4.

Figure 4. *The explored issues in the current study (idea taken from Chen Hsieh et al. (2016))*



#### 4.4. Instructional Design

As mentioned earlier, three main phases are presented in classrooms based on flipped learning, including pre-class learning, in-class learning, and assessment (McLaughlin et al., 2016). In the following section, each phase is elaborated on.

##### Pre-class learning

The academic content taught in this course was chosen from several articles and books concerning materials development by the teacher (the first author) of the course. Based on the syllabus developed by the teacher, for each session, one topic was assigned. The materials prepared for teaching this course were in different forms, animation clips, podcasts, lectures, and PowerPoint slides. The researcher (the second author) made the animation videos via the Powtoon Cartoon website ([www.PowToon.com](http://www.PowToon.com)). Via this website, the animated clips can be full of motions, figures, music, etc., making the learning procedure more enjoyable. Some screenshots of the clips are presented in Figure 5.

Figure 5. Some screenshots of educational video clips made by the researcher

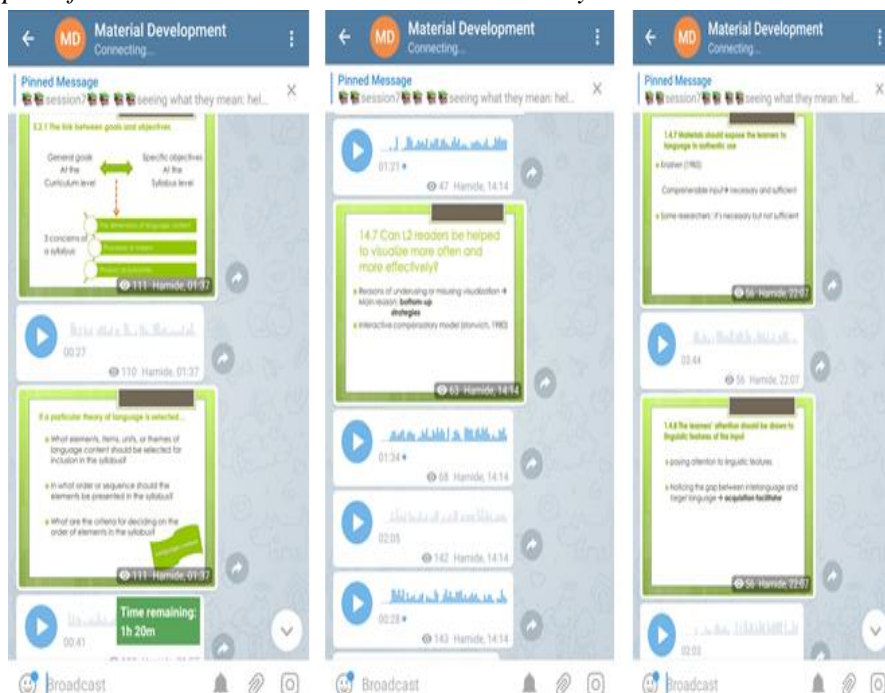


In addition to these clips, PowerPoint software, which is a part of Microsoft Office software, was used to make slides that highlighted the main points of the course to be taught. The explanation of each slide was given in the form of podcasts and voice tracks recorded directly via Telegram (Figure 6).

The platform used for sharing the content was Telegram which is one of the most famous social networks and has over 500,000,000 active users all around the world (Telegram, 2022). It could be accessible on any device. Free text messaging and sending audio and videos, easy access, a user-friendly platform, and different techniques like recording voice and videos and various stickers and emojis for expressing feelings were among the characteristics of this helpful application. The students were completely familiar with Telegram and they all had a Telegram account; therefore, there was no need for training them on how to use the application. For this study, a channel was created through Telegram for sharing the course materials and communicating with each other (e.g., video clips, podcasts, etc.) before each class session.

**Figure 6:**

*Examples of educational slides and voice tracks made by the researcher*



The platform used for sharing the content was Telegram which is one of the most famous social networks and has over 500,000,000 active users all around the world (Telegram, 2022). It could be accessible on any device. Free text messaging and sending audio and videos, easy access, a user-friendly platform, and different techniques like recording voice and videos and various stickers and emojis for expressing feelings were among the characteristics of this helpful application. The students were completely familiar with Telegram and they all had a Telegram account; therefore, there was no need for training them on how to use the application. For this study, a channel was created through Telegram for sharing the course materials and communicating with each other (e.g., video clips, podcasts, etc.) before each class session.

### **In-class Learning**

First of all, the teacher provided a review of the topic. Since the students were familiar with the content, they raised questions and randomly called out students' names individually to give their responses. The teacher also solved the students' problems concerning some subtopics, which the students found problematic. Moreover, the



students discussed the related topic and worked on the given tasks and issues individually and in groups. "This transformed the in-class activities from a focus on lower-order skills, defined by Anderson et al. (2001) as remember, understand, and apply, to higher-order critical thinking, analyze, evaluate, and highest level, create" (Chen Hsieh et al., 2016, p.5). The goal of applying this approach was to engage the students in academic discussions and interact with their teachers and peers. It was interesting that the students approached the researcher (the second author) and expressed their opinions and suggestions about prospective tasks. For instance, it was better to share the same syllabus (groups' tasks) or it was better to present the given tasks to each group on the video projector so everyone can see what was going on, etc. which shows that the students were engaged and interested in the class activities.

### **Assessment**

Two days after the class session, a task related to the previous topic was given to the students via the Telegram channel in the form of a short video (for example, clips taken from Youtube) or a text (from an academic book or article). The students were supposed to complete the task. It is indispensable to mention that the given tasks were in line with the week's course. The students sent their assignments via voice tracks typed pages, or pictures of their writing via Telegram to the teacher. The flipped classroom lasted one whole semester. The details of the students' and instructor's activities are given in Table 3.

**Table 3.**

*Detailed procedure about the flipped learning model for learners and teachers (teacher & researcher)*

Phases	Individual students	Instructors
<b>Phase 1:</b> pre-class learning: Online self-study	Students watch the instructional videos or listen to the voice tracks (learning materials) made by the instructor four days before the class session	The researcher makes the instructional materials via Powtoon Cartoon, PowerPoint software, and Telegram based on the course topics and shares them in the Telegram channel with the students
<b>Phase 2:</b> in-class learning	Each student participated in class discussions, asked their difficulties and shared their ideas with the classmates and made oral presentations	(1) The instructor answered the students' questions and gives explanations and tries to clarify unclear points if there were any. (2) attempted to motivate the students for group discussions
<b>Phase3:</b> assessment: after the class session	The students work on the task and sent their project to the instructor via Telegram in a private message.	The researcher shares a task, an educational video clip, or an academic text, related to the topic taught in the Telegram channel with the students.

## 5. Data Analysis

As mentioned earlier, to answer the research questions, two questionnaires were administered entitled 'Perception of Flipped Learning Questionnaire' and the 'Technology Acceptance Model' Questionnaire. Descriptive statistics were utilized to investigate the participants' responses. This analysis was conducted quantitatively using SPSS 24 software. The students' responses to each item were analyzed descriptively, and the mean and standard deviation of each item along with each construct were found, and the items or constructs which got the highest or lowest result was reported.

## 6. Results and Discussions

### 6.1. Results

Having multiple sources of data, including questionnaires, the focus group interview, learning journals, and class observation showed that higher education EFL students prefer flipped learning approach over the conventional teaching methods.

However, the students had their criticism and comments toward this approach. The findings related to each research question are presented in the following section.

### 6.1.1. Research Question 1: What are the student's attitudes toward flipped learning?

The questionnaire eliciting students' perceptions of the flipped classroom (Appendix 1) was used to see what the students' beliefs and attitudes were toward the flipped-learning approach. Motivation, effectiveness, engagement, applicability, and overall satisfaction are the constructs included in this questionnaire. The results (Table 4) showed that students' responses to all five constructs were categorized as upper intermediate, yielding mean scores of 3.97, 3.95, 3.90, 3.61, and 3.97 for motivation, effectiveness, engagement, and overall satisfaction, respectively. According to these results, it can be concluded that the students found the flipped learning approach can (1) motivate them in their academic learning at university, (2) enhance their academic knowledge, (3) engage them in academic discussions in the class, and (4) be applied in university classes. Item 3, stating "I think flipped classroom is a more effective and efficient way to learn" got the highest mean ( $M=4.15$ ) which confirms that the students prefer flipped learning to traditional classes. It's interesting to say that although most of the students found flipped learning approach applicable in the university classes, item 14 got the lowest mean score ( $M=3.29$ ), with two students choosing the answer 'strongly disagree.'

**Table 4.**

*An overall overview of descriptive statistics of the items and constructs of the questionnaire eliciting students' perceptions of flipped classroom*

	N	Minimum	Maximum	Mean	Std. Deviation
Motivation	34	1.00	5.00	3.9706	.88507
Effectiveness	34	1.00	5.00	3.9485	.86554
Engagement	34	1.00	5.00	3.8971	.93160
Applicability	34	1.00	4.50	3.6103	.90493
Overall satisfaction	34	1.00	5.00	3.9706	1.02942
Valid N (listwise)	34				

### **6.1.2. Research Question 2: What are the students' perceptions regarding the selected platform for their flipped learning treatment?**

To answer this question, the TAM questionnaire (Appendix 2) was handed out to the students to explore their overall perceptions concerning using Telegram in this course. The results (displayed in Table 5) reveal that using Telegram in the course resulted in satisfaction with an upper intermediate level ( $M = 3.77$ ). Of the six variables, behavioral intention ( $M = 3.99$ ) ranked the highest, followed by attitude about the use ( $M = 3.80$ ), material characteristics ( $M = 3.80$ ), system characteristics ( $M = 3.75$ ), perceived ease of use ( $M = 3.75$ ), and perceived usefulness ( $M = 3.54$ ). Concerning behavioral intention, the participants believed that if they had access to Telegram, they would continue writing in English in addition to their mother tongue. Also, they would continue to use it to enhance their academic knowledge, and they would have more confidence in English conversations. The results showed that having Telegram will help the students in their English usage and academic learning. Regarding the students' attitudes, they responded that they liked to use Telegram in their academic courses, and they look forward to having access to flipped learning. Considering the material characteristics, the students believed that the video/audio materials led them to experience a deeper insight into their academic courses, and it could help them to improve their academic knowledge and also help them to be immersed in the class environment. Item MC3, "The video/audio materials made by the teacher helped me understand the important points in the course." got the highest mean score ( $M = 4.15$ ) among all the 21 items, indicating that the students found Telegram helpful in learning the critical points of their course. Concerning system characteristics, the students said that Telegram could help them to learn their English academic courses in a realistic environment. Also, they believed that Telegram provided a stimulating environment for learning their academic courses. Somehow the item SC3, "I was able to use Telegram effectively to interact with the teacher to learn my course." got the lowest mean score ( $M = 3.38$ ) among all the 21 items, which means that some students didn't find Telegram effective for interacting with the teacher. Moreover, considering the ease of use, the students believed that via Telegram, they could get clear guidance from the teacher, and they found using it easy, convenient, and not stressful. The participant's responses to the perceived usefulness construct revealed that the students believed that not only Telegram would improve their academic performance, but also it enhance their desire to study their academic courses.

**Table 5.**

*An overall overview of descriptive statistics of the items and variables of the TAM questionnaire*

	Min	Max	Mean
System characteristics	1.00	5.00	3.7574
Material characteristics	1.00	5.00	3.8015
Perceived ease of use	1.00	5.00	3.7549
Perceived usefulness	1.00	5.00	3.5490
Attitude about use	1.00	5.00	3.8015
Behavioral intention	1.00	5.00	3.9902

Valid N (listwise)=34

## 6.2. Discussion

In this study, we examined the extent to which flipped learning model can positively affect higher education students of TEFL, especially graduate students. Thirty-four graduate students attending the Materials Development and Designing course participated in this study, and this model was applied in their class for one whole academic semester. After the treatment and at the end of the semester, two questionnaires were administered named Perception of Flipped Learning and Technology and Acceptance Model (TAM) to explore the learners' perceptions regarding the FL model and the utilized platform, Telegram, in instructional design and the responses were analyzed quantitatively using descriptive statistics. The first question explored the Iranian graduate student's perceptions regarding flipped learning. The participants responded positively regarding the FL model. Therefore, they validated the application of the flipped learning model for the higher education students of TEFL. We came to the conclusion that the FL model can be helpful for graduate TEFL students, and it may engage them in learning and discussing, which is reasonably necessary for the students at this stage.

Our findings for the first research question align with other studies conducted, which showed the students' acceptance of flipped learning instructional design (Adnan, 2017; Chen Hsieh et al., 2016; Doman & Web, 2017; Lee & Wallace, 2017; Lucke, 2014; Mortensen & Nicholson, 2014). Also, it showed that the students prefer the teacher in the class as a guide, not the main authority, which is in line with the findings of Zou and

Xie's study (2019). Moreover, this study found that flipped learning approach can be beneficial for enhancing academic achievement, which is in line with Zainuddin & Halili's (2016) research.

The second question deals with the learners' perceptions towards Telegram, the online platform used in the instructional design. Telegram is one of the most popular mobile apps around the world. To answer this research question, the TAM questionnaire was administered at the end of the semester. The findings showed that the students found Telegram a help for enhancing their academic performance, having an enjoyable learning environment, and a means for reducing their stress in learning and using English. Interestingly, an overwhelming number of students supported the use of Telegram because it is easy to use and also, it is so popular among young people. Also, its capabilities will not limit teaching and learning for future studies. What we found out was that Telegram can be an excellent platform for sharing educational content in the FL model. This is in line with the academic literature showing that social media can be effective for students, and they accept that a device used for personal use can be used for educational purposes (Miyazoe & Anderson, 2010). Nowadays, the cellphone is accessible to all students, including graduates, they can use it anywhere and anytime they want (Chen & Li, 2010; Huang et al., 2011), so it is a wise choice to use social media for educational and academic purposes, especially for the graduate students who have a considerable number of courses and they face a lack of time. Moreover, we came to the point that Telegram has applicability for using in the academic context and found that Telegram is accepted by the students, and they found it acceptable for educational purposes, and this is aligned with the studies conducted by Haghighi et al. (2018) and Amiryousefi et al. (2019).

## **7. Conclusion and Pedagogical Implications**

In this study, we aimed to explore the application of flipped learning model in TEFL graduate students' classes (which are parts of higher education) that can positively affect their perception toward that and do the graduate students and this model is beneficial for academic context or not. Moreover, we wanted to see if Telegram was accepted or rejected by them for using in the class. At the end of the semester, two questionnaires were administered to examine the students' perceptions concerning the FL model and Telegram as the educational platform. According to the first research question, we concluded that the flipped learning approach can motivate them in their academic learning at the tertiary level. Similarly, the FL model can enhance their academic knowledge and encourage them to participate in academic discussions in class. Likewise, using Telegram helped the students in their English usage and also in their academic

learning. Regarding the students' attitudes, they responded that they benefited by accessing Telegram as an effective technology in their learning environment. This study could be helpful for material designers, teachers, and teacher educators to become familiar with innovative methods of teaching, which can bring a difference to the environment of the classes and enhance the learning process. It provides all the essential steps for applying the flipped learning model in the courses for material designing, teaching, and assessment. Prospective studies can be replicated at other universities. Second, other platforms can be selected for implementing the flipped classroom, including social media like LINE and WhatsApp or the websites like Gmail and iCloud. Another study can investigate the students' perceptions regarding these platforms. Moreover, the instructors' perceptions regarding flipped learning model can be explored and see how much they can reconcile themselves using flipped learning approach and the obstacles they may confront while implementing this model in university classes.

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### Appendix 1:

#### Perception of Flipped Learning Experience

This survey attempts to understand your overall perception of flipped learning. There is no right or wrong answer. Please select the best answer which best show your overall feeling and perception about each statement. Your answer is anonymous and there won't be any judgement according to your answer. Thank you in advance.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
1	A flipped classroom is a better way of learning.				5
2	I enjoyed the flipped classroom teaching approach more.				5
3	I think the flipped classroom is a more effective and efficient way to learn.				5
4	I feel more motivated in flipped classroom.				5
5	I participated and engaged myself more in learning in the flipped classroom.				5
6	I became a more active learner in the flipped classroom.				5
7	I thought the time and effort I spent in the flipped classroom was worthwhile.				5
8	I learned more and better in the flipped classroom.				5
9	I prefer the flipped classroom to a lecture-based classroom.				5
10	I think the flipped classroom guided me toward better understanding of the course topics.				5
11	I experienced pleasure in the flipped classroom.				5
12	I devoted myself more to the instructional/class				5

activities in the flipped classroom.

13	I spent more time and effort than usual on my flipped classroom learning activities.	1	2	3	4	5
14	Flipped learning approach helped me to have better academic performance.	1	2	3	4	5
15	Flipped learning approach helped me to extend my academic knowledge.	1	2	3	4	5
16	I think flipped learning approach can enhance the academic context of my country to a great extent.	1	2	3	4	5
17	The flipped learning approach helped me to recall the courses better.	1	2	3	4	5
18	Generally, I am happy and satisfied with this flipped learning experience	1	2	3	4	5

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## Appendix 2:

### Technology Acceptance Model (TAM)

This survey attempts to understand your overall perception the technology used in your classroom. There is no right or wrong answer. Please select the best answer which best show your overall feeling and perception about each statement. Your answer is anonymous and there won't be any judgement according to your answer. Thank you in advance.

#### System characteristics

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(SC1)	Using Telegram provided English learning activities in a realistic environment.	1	2	3	4	5
(SC2)	Using Telegram provided a stimulating an environment for learning my academic course.	1	2	3	4	5
(SC3)	I was able to use Telegram effectively to interact with the instructor to learn my course.	1	2	3	4	5
(SC4)	I felt more comfortable in using Telegram to reflect my learning progress, compared to face-face interactions.	1	2	3	4	5

#### Material characteristics

(MC1)	The video/audio materials made by the instructor led to a better understanding of the academic course.	1	2	3	4	5
(MC2)	The video/audio materials made by the instructor helped me immerse myself in the learning atmosphere of the class.	1	2	3	4	5
(MC3)	The video/audio materials made by the instructor helped me understand the important points in the course.	1	2	3	4	5
(MC4)	I think that the video/audio materials made by instructor were useful for improving my academic knowledge and performance.	1	2	3	4	5

		1	2	3	4	5
Perceived ease of use						
(PEU1)	I received clear guidance about my university work via Telegram.	1	2	3	4	5
(PEU2)	Using Telegram didn't require too much time.	1	2	3	4	5
(PEU3)	Learning to use Telegram for the university class activities was easy.	1	2	3	4	5

## Perceived usefulness

(PU1)	Learning through Telegram improved my academic performance.	1	2	3	4	5
(PU2)	Learning through Telegram enhances my desire to study my academic courses.	1	2	3	4	5
(PU3)	Learning through Telegram provided a beneficial outcome to the class.	1	2	3	4	5

## Attitude about use

(AT1)	I like using Telegram to study my academic courses.	1	2	3	4	5
(AT2)	I have positive attitude about using Telegram in this class.	1	2	3	4	5
(AT3)	I feel that using Telegram to learn English academic courses is a good idea.	1	2	3	4	5
(AT4)	I looked forward to using Telegram in this class.	1	2	3	4	5

## Behavioral intentions

(BI1)	If I have access to Telegram, I will continue to write in English in addition my own language.	1	2	3	4	5
(BI2)	If I have access to Telegram, I will continue to use it to improve my English academic knowledge.	1	2	3	4	5



## بررسی رویکرد دانشجویان کارشناسی ارشد ایرانی در برابر یادگیری معکوس: دانشجویان رشته آموزش زبان انگلیسی (پژوهشی)

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### چکیده

حوزه آموزش زبان در طی سالهای گذشته از تکنولوژی برای ارتقای کیفیت آموزش و یادگیری بهره فراوان برده است. هرچند استفاده از تکنولوژی میان مدرسین زبان مرسوم است اما در کلاس‌های دانشگاهی کمتر از آن استفاده شده است. یادگیری معکوس یکی از رویکردهای جدید و موثر در آموزش زبان قلمداد می‌شود. مطالعه پیش رو رویکرد دانشجویان کارشناسی ارشد آموزش زبان را نسبت مدل یادگیری معکوس بررسی کرده است. بدین منظور، ۳۴ دانشجوی کارشناسی ارشد آموزش زبان انگلیسی در دانشگاه یزد که در درس طراحی موارد آموزشی شرکت داشته‌اند طی یک ترم آموزشی مورد مطالعه قرار گرفته‌اند. روش کمی تحقیق بدین منظور مورد استفاده قرار گرفته و به منظور جمع‌آوری داده دو پرسشنامه TAM و پرسشنامه تجربه حضور در کلاس معکوس مورد استفاده قرار گرفتند. پس از بررسی داده‌ها، محققین میزان تاثیر مدل یادگیری معکوس بر تدریس دروس دانشگاهی، دیدگاه دانشجویان نسبت به این مدل و نظراتشان نسبت به پلتفرم آنلاین مورد استفاده، تلگرام را ارائه داده‌اند. نتایج به دست آمده نشان می‌دهد که یادگیری معکوس تاثیر مثبتی بر انگیزش یادگیری و دیدگاه دانشجویان داشته است و دانشجویان استفاده از آن را مثبت ارزیابی کرده‌اند. بعلاوه، تلگرام پلتفرم مناسبی برای استفاده قلمداد شد.

### کلیدواژه‌ها:

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