

# Gamifying Flipped Writing Classes for EFL Students: A Class Design Model

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**Abstract:** English writing as an essential language skill has been emphasized on in EFL classes and the out-of-class activities in flipped learning enable students to practice English writing efficiently. However, recently some students have been found to be distracted out of class, since the lack of teachers' guidance and supervision. On the other hand, gamification for learning is generally popular since its engaging effect on students. Based on this, this study aims to design a gamified out-of-class flipped learning class model. In addition, non-gamified activities out of class will also be designed in order to help future research on the effects of gamification for flipped learning in the EFL contexts. This class design based study will contribute to out-of-class phase design in flipped learning and scaffold future teachers, curriculum designers and researchers to using gamification in their flipped classes.

**Keywords:** Flipped Learning, Gamification, Engagement, English Writing, Out-of-Class

## 1. Introduction

An increasing number of students from non-English speaking countries are working to develop their proficiency in English and in the field of foreign language acquisition, writing is often considered the most important productive skill since competence levels in other aspects of language acquisition can, to some extent, be displayed through writing performance [1]. Improving English writing skills is heavily dependent on learners receiving 'feedback' [2] which is "what pushes the writer through the writing process on to the eventual end-product" [3]. However, teachers in a traditional class have limited time to give sufficient and prompt feedback on learners' writing tasks [4,5]. Usually, students in a traditional teacher-centered writing class need pay more attention to the input of writing such as remembering and understanding different genres before they can practice [6]. This kind of low-order learning outcomes and activities could not produce sufficient feedback since students may 'remember' and 'understand' (in Bloom's taxonomy) by themselves. On the other hand, those high-order learning outcomes and activities (i.e. applying, analysing, evaluating and creating) which can promote interaction and feedback are distributed too little class time. As a consequence, the lack of time in high-order activities results in the lack of feedback in EFL writing class. Inadequate feedback, then has negative effects on EFL students' writing performance.

Under such circumstances, flipped learning in EFL writing courses gives instructors an opportunity to provide feedback by engaging EFL students in more high-order learning activities [7]. In a flipped classroom, students use the before-class time to remember and understand basic concepts; during the in-class time, they can be directed to carry out more high-order activities, such as applying what they have learnt in the before-class time [8].

On most occasions, the flipped learning approach highlights two phases: the before-class and in-class. In this study, I suggest that together with the "before-class" time, which can be used for understanding and memorising basic concepts, the "after-class" stage forms the "out-of-class" concept. This is because that the after-class stage is also important for students in EFL writing classes immersed in high-order learning outcomes and acquiring feedback, as it allows them to carry out their writing tasks, work online with peers, and evaluate peers' writing.

Theoretically, flipped learning enables EFL learners to improve their writing skills since the teachers could arrange low-order learning tasks before class, use a large majority of in-class time and sometimes also use after-class time to finish high-order activities [2]. However, in practice, flipped learning models sometimes fail to improve EFL students' engagement in out-of-class learning activities due to their 'low

[levels of] self-regulated behaviors' <sup>[9]</sup>. For example, according to Sahin, Cavlazoglu and Zeytuncu (2015), a certain number of students skip pre-class learning tasks. Since 'engagement is key to academic achievement' <sup>[10]</sup> and "the positive effects of flipped learning can only be realized if students are motivated to complete the out-of-class activities" <sup>[11]</sup>, it is essential to adopt effective ways to help EFL students assess and complete learning tasks outside of class. In this regard, gamification might constitute a solution, which involves the use of game design elements in non-game contexts and is regarded as an effective approach to motivate students <sup>[12]</sup>.

To date, very few studies have explored the use of gamification in out-of-class activities <sup>[13]</sup> and it is necessary to study how to design and implement this instructional approach <sup>[11]</sup>. Therefore, this study will focus on the pre- and post-class design to engage EFL learners in out-of-class time with gamification techniques to help learners prepare adequately for the valuable in-class time and improve students' English-as-a-foreign-language (EFL) writing skills (see Figure 1). Besides, in order to explore the effectiveness of gamifying flipped learning, it is necessary to compare the gamified with the non-gamified classes. This study will also design non-gamified out-of-class activities, with the hope to contributing to future experimental studies in this area.

This study will address the following three research questions (RQs):

RQ 1: How to design the out-of-class phase of the non-gamified flipped EFL writing classes?

RQ 2: How to design the out-of-class phase of the gamifying EFL writing classes?

RQ 3: What instruments could be used to explore the impact on student engagement of gamified and non-gamified EFL writing classes?

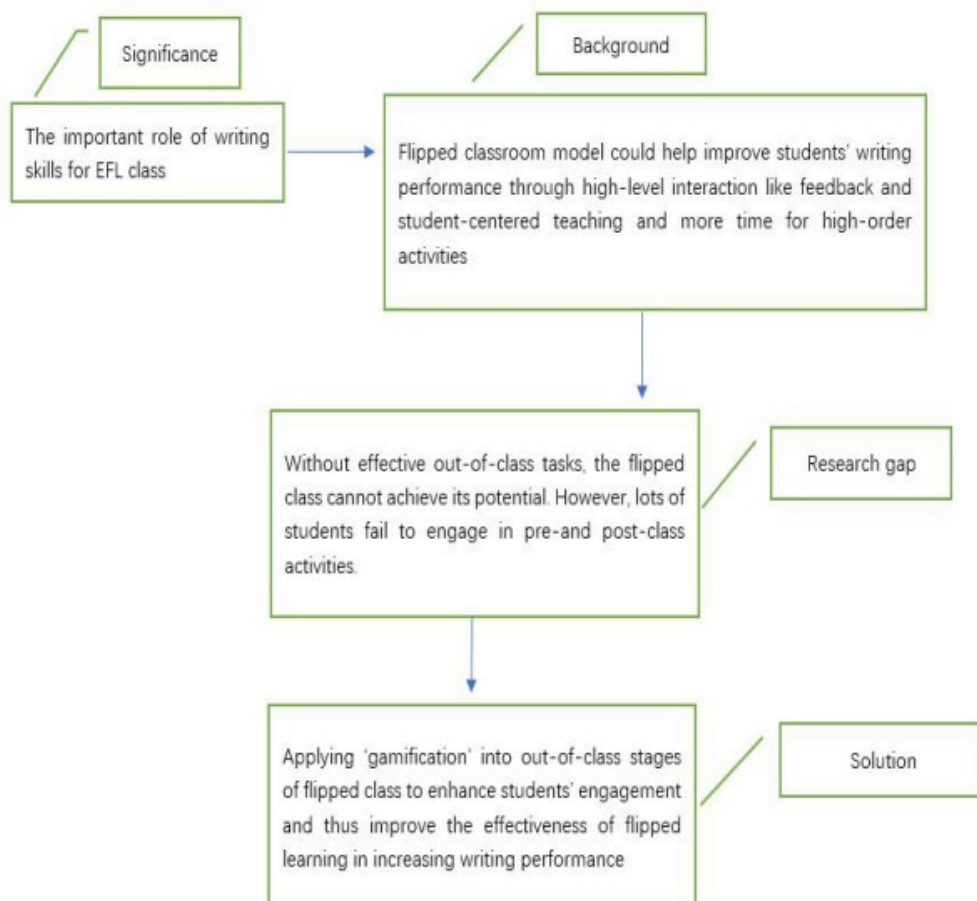


Figure 1: Background, research significance, research gaps, and proposed solutions.

## 2. Literature Review

### 2.1. Flipped Learning for Second Language Acquisition (L2)

According to Huang and Hew <sup>[11]</sup>, in a typical flipped learning class, students watch video lectures and complete activities (e.g., quizzes) before class, engage in individual or class activities in class, and complete additional activities (if any) as homework after class if there are additional activities assigned. Recently, flipped learning has been a hot topic and received attention in the field of foreign language, including English writing instruction <sup>[14,15]</sup>.

#### 2.1.1. The Feasibility and Reasons for Flipped L2 Classes

##### (1) Flipped learning provides students with more language practical opportunities

Effective language acquisition requires students to “engage in as many activities as possible to gain a better grasp of the new target language” <sup>[14]</sup>. However, the restricted class time gives limited time for practice and thus influences students’ language learning outcomes negatively. When it comes to writing class, writing practice is often assigned as homework since teachers need distribute the class time to teach students writing skills and how to write before they start to practice <sup>[6]</sup>. Consequently, lacking sufficient practice is regarded as one important reason for unsuccessful writing achievement <sup>[16]</sup>. Flipped learning approach helps solve this issue, in which students learn writing skills and knowledge by watching pre-class educational videos and teachers have more time to carry out language writing practice in and after class.

##### (2) Flipped learning provides students with interactive language learning environment

Language communication and interaction is the crucial purpose of language learning <sup>[17]</sup> and writing involves “an interaction between three elements that interact in getting to the final product: 1) the text, 2) the writer, 3) the reader” <sup>[18]</sup>. Flipped learning “frees instructional time, consequently allowing for more dynamic and interactive classroom” <sup>[19]</sup> where students could first interact with the text before class <sup>[20]</sup> and teachers as readers of the writing performance, could have more time to respond to students’ writing and provide feedback in class <sup>[17]</sup>.

##### (3) Flipped learning respects for individual differences (IDs)

Individual differences are regarded as “consistent predictors of L2 learning success” <sup>[21]</sup>. Flipped learning “serves the principles of personalized-differentiated learning” <sup>[22]</sup> since that students could learn at their own pace when they prepare class by watching videos. They are able to “pause, rewind, and replay the video at will” <sup>[19]</sup>.

#### 2.1.2. Implementation of Flipped Learning for Second Language Acquisition: LMS and Online Practice

In order to implement flipped learning in language class, especially in English writing class, two important factors: LMS and online writing practice should be considered <sup>[22,23]</sup>.

Flipped learning approach could be divided into two aspects of learning : inside and outside the class. An LMS is “an integral part of flipped classroom, because it connects the outsides and inside parts like a bridge” <sup>[22]</sup>. an LMS enables teachers to “send videos...; contact students; check and grade assignment; and link to other resources” <sup>[22]</sup>.

In terms of EFL writing class, online writing practice with LMS out of flipped classrooms is emerging to “foster knowledge sharing and...communication” and during this process, students could interact with their peers, “check comprehension, share opinions, compose ideas, and receive feedback” <sup>[23]</sup>.

#### 2.1.3. Possible Positive Results of Flipped L2 Classes

According to Perez and Riveros, students’ success in flipped classes is attributed to “self-efficacy, self-regulation, personalized tutoring, and constant interaction with tutors” <sup>[24]</sup>. An successful flipped class could have positive effects on students’ second language acquisition (writing in particular).

Several studies have identified that the flipped learning could provide opportunities to improve learners’ English writing performance. Motteram finds that “social interaction can lead the learners to language development through interactional exchanges and negotiation of meaning” <sup>[18]</sup>. Additionally, Engin’s study about students’ English writing practice in a flipped class implies that the pre-class video could promote students’ language learning and encourage “more focus on writing form and [promote] accuracy in English” <sup>[16]</sup>. Similarly, Said and Elfatah state that students in flipped class outperform those

who are taught by traditional teaching method and also develop their writing skills such as organizations, coherence and styles <sup>[25]</sup>.

#### **2.1.4. Problems of Flipped Learning for Language Acquisition**

As mentioned above, pre-class videos through LMS and post-class online writing practice could enhance the positive effect of flipped learning on language learning. However, researchers have reported failures when carrying out them, which mostly focus on disengagement and low self-efficacy during out-of-class activities. For example, Brunzell and Horejsi state that not all students are willing to watch the assigned pre-class videos <sup>[26]</sup>. Students' interaction in pre-class activities 'influences their understanding and performance during in-class sessions, and thus can affect their final learning outcome' <sup>[11]</sup>. Besides, post-class practice is "significant because it helps writers reshape their thoughts, discover and reconstruct meaning, and improve their texts" <sup>[27]</sup>. It is therefore essential to improve their engagement out of class to support greater learning achievement.

Under this circumstance, gamification is predicted as an effective intervention for engaging language learners into out-of-class activities in flipped classrooms (see next sub-section).

### **2.2. Gamification for Language Acquisition**

Even though educational gamification in language learning is basically new, especially in L2 learning, "[its] success in other disciplines made it adaptable to the objectives towards the development second language acquisition in learners" <sup>[28]</sup>.

#### **2.2.1. What Gamification Is?**

According to Deterding, Dixon, Khaled, and Nacke, gamification is 'the use of game design elements in non-game context[s]' <sup>[12]</sup>. When it comes to education, Simoes, Redondo and Vilas explain it more clearly; that is, 'students learn, not by playing specific games, but they learn as if they were playing a game' <sup>[29]</sup>. This 'not by playing specific games' is achieved by providing game elements (e.g. points, badges, leaderboards, progress bar) in educational contexts <sup>[30]</sup>.

#### **2.2.2. Gamification, Engagement and Language Learning**

Since engagement is closely related with effectiveness of learning <sup>[31]</sup>, when they are more engaged, students are more likely to acquire different skills and improve their knowledge acquisition <sup>[17]</sup>. In terms of second language acquisition, Brown also states that the learner engagement is key to the FL/L2 learning <sup>[32]</sup>. In this case, gamification could enhance language learners' engagement and motivation from four aspects.

##### **(1) Relaxed learning atmosphere for personal responses and expression in L2**

The environment in which students could express themselves is important for language learning, writing education in particular <sup>[33]</sup>. "A writing process centering on students' feelings and experiences will also positively affect their motivation towards writing" <sup>[34]</sup>. According to Cruaud, students are more willing to communicate and express themselves in L2 when exposed into gamified technique, since they feel that it reduces their second language anxiety <sup>[35]</sup>.

##### **(2) The right to choose learning goals for language learning**

According to Sykes, Jonathon, Judith, and Manel, gaming mechanism usually has a flexible structure (like different difficulty levels) which "allows for the player's choice...[which is] necessary for the player feel in control and to maintain the motivation" and in which students could be aware of their own goals and choose the learning task they could engage in <sup>[35]</sup>.

##### **(3) Competitive mechanism of gamification facilitates language learning**

According to Cruaud, gamification has potential to enhance language learner motivation, especially for those who enjoy competing <sup>[35]</sup>. "Accumulating points and getting a sense of competition-driven systems such as competing for prize and ranking are typical features in gamification" <sup>[36]</sup>. The sense of risk-taking could boost students' interest and improve their learning outcomes, especially when they are involved in appropriately challenging class tasks relative to their abilities <sup>[36]</sup>.

##### **(4) Stimulating and interesting language experience**

Through gamified learning, students could acquire knowledge in "an exceptionally pleasant and non-stereotypical way" as if they are playing games <sup>[37]</sup>. For example, Wichadee and Pattanapichet report that

the gamification technique (through the gamified LMS Kahoot) could increase English learners' motivation especially because it transforms "any contents that are boring or difficult like aspects of grammar or vocabulary to be interesting and easier to understand" [36].

### 2.3. Learning Engagement and the Evaluation

In order to examine how gamification engages EFL students to write in flipped learning contexts and thus improve their writing performance, it is indispensable to know what engagement is and how to measure it. Fredricks, Blumenfeld, and Paris state that student engagement is 'a meta-construct that includes behavioral, emotional, and cognitive engagement' [38].

The most common approach used to examine students' engagement involves gathering information from the students themselves in the form of student self-reports [39], since these are "the most practical and easy to administer in classroom settings" [38]. In addition, work sample analyses, teachers' rating of students, interviews, observations, and quizzes are also often used by instructors to measure engagement [38].

## 3. Methodology

A design-based study will be conducted in which one class is designed to give EFL writing activities with the involvement of gamification techniques out of class (GM), while the other class is designed in a non-gamified way (NGM).

### 3.1. Course Design and Procedure

Both classes will use the Moodle platform to host the learning materials. Before the course, the instructor will conduct an introductory class to help students familiarise themselves with Moodle. For the non-gamified class, LMS iSpring Quiz Maker and blogs will also be introduced to the students (see Figure 2).

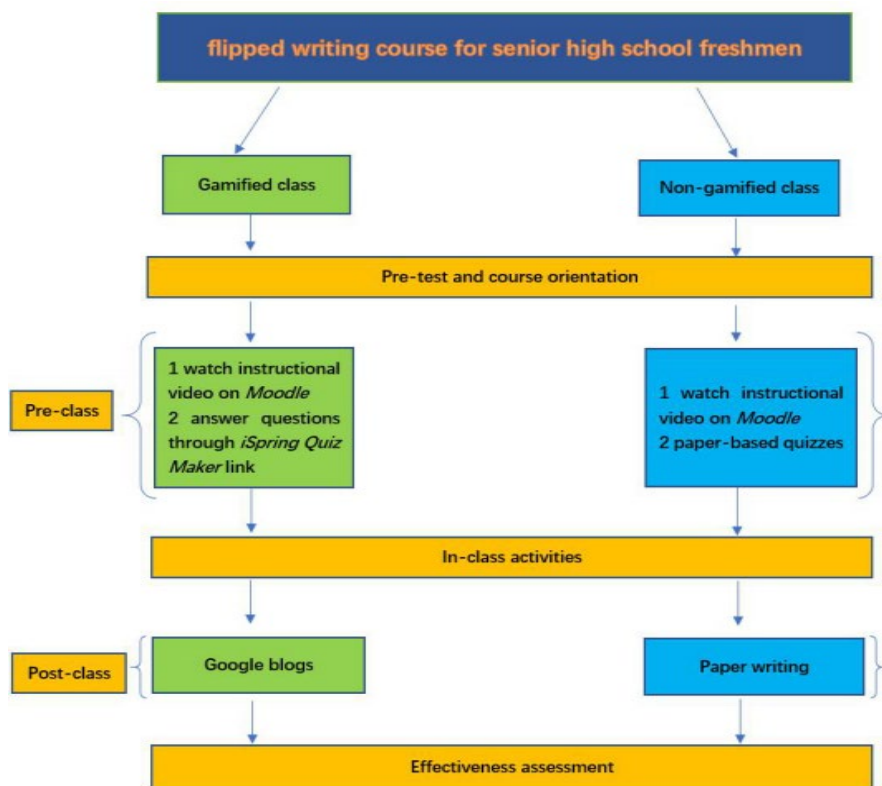


Figure 2: Class design.

#### 3.1.1. Class Design Phase One: Pre-class Activities

In the pre-class stage, students will watch online educational videos on a learning management system

(LMS) named Moodle. The teacher will remind students of the deadline for completing the tasks every week, but there will be no penalty for those who fail to complete the activities. The differences between the two groups are shown below:

The NGM class: The students will be given paper-based quizzes which have a total of 20 questions for each video. The students will have the freedom to decide whether or not to hand in their answers when they come to class.

The GM class: The instructor will upload a link to the gamified LMS iSpring Quiz Maker, which allows students to answer e-quiz questions that are the same as those presented to the other class. In order to engage students in the pre-class activities, gamified elements such as points, badges, and leaderboards will be used in this stage.

Firstly, participation-based badges will be used to encourage students to watch the videos. If students finish the quiz before class, they will be considered as having participated in the pre-class activities and be awarded a Participation Badge. Additionally, a Consistent Badge will be awarded to those who make consistent efforts in completing the pre-class quizzes before the deadline every week. Secondly, the students will be awarded five points for each correct answer. When they achieve 100 points, the learners will be awarded a Victory Badge. Therefore, the more carefully they watch the videos, the more badges they are likely to win. Thirdly, a leaderboard is used to display the names of the participants who win badges. In this way, students can track their progress and be motivated to improve their ranking by carrying out the pre-class tasks.

### ***3.1.2. Class Design Phase Two: Post-class Activities***

In order to strengthen students' prior knowledge and encourage them to practise their English writing skills, there will be ten essays distributed in the order from simple to difficult. Students will be advised to write one essay per week. The difference from the pre-class task is that the teacher will not remind students of the deadline each week. Instead, students will be allowed to catch up later on if they so wish. Carrying out all activities will be optional.

The NGM class: These students will hand in their writing assignments directly to teachers after class.

The GM class: These students are required to create their own Google accounts and carry out their writing assignments on Google Blogs. Students can also review the work submitted by their peers on the blog, press the "like" button, and leave comments. At this stage, the gamified elements are points, badges, progress bars, leaderboards, peer pressure, and social influence.

Firstly, each week, two writing tasks of different levels will be provided on Moodle, and the learners can decide which one they would like to carry out. Completing the Level 1 essay can be turned into a 1 Low-Level Completion Badge, while completing the Level 2 essay can help them win a High-Level Badge. This design is aimed at determining whether the gamified elements can motivate students to take on the challenge of harder tasks. In order to encourage the students to persist with their writing every week, and discourage catching up with the assignments in the final weeks to win badges, the teacher will award those who write their blogs regularly with an Early Bird Badge.

Secondly, in order to motivate students to learn from each other and enhance their awareness of their competence level, peer feedback will play a key role in post-class tasks. Students will be expected to review and comment on their peers' blogs, and if they contribute to two blogs, they will gain a point. In addition, the teacher will reward students with an extra two points if they can spot a mistake and help correct it in their peers' blogs. Five points in this part will enable students to acquire a Comment Badge.

Thirdly, a progress bar will allow students to observe how many blogs they have commented on.

Fourth, two leaderboards will be set up to show students their completion rate of blogs and peer reviews.

At the end of the ten-week writing courses, the 40 participants will be given a compulsory official English writing test, which complies with IELTS grading criteria. The game design elements used in this proposed study are displayed in Figure 3.

Game design element	Class stage	Figure	Description
<b>Participation-based</b>			
badge	Pre-class		Reward for watching instructional video and participating pre-class quiz
Consistent badge	Pre-class		Reward for insist to finish pre-class quizzes per week
<b>Low-level completion</b>			
badge	Post-class		Providing for those who choose to write Level 1 writing task
<b>High-level completion</b>			
badge	Post-class		Providing for those who choose to write Level 2 writing task
Early bird badge	Post-class		Reward for insist to finish blog writing per week
Digital point	Pre-class		Encouraging student 5 points for each correct answer in quiz
	Post-class		Encouraging student 2 points for finding a mistake and correct it in peers' blog writing tasks
Victory badge	Pre-class		Reward for 100 points
Comment badge	Post-class		Reward for 5 points
Leaderboard	Pre-class		Rank students according to their badges earned
	Post-class		Rank students according to their completion of blogs and review
Progress bar	Post-class		Evaluate the number of blogs students have commented on

Figure 3: Game design elements.

### 3.2. Effectiveness Evaluation

#### (1) Data source one: Optional assignments

To evaluate students' behavioural engagement, quantitative data can be collected in the form of the students' completed e-quizzes, blogs, and comments. The learning management system will record the completion rate automatically.

To study the cognitive engagement, pre-class e-quiz scores, quality of blogs, and their difficulty selection of post-class writing assignments can be collected. It is worth noting that for uniformity and cohesion purposes, the same scoring criteria as for the post-course test will be used for assessing students' average blog writing level.

In addition to the data relating to the gamified classes, data will also be collected for the non-gamified one, including their completion rates, and the quality of their pre- (quiz score) and post-class activities (also using IELTS grading criteria). The effect of gamification on flipped learning will be addressed by comparing the two classes of data.

#### (2) Data source two: Post-course writing test

Students' writing performance can mainly be assessed in terms of their final test scores.

#### (3) Data source three: Survey responses

To evaluate emotional engagement, a questionnaire survey can be used which is adopted from "Student Engagement and Disaffection in School - Student Report" from the Rochester Assessment

Package for Schools developed by Wellborn and Connell <sup>[40]</sup>. Items in the survey relate to students' emotions, such as the level of anxiety and boredom.

#### (4) Data source four: Student interview

Students can be interviewed in order to gather in-depth information. A semi-structured interview can be conducted to explore students' experiences, feelings, and comments.

#### 4. Conclusions

This study aims to design out-of-class activities for students' English writing flipped classrooms. In order to explore the effect of gamification, the assessment instruments are also stated. This class design model will give a clear instruction to the future teachers and curriculum designers who hope to use this strategy in their classes. The next step for our research will be conducting an empirical study according to this design model, so as to explore the engaging effects of game elements on students in out-of-class stages in EFL writing classes.

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