گۆڤارى زانكۆى رايەرىن



# Teachers' Perceptions Associated with Student Considerations in The Flipped Learning Model

## Abubakir Muhammad Mahmood

Department of English, College of Education, University of Raparin, Ranya, Kurdistan, Region, Iraq.

## Abstract

explored primary This study school teachers' opinions on the effects of Flipped Learning (FL) depending on the grade level and subject matter taught in an EFL environment in Kurdistan. Teachers of a Private Bradost School in Ranivah participated in the study. Data were gathered by using a survey tool borrowed modified by the researcher. and 18 participated teachers randomly. additional Consequently, due to the needed outside of technology the classroom, the participants thought that certain students could find it challenging to

access. The results show that the mean scores in the area of parent involvement and parent or teacher conferences, the participants strongly agreed that in an FL. video lectures make the class more transparent to parents, and they also believed that discussions with parents focused more on learning than they do on classroom behavior. Accordingly, they believed that time created for in-class activities in the FL allowed for more active learning increased higher-order and thinking for students, based on the following construct mean scores, with instructional considerations in the FL, in the areas of personalized learning, pupils to teacher interaction, active learning, and time for learning. They believe that FL gave teachers more time to improve and tailor education for students. Additionally, they cited favorable opinions of flipped learning in comparison to traditional classrooms.

**Keywords:** Flipped Learning, Teacher Perceptions, EFL Teachers, Conventional Classroom.

**Article Info:** 

DOI: 10.26750/Vol(10).No(4).Paper38 Received: 06-July-2023 Accepted: 27-Aug-2023 Published: 29-Dec-2023 Corresponding Author's E-mail: abubakir.mohammed@uor.edu.krd



This work is licensed under CC-BY-NC-ND 4.0 **Copyright**©2023 Journal of University of Raparin.





#### Introduction

Due to the development of ICT tools and the online world, the global educational system has witnessed rapid and sequential changes in recent years, making it easier for educational leaders to provide dynamic multi-media learning programs and the ability to support both substance and evaluation between teaching and learning (Ouda & Ahmed, 2016). Both developed and developing nations are interested in reforming and implementing new pedagogical techniques in the teaching and learning processes as a result of these quick and consecutive developments. Many nations then made fundamental adjustments to their educational system to deal with the acceleration brought on by the enormous advances in the realms of knowledge and technology. A thorough examination of the educational system in the majority of the nations in the region was necessary to address these difficulties. The main issue in the region's schools is that the modern K-12 English language curriculum (Sunrise for Kurdistan) emphasizes communicative methods of teaching and learning, whereas the educators in the Kurdistan Region use a more traditional approach that mainly relies on memorization of lists of grammatical rules and word definitions. As a result, the importance of listening and speaking abilities, which are crucial for communication, is neglected in favor of reading and writing skills. The traditional teaching technique causes students to have inadequate speaking and listening skills, which are essential building blocks for using the contemporary communicative approach (Saleh, 2017). This encourages educational stakeholders and staff members to think of novel ways to improve and modernize the teaching methodology that centers the language learner in the classroom. This highlights that if the learning environment and teaching techniques are suited to the learners' skills and requirements, they may learn and attain the competency level. The flipped learning model has so far become popular at college-level and upper-high school EFL courses. This method may be very helpful for both teachers and language learners because it allows for more interactive learning activities and a communicative approach to all curriculum topics (Saleh, 2017). As was already said, one of these cutting-edge paradigm shifts and methodologies used in the educational process is the flipped learning model. Additionally, it is one of the patterns and tactics for teaching and learning that encourages student-teacher engagement via the use of technological instruments (Tully, 2016). The educational system and learning facilities might both benefit significantly from this approach. According to Altemueller and Lindquist (2017), the idea of the flipped classroom is doing homework at home as supplementary learning during class time and doing traditional learning during class time at home. Therefore, combining pre-class and in-class activities forces students to take on additional commitments and responsibilities so that they may engage in class more actively and achieve better results while also feeling more self-confident. Additionally, the students are exposed to the topic knowledge outside of the classroom using technological tools such as films that the instructor creates to illustrate a particular lesson or facts connected to the lesson. According to Divjak, et al, (2022) the flipped classroom is an example of a





contemporary teaching strategy that uses cutting-edge innovations sensibly and entertainingly to address the requirements of students right now. In this model, teachers prepare lessons using videos or other multimedia, and students are in charge of reviewing all prepared materials before class using their tablets, iPads, iPods, laptops, desktop computers, and/or smartphones. Lecture time is encouraged to be used for exercises, activities, practices, and assistance with homework assignments. The teacher's additional responsibilities in this approach include serving as a mediator and inspiring students to learn from the provided resources outside of class.

Flipped education refers to the use of internet technology to affect classroom instruction so that teachers can spend more time connecting and talking with students than really teaching. The whole homework paradigm in the classroom is "flipped" under this methodology, which goes by the name FL. Simply said, classwork is now completed at home via videos made by the teacher, and homework is now completed in class. Numerous researchers asserted that with the rapid advancement of computer technology, e-learning and the variety of different communication tools are very effective in enhancing learning outcomes, and as an FL, they play a significant role in the development of education (Lau, The knowledge of course material improves when assessments are given to each 2023). student in the class and they receive personalized feedback or revisions. By examining educators' perspectives on how FL affects pedagogy in education, developing English language learning in an EFL context, and dissecting the elements of this educational framework, the current study seeks to propose an educational framework for FL as a new educational paradigm. Kurdistan Region Government (KRG) demands such advancement and changes in the educational sector regarding the use of technological devices and more integration into the educational process as a result of these perspectives on the use of ICT tools. The English language curriculum for grades K-12 was first changed. Teachers' opinions have altered since then. Students are more drawn to ICT resources that supported their learning than they were to traditional teaching techniques, which have transformed into communicative and interactive approaches. The lesson could be more entertaining for the students if they are drawn to it. As a result, Kurdish students may favor it over the previous, conventional method of instruction.

#### **Literature Review**

One of the most important components of the study is a literature review. It provides information on things that are previously known about the subject of the research and develops ideas about the theoretical and methodological techniques that have been applied in this particular field. In addition, the literature review gathers current, pertinent research on your selected subject and synthesizes it into an organized overview of what is already known in the field and how to apply lessons learned in the past (Snyder, 2019).

According to Chou et al. (2021), flipped learning, as opposed to traditional teaching, might improve students' motivation for learning and attitude toward learning, as well as their





perception that the subject matter being taught is simpler to understand and assimilate. Additionally, it enables professors and students to guide one other's learning through discussion of various subjects. For the purpose of teaching mathematics in primary schools, Lin et al. (2018) used mobile learning with a flipped classroom. The findings demonstrated that, in comparison to traditional teaching, flipped learning increased students' learning interests and motivation and promoted students' learning effectiveness; teachers and students both gave flipped learning a favorable evaluation.

According to Chen et al. (2019), there is a link between learning attitude and desire to learn. If learning motivation is not met, a positive attitude toward learning will not be demonstrated. According to Awidi and Paynter (2019), there are positive relationships between students' learning motivation and attitude toward learning, i.e. the more motivated students are to study, the more positive their attitudes toward learning. According to Green (2019), learning motivation and learning attitude are inversely correlated; learning motivation demonstrated predictability on learning attitude, which was not only the main indicator to induce learning motivation and curriculum development but also the indicator of learning attitude and learning outcome.

With the use of ICT technologies, teachers move direct learning from the big group learning environment into the individual learning environment in the FC model. The FL model is a blended learning method that uses ICT technologies in various ways to influence classroom learning. As a result, the teacher may engage with the class more often than lecture, giving the students more chances to learn and receive more specialized feedback and assistance. They also get feedback from their peers on the tasks they are doing and what they still do not understand. Students and teachers may develop interactive and communicative language acquisition in the classroom by utilizing FL in educational settings for teaching and learning. To engage and advance the four language skills (Reading, Writing, Listening, and Speaking), as well as to encourage learners, the FL model is extremely helpful as an online exercise (Banditti, 2018). The development that students' writing, reading, speaking, and listening make when they join an FL in an EFL environment has received very little attention in studies and debates. Additionally, a model like this has a significant impact on how wellprepared the students are for the course's materials when they arrive in class. The majority of academics concur, according to Akçayır and Akçayır, (2018), that the advantages of FL make classroom instruction more participatory and successful. They emphasized that most academics concur the advantages of FL make classroom learning more dynamic and successful for both students and teachers. As a result, this study aims to demonstrate how teachers in Kurdistan Region Government see students about FL model issues.





#### **Flipped Learning Approach**

It is clear that the FL model is a relatively new teaching strategy and has just emerged as one of the most cutting-edge learning approaches that depend on the use of technology tools to help students learn, particularly outside of the classroom. By repurposing the customary chores performed by students and teachers outside and within the classroom, it emphasizes the active use of class time. FL method gives students an excellent chance to acquire course ideas via online learning resources outside of the typical classroom context so that students may engage in active learning techniques like problem-solving and real-world applications in the classroom. FL, in the words of Bergmann and Sams, is direct instruction provided to the individual outside of the classroom, and more effective use of in-class time for group work and individualized attention (Hsieh, et al, 2016 and Dusenbury and Olson, 2019). Students, according to FL, start participating actively in lessons rather than just sitting back and listening. Since they may pause, rewind, and replay the instructor's videos at any time, students can study at their own pace when watching them in advance of the class. Students' grasp of the subject matter is strengthened and deepened by repeated exposure to the learning resources and materials. The knowledge can then be applied in a larger context during class activities (Hsieh, Wu, & Marek, 2016, p. 1). Students are asked to examine their lecture notes from home or watch recorded lecture videos before coming to class. They are also expected to engage in active learning in the classroom by working in groups or alone. The teachers provide the students in the classroom with guidance and advice, act as facilitators to aid in problem-solving, and provide criticism as necessary. The learners also get additional practice and help opportunities with the lesson's objective. In other words, anytime a student is in need or is puzzled, they are directed and assisted.



A conceptual framework of EFL flipped-class pedagogy



The lecture portion or presentation that is typically performed in the classroom is replaced with pre-class work under the FL method. The typical homework assignments are all performed outside of the learning environment (the classroom) under the flipped model so that students may receive immediate feedback and assistance when they attempt to apply what they have learned. As a result, this will let the students follow and view the videos that have been recorded or downloaded as well as the course materials at home whenever they want and as often as necessary using their iPads, iPods, laptops, tablets, or cellphones. Academics advance because they have a deeper comprehension of the subject. To put it another way, using the FL paradigm to promote students' access to material and full participation in the learning process is one method to incorporate blended learning (BL).

In general, FL is a form of blended learning method since it was subsequently recognized as an alternative teaching style. In his paper, Strayer (2007) defined FC as an: "Innovative classroom structure that moves the lecture outside the classroom via technology and moves homework and practices with concepts inside the classroom via learning activities" (p. ii).

According to Garrison and Kanuka (2004), the FC method "is a combination of face-to-face and online learning experiences—not a stacking of one on top of the other" when it comes to using it in the educational process (p. 99). Books and other tasks that must be completed as homework outside of class are intended to augment class time to some extent. Teachers should assist students in creating interesting and practical applications during class based on the results of the self-guided grammar sessions and exams. (Bell, 2014). Reynard (2007) recommend that:

"Face-to-face class meetings should be a method of scaffolding learning rather than the central instructional arena as in conventional courses...Class time should be an important piece of the learning process for students and should provide dialogue, group work or demonstrations of practice an effective and dynamic learning environment should provide heightened interaction for the learner" (pp. 3-4).

Similarly, in his dissertation, Educause (2012) states that:

'..... a pedagogical model in which the typical lecture and homework elements of a course are reversed. Short video lectures are viewed by students at home before the class session, while in-class time is devoted to exercises, projects, or discussions. The video lecture is often seen as the key ingredient in the flipped approach, such lectures being either created by the instructor and posted online or selected from an online reposition (p. 1).



The majority of flipped learning courses are pre-recorded and can be seen and accessed readily inside and outside of the classroom at any time. This illustrates the pervasive nature of the learning environment for the entire learning process. Videos are important in FL, but their utilization with students during class time is where they may be most effective.

The principles underlying the flipped classroom strategy are based on concepts like active learning, blended learning, student interaction, and podcasting of courses. FC is a workshop-style class where students can ask questions regarding the lecture material, have their abilities assessed, and engage in hands-on activities with one another. The primary responsibility of teachers in FC is to guide and counsel students throughout class time (Educause, 2012).

It is evident that before entering the classroom, students introduce and watch the educational resources in the FC that comprise information from a certain unit at home. Exercises, projects, assignments, and/or class discussions, however, are completed in class. The key uses of the flipped classroom are the videos that the teachers generate, produce, and upload online or choose from internet resources. The primary three phases of the FC pedagogy are listed below. It is evident that before entering the classroom, students introduce and watch the educational resources in the FC that comprise information from a certain unit at home. Exercises, projects, assignments, and/or class discussions, however, are completed in class. The key uses of the flipped classroom are the videos that the teachers generate, produce, and upload online or choose from internet resources. The primary three phases of the FC that comprise information from a certain unit at home. Exercises, projects, assignments, and/or class discussions, however, are completed in class. The key uses of the flipped classroom are the videos that the teachers generate, produce, and upload online or choose from internet resources. The primary three phases of the FC pedagogy are listed below.



The comparison between Traditional and Flipped Classroom A approaches. (Dove & Dove, 2015, p. 169)



*The first phase* is the pre-class period during which the students independently prepared their lessons. They examined videos posted online by their lecturers or online courses. Before returning to their classroom, they create some tasks to test out the most challenging parts of the course. At this point, it gives students pertinent background information about their subject.

*Second stage*: All of the students participate in the teaching and learning activities at this point in the lesson as peers and work together with their teachers as principal collaborators. The material that the students have acquired before class time is discussed and shared by the students. By doing this, students take center stage in the classroom, transforming it into an SCL setting. At this level, the teacher serves as a facilitator, and the pupils are expected to fully comprehend the material. Additionally, the students attempt to solve their difficulties through their dialogues.

*The third phase* comes after the lesson and offers comments to assist and aid the students in understanding the issues that exist in the FC. The key objective at this point is to inspire their peers to understand the challenges that the students are having in the session. In this phase, the instructor clarifies, encourages, and communicates with the pupils to demonstrate that they comprehend what they have learned (Educause, 2012).

The use of an FC strategy boosts students' enthusiasm and interest in their studies. It maximizes the utilization of class time and resources while enhancing the impact of classroom instruction. Additionally, the FC technique will alter the conventional teaching strategy since it emphasizes learners' independent study by placing them at the center of the class. To engage in a true learning "workshop," FC "provides students with a film that teaches the concept, material content, organization, and skills" (Chen Hsieh et al., 2015, p. 2). In this method, the teacher answers questions, monitors development, and spots typical mistakes. In this method, the teacher answers questions, monitors development, and spots typical mistakes. Educause (2012) similarly mentions the use of videos in flipped classrooms: "Short video lectures are viewed by students at home before the class session, while in-class time is allocated to exercises or discussions. The video lecture is often seen as the basic element in the flipped approach" (p. 1).

After seeing the pre-recorded videos produced by the educators, students in the FL model are given additional chances to practice and complete follow-up tasks during class time. This activity creates an active learning environment that emphasizes student-centeredness, an independent learning setting, and offers numerous opportunities to promote interaction between students and the teacher. In flipped classroom instruction (FCI), expectations from the kids on what to do at home and school are therefore inverted. In turn, this has a good impact on pupils' academic progress.

Flipped classroom teachers are characterized as effective, self-reflective, and relationship experts. They are effective at managing their time, which makes them efficient. With this method, practice takes up the majority of class time, fostering greater student-





teacher and student-student collaboration. As they continually assess themselves, students become more introspective, which improves their learning abilities in terms of pedagogy and argument. A deep partnership between students and their parents may be shaped by FL, thus teachers are required to be experts in relationships (McCammon, 2013, as cited in Ekmekci, 2014, p. 67).

#### Autonomous Learning in Flipped Classroom Model

Watching the recorded videos by the students before entering their classroom, which in turn entails the responsibility for language learners' learning, is one of the key components of the FC approach's success. Additionally, with independent learning, language learners are aware of their strengths and shortcomings as well as how they are used in class. Furthermore, Jacobs and Farrell (2013) state that as the instructor does not bear exclusive responsibility for instruction in the classroom, intrinsic motivation plays a significant part in learner autonomy. Watching the recorded videos by the students before entering their classroom, which in turn entails the responsibility for language learners' learning, is one of the key components of the FC approach's success. Additionally, with independent learning, language learners are aware of their strengths and shortcomings as well as how they are used in class. Furthermore, Jacobs and Farrell (2013) also state that as the instructor does not bear exclusive responsibility for instruction in the classroom, intrinsic motivation plays a significant part in learner autonomy. The primary issue in a regular classroom is that language students typically have a "wait to receive" mentality. In other words, language learners often wait for the teacher to educate them on what to learn, when to acquire it, and how to demonstrate their mastery to the teacher. According to Bergmann and Sams (2012), the "wait to receive" mentality is particularly prevalent in conventional classrooms because it is simple and comfortable for the students, and it is probably how the majority of students typically behave at school. Additionally, Bergmann and Sams (2012) provided additional explanation and provided an example of students who attended class but were more focused on achieving a good mark than really learning anything. The students rapidly pick up on how to pass by taking shortcuts. They do not care what they have comprehended at all; they just want to get through the full topic as quickly as possible.

One of the key elements for leveraging the potential of technology for language learning is enhancing and motivating the autonomous use of current technology for the teaching and learning of the English language. It might be argued that autonomy is the most valuable research since it serves as a fantastic motivator for language learners. The main objective of teachers is to assist students in becoming independent learners so that they can support their learning. With the FC method, language students are given greater authority and, in a sense, take ownership of the learning process. Although the majority of their scientific students did not go on to become scientists, engineers, or physicians. Jon Bergmann and Aaron Sams (2012) both agreed that they had learned one of life's most valuable lessons—to take ownership of their education. Bergmann and Sams went on to say





that the FC model requires language learners to demonstrate their understanding in nearly every class, which is seen as difficult and necessitates a lot of work on their part. Some factors indicate that for some language learners, the traditional model's "sit, wait, and receive" mentality is the most appropriate, but the learners' long-term academic success requires integrate autonomy. Furthermore, there is not much proof that the FC model increases student understanding, even though it emphasizes autonomy and taking charge of one's education. This suggests that the FC model may not be the revolutionary teaching tool that teachers have been waiting for. Additionally, the FC's extended time of learning rather than memorization may annoy the student in the beginning. Additionally, Bergmann et al. stated that language learners who used the FC from the beginning till the end made progress. When they first started with the FC, they were frustrated, but in the end, they left it as students (Bergmann and Sams, 2012).

Autonomous language acquisition for EFL students entails participation in both the classroom and daily life. According to academics, acquiring autonomy is a crucial part of learning the target language (Bravo, Intriago, and Holguin, 2017). In this regard, Dörnyei and Ushioda (2013) hold that autonomy, motivation, and learning accomplishment of learners are interdependent and constitute a circular process, and that the success of EFL learning is more closely linked to the motivation of the language learners. Additionally, according to certain researchers (Najeeb, 2013; Dörnyei and Ushioda, 2013), incentive strengthens autonomy. To put it another way, linguistic motivation and independent learning work hand in hand and motivate learners as well.

One of the teaching and learning strategies that teachers may use to include more ICT resources into the learning environments of the students and enhance learner autonomy is the usage of the FC model. Through formal education, autonomous learning is embraced and cultivated, and teachers encourage their students' autonomy by providing instruction that prioritizes their tasks. The learning environment and time are both flexible for the students, who can pick their activities, take part in decision-making, and practice leadership skills. In this situation, TCL has changed to SCL, and the students are more self-assured. In this way, intrinsic motivation is necessary for language learners to develop learner autonomy. Previous studies have revealed a link between students' internal motivation and individualization and the usage of ICT in the classroom. Additionally, when students take charge of their education, their confidence and willingness to learn increase. More recent technology, according to several academics (Yunus et al., 2013; Mullamaa, 2010), is said to boost students' enthusiasm to study languages, which in turn makes them more receptive to the subject matter. As a conclusion to this section, it should be noted that problem-based learning, which was previously discussed as an alternative to the FC approach, also promotes learner autonomy and may be able to address some of the potential issues with the traditional classroom.





#### Teachers' Perceptions of FL in the Classroom

The integration of FL in the classroom is dependent on the teachers' knowledge of using technology in FC as well as their particular perceptions of the FC approach, according to several previous researchers, including (Abu-Hamour 2013, and as cited in Alsobaie, 2018).

#### Flipped Learning as a Model for Change

The researchers performed several questionnaires at various schools as part of their investigations into the benefits and drawbacks of FL to show how teachers felt about it. The majority of Florida classroom teachers believe in this concept of a classroom that actively promotes change in the learning environment (Abuhamour, 2013; as cited in Alsobaie, 2018). In addition, the study claimed that most teachers agreed that students' learning now differs from what it was in the past due to the accessibility of technology. Students now spend much of their time online, visiting social media platforms, playing video games, and looking up website resources. Teachers must thus get familiar with modern teaching and learning methods that use ICT, internet knowledge, and technology. Another study with a similar outcome (Joanne and Tim, 2014; cited in Alsobaie, 2018) found that the majority of FC teachers were satisfied with and agreed that FL pushed for a shift from traditional TCL to SCL, in which students investigate ICT tools as new technology and use them in their daily lives to pick up new knowledge and perspectives. In this respect, Bender and Waller, (2013) state that FC is where "Students are required to use web resources as homework and undertake initial instruction of the lesson content themselves on new topics, while the class time is used for interesting laboratory explorations or practice activities using the new content" (p.80). To put it another way, the typical classroom, where the professors are the focal point, teach and explain new material, and assign homework and other responsibilities to the students, is altered to a model where the students take center stage. As a facilitator of the teaching and learning process, the instructor now oversees and reinforces classroom activity assignments while building on the concepts that the students have previously studied at home. Additionally, Jacobi (2012) revealed that students who were taught using computerbased education in classrooms received much higher evaluation results than students who were taught using the conventional technique. The majority of educators who have adopted the FL method as a model for change generally concur with the aforementioned finding since it encourages and permits students to use computer-based platforms to enhance their learning activities.

#### Student-centered Learning Approach

The student-centered learning (SCL) approach is the most common way for all language learners to share their knowledge and progress in the classroom, working together under the direction of the teachers to improve their integration and communication throughout the whole learning process. Herreid and Schiller (2013) claim that FC is the evergrowing time constraint on classroom instruction in their study on using FC to provide





educational material in healthcare education colleges in the United States. They verified that the FC is an equally successful way to switch from a time-consuming teach-teacher strategy to a more practical SCL technique for teaching instruction. While Bingimlas (2009) said that FL complemented intra-operative teaching, permitted higher class participation, and decreased lecture time in employing the FC technique to impart educational content. Additionally, additional comparable findings by Brunsell and Horejsi (2013) showed that FL is preferred by most teachers since it emphasizes interactive activities. Additionally, they emphasized and suggested that FL is an SCL strategy that gives language learners in the classroom additional chances to express their opinions. In particular, the FL model enables teachers to make the transition from TCL to SCL, according to Ford and Forman's (2009) study, who found that students are increasingly serving as mediators of their learning rather than being the subject of teaching. To this point, it is evident that the majority of the teachers concurred that FL has developed into a successful strategy for enriching the educational environment.

#### **Research Design**

This study was created using a quantitative method for collecting the necessary data to better understand the research problems, give answers to the research questions, and find out about the teachers' perceptions of the efficacy of FL in the advancement of English language learning in a context of EFL in Kurdistan Region of Iraq. The researcher used a survey questionnaire to collect information from the participants and to address the main research questions. The efficacy of the FCI or FL model's new teaching paradigm strategies in the educational process of utilizing ICT resources for blended learning has been questioned in some circles. Concerns exist over the necessity of using the FL model to improve English language acquisition. To put it another way, the FL model will help the participants improve their knowledge of the English language in certain competency areas. Concerns have also been raised about the impact of online learning and teacher-prepared DVDs on EFL instruction in Kurdistan because they are both viewed as ICT tools. The following research questions (RQ) were developed based on these goals, and this study aims to provide answers to them:

- 1. What are the educators' perceptions towards the student and parent considerations and the instructional considerations in the FC?
- 2. What are the educators' perspectives about FL's potential benefits and usefulness to support student learning in elementary schools?

#### **Samples and Sampling**

Techniques of deliberate sampling were utilized in this investigation. Purposeful sampling, as defined by (Creswell, J. W., 2008), is a technique where "the inquirer picks subjects and study locations because they may specifically inform an understanding of the research topic and primary phenomena" (p. 125). In this study, the researcher's first task was



to determine the teachers' perspectives of students' needs as they applied to the FL model in Kurdistan Region of Iraq.

The examination of this was organized around two research themes. The study's subjects were teachers from Raniyah's Bradost Private School. They were picked especially to meet these demands. Pseudonyms were employed to safeguard the identity of the educators in their profiles, and these samples were representative of educators from a variety of backgrounds. The researcher employed the Teachers' Perceptions Questionnaire (TPQ) as a tool to determine how well teachers understood and felt about the sources of inspiration for the FL model. The participants were comprised of eighteen educators (9 male and 9 female teachers), as shown below.

The researcher used the TPQ to delve into the participants' perspectives of the teaching and learning experience to learn more and identify further effects of the influence of FL in promoting English language learning in an EFL context. Gough, et al. created and made use of the TPQ (2017). The researcher obtained written authorization from the questionnaire's creators before utilizing it in this paper study. It has 17 questions on a Likert scale of 1 to 5. To make the questionnaire more suitable for the Kurdish EFL environment and the paper study, the researcher made several changes to the questionnaire's claims, such as deleting three of them. The questionnaire's five components were included in the TPQ; (*potential benefits of the pupils in FL, Instructional Considerations in the FC, Learning in the FC, Student Considerations in the FC, and Parent Consideration in the FC*). By basing the poll on a study of relevant literature and research, validity was verified. Two EFL specialists assessed the statements in the questionnaire in both languages to increase their face validity. The researcher delivered it to eight EFL teachers who were not among the participants at the school as a pilot study for it. As stated in Table 1, a reliable Cronbach's alpha coefficient of .736 was determined by measuring the questionnaire's dependability.

<b>Reliability Statistics</b>			
	Cronbach's Alpha	Standardized Items	N of Items
Pilot study	.750	.820	17
Main study	.736	.804	17

#### The instruments' Validity and Reliability

These survey questionnaire instruments used a 5-point Likert scale that ranged from Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). The questionnaires sought to discover more about how language students and teachers saw the possibility of cooperation within the FL community, the accessibility and availability of online course resources, and their opinions of the FC method. Overall, the questionnaires sought to determine if the attitudes were positive or negative and to gather any relevant information on how students and teachers perceived these activities. Cronbach's Alpha was





computed in order to assess the internal consistency and dependability of the questions on the common final test. The formula for Cronbach's Alpha involves finding the correlation coefficient for each split after dichotomizing the data in all conceivable combinations. Alpha is the sum of these values (Cronbach, 1951; Field, 2005). According to Table 1, the Teachers' Perceptions Questionnaire's Cronbach's Alpha value was determined to be .736. An accomplishment exam's alpha value should be larger than.70 to give strong evidence for its internal consistency and reliability (Morgan, Leech, Gloeckner, & Barrett, 2007).

A copy of the questionnaire was given to two subject-matter evaluators to be reviewed for clarity, appropriateness, validity, and reliability while the researcher remained in constant communication with the study's supervisor during the process of modifying the questionnaire. The first specialist holds a Ph.D. in English Language Teaching from the University of Human Development in Sulaimaniyah, and the second evaluator holds a Ph.D. in English Language Teaching from the University of Salahaddin in Erbil. The suitability of the questionnaire and its questions for the study was established. As pilot research, the TPQ was administered to 8 Kurdish EFL teachers in Raniyah City to gauge the dependability of the assertions in the surveys. The Cronbach's Alpha for the pilot study was .750 and for the main study was .736 as shown in Table 1. Therefore, the questionnaire was found to be reliable.

#### **Data Analysis Procedures**

The goal of this paper study was to investigate how educators perceived their involvement with the FL model in northern Iraq. The researcher employed Teachers' Perceptions Questionnaire (TPQ) as an instrument for teacher participants to address the primary research questions and define the study's objective. The mean scores of the respondents in the flipped group for each questionnaire item were displayed using descriptive statistics. In other words, the language learner participants used written self-reports as a qualitative study to explain the influence of the FL model on the educational process in this location to elicit their impressions of the FL experience in greater depth. The researcher utilized the IBM SPSS (Statistical Package for Social Scientists) software application, version 25, to analyze the collected data gained from the aforementioned tests to make the data set easier to manage.

#### Limitations

Due to the adoption of a new model for change in the educational process, this research was constrained by the fact that it was essentially a need analysis for the existing situation Kurdistan Region of Iraq. Regarding enhancing teaching and learning of the English language in an EFL environment in this specific location, the new paradigm strategy technique was Flipped Learning. Other factors could exist, but given the nature of this study, it is probably best to ignore them for now. Additionally, the study's participant pool was restricted to a small number of teachers who served as samples for obtaining their perceptions of the role and impact of FL in the development of the English language in the





EFL context in the course of education, which precluded any sense of generalization (Creswell, 2014; Creswell, 2013; Saldana, 2013; Marshall & Rossman, 2011; Flowers, Larkin & Smith, 2009). It would have been possible to offer more generalized information on the situation in Kurdistan if more educators had participated. Another drawback of the study was that it was conducted in a small area (Bradost School), which meant that it did not accurately reflect the entire state of the nation. The researcher attempted to get a fundamental understanding of how to use such a novel approach to teaching and learning in the education process, especially in the growth of English language acquisition in the EFL environment. There are more opportunities for conducting more studies on this subject.

#### **Teachers' Perceptions Questionnaire (TPQ)**

The researcher used (TPQ) questionnaire to explore the participant teachers' perceptions about teaching and learning experience with the FC model through five constructs as the parts of the survey questionnaire regarding the impact of FL on developing English language learning in an EFL context in Kurdistan Region, like (potential benefits of the pupils in FL labeled with (S1, S6, S11), Instructional Considerations in the FC labeled with (S3,S10,S16, S17), Learning in the FC labeled with (S5,S9,S12), Student Considerations in the FC labeled with (S2, S4, S13, S14, S15), and Parent Consideration in the FC labeled with (S7, S8). The researcher returned the survey questionnaires to analyze the acquired data by utilizing means and standard deviations for each area explored to evaluate and explain the survey data according to their categories using descriptive and inferential statistics.

No.	Area	Ν	Mean	Standard Deviation
<b>S</b> 1	Absent students	18	4.61	0.50
<b>S</b> 11	Struggling students	18	4.61	0.50
<b>S</b> 6	In-class and out-of-class time	18	4.05	0.72

 Table 2. Teachers' Perceptions of Potential Benefits for Pupils in the Flipped Classroom.

#### Teachers' perceptions of the potential benefits for students in the flipped classroom

Table 2 provides a summary of the means and standard deviations for the several areas that were thought to provide students in the FC with possible advantages. In the areas of the FC benefiting absent students (M = 4.61), struggling students (M = 4.61), and in-class and out-of-class time mean (M = 4.05); the majority of the teachers agreed or strongly agreed.

# Teachers' perceptions associated with instructional considerations in the flipped classroom

-879-**Table 3**: Teachers' Perceptions Associated with Instructional Considerations in the Flipped Classroom. Journal of University of Raparin

گۆڤارى زانكۆى ړاپەرين

E-ISSN: 2522 – 7130 P-ISSN: 2410 – 1036



No.	Area	Ν	Mean	Standard Deviation
<b>S</b> 10	Personalized learning	18	4.50	0.75
S16	Pupil-to-teacher interaction	18	4.37	0.74
<b>S</b> 3	Active learning	18	4.47	0.74
S17	Time for learning	18	4.25	0.70

The findings of the averages and standard deviations of the various areas related to instructional concerns in the FC are shown in Table 3. In the areas of individualized learning (M = 4.50), student-teacher contact (M = 4.37), active learning (M = 4.47), and time for learning (M = 4.25); the teacher participants agreed or strongly agreed.

#### Teachers' perceptions associated with learning in the flipped classroom

The results of the averages and standard deviations of the common areas related to learning in the FC are shown in Table 4. The respondent teachers had a high degree of agreement with all three domains, including passive learning (M = 4.50), English language learners (M = 4.38), and students' learning (M = 4.11).

No.	Area	Ν	Mean	Standard Deviation
<b>S</b> 9	Passive learning	18	4.50	0.70
S5	English Language Learners	18	4.38	0.69
S12	Student learning	18	4.11	0.83

Table 4: Teachers' Perceptions Associated with Learning in the Flipped Classroom.

### Teachers' perceptions associated with student considerations in the flipped classroom

Table 5's findings provide an overview of the averages and standard deviations of the various areas taken into account with student concerns in the FC. The areas of student-to-student contact (M = 4.37), classroom discipline (M = 4.12), accessibility to technology (M = 4.00), and student accountability (M = 3.87) were those where participating teachers agreed most strongly, while the area of student preference (M = 3.75) had the lowest mean.

**Table 5**: Teachers' Perceptions Associated with Student Considerations in the Flipped Classroom.

No.	Area	Ν	Mean	Standard Deviation
S15	Student-to-student interaction	18	4.37	0.74
<b>S</b> 4	Classroom discipline	18	4.12	0.83
<b>S</b> 2	Accessibility to technology	18	4.00	0.53
S14	Student Responsibility	18	3.87	1.12
S13	Student preference	18	3.75	0.70

The findings of the averages and standard deviations of the various regions taken into account with parent considerations in the FC were shown in Table 6. Regarding parent





involvement (M = 4.16), and parent or teacher conferences (M = 4.33), teacher participants agreed or strongly agreed, and believed that discussions with parents when using a flipped classroom focus more on learning than classroom behavior. They also agreed or strongly agreed with the statement that video lectures make the class more transparent to parents.

*Table 6:* Teachers' Perceptions Associated with Parent Considerations in the Flipped Classroom.

No.	Area	Ν	Mean	Standard Deviation
<b>S</b> 8	Parent or teacher conferences	18	4.33	0.48
<b>S</b> 7	Parent involvement	18	4.16	0.83

#### **Discussion of the Findings**

This paper aimes to investigate how educators perceived the contribution of FL to the growth of English language acquisition in an EFL setting in Kurdistan Region. The most significant results of the study and the conclusions of the construct system characteristics showed that the respondents agreed with virtual learning, which offered a realistic and stimulating English learning environment in which the students not only became engaged in real interaction and comment-making, but also improved their ability of writing and proficiency of speaking as a result of the comments and suggestions made by their teachers and peers. Regarding the concept and perceived usefulness, the findings showed that it was a great idea to utilize virtual learning to study English as a foreign language since it improved the participants' critical thinking and helped them develop their abilities and classwork. According to the findings of the construct behavioral intention, the majority of respondents agreed that they will accept studying languages online in the future. In addition, the audio/video lectures created and distributed by the educators increased the participants' oral proficiency and boosted their pragmatic competence, which may be a variety of factors contributing to such big outcomes.

The researcher used the TPQ to explore the teachers' perceptions about the student and parent considerations as well as the instructional considerations with a learning experience in the FL model classroom through five constructs belonging to the questionnaire to address the research questions; (*potential benefits of the pupils in FL, Instructional Considerations in the FC, Learning in the FC, Student Considerations in the FC, Parent Consideration in the FC)*. The researcher used descriptive statistics to assess the data that had been obtained by employing means and standard deviations for each of the areas under investigation. The teachers overwhelmingly concurred in the areas with the lowest means: student-to-student contact (M = 4.37), classroom order (M = 4.12), technology accessibility (M = 4.0), student accountability (M = 3.87), and student preference (M = 3.75). Due to the additional technology needed outside of the classroom, the participating teachers thought that certain students could find it challenging to access. This result is consistent with the findings of





previous researchers who noted that technological needs might pose an accessibility barrier for students in flipped classrooms. They reported that not all implementations of flipped classrooms result in positive learning outcomes, and this study indicated that accessibility of the new technology may be a problem for students (Butrymowicz, 2012; Milman, 2012; Fulton, 2012; and Bergmann & Waddell, 2012). In other words, many published studies declare that FC instruction has no significant effects on students' learning as compared to conventional instruction. In addition, despite these challenges, FC enabled students to cooperate and collaborate with their peers to improve connections with their peers. In addition, educators think that kids in FC have a sense of ownership over their education and choose FL over traditional learning. In the area of parent involvement (M = 4.16) and parent or teacher conferences (M = 4.33), teachers agreed or strongly agreed that in an FC, video lectures make the class more transparent to parents, and they also believed that discussions with parents focused more on learning than they do on classroom behavior. Accordingly, the teachers strongly agreed that time created for in-class activities in the FC allowed more active learning and increased higher-order thinking for students (M = 4.25), based on the following construct mean scores, with instructional considerations in the FC, in the areas of personalized learning (M = 4.50), pupils to teacher interaction (M = 4.37), active learning (M = 4.47), and time for learning (M = 4.25). They believe that FL gave teachers more time to improve and tailor education for students. These results appear to be consistent with those of (Knight & Wood, 2005; Freeman et al., 2007) who have highlighted the advantages of implementing active learning in the classroom and the fact that active learning can encourage students to engage in higher-order thinking (White, 2011). Using the flipped classroom allows for the inclusion of more active learning in the classroom, according to this research and several others (see Drumheller & Lawler, 2011; Lage & Platt, 2000; Day & Foley, 2006; Kaner & Fiedler, 2005; Herreid & Schiller, 2013; Valenza, 2012). Additionally, according to certain research reports, student involvement has a positive influence on students' high-order thinking, critical thinking, and problem-solving abilities (Sun et al., 2018; Green and Schlairet, 2017; Wang, 2017). In general, the FC allocated time for topic coverage, direct instruction, active learning, and critical high-order thinking.

#### Conclusions

According to this study, FL gives teachers more time to develop and customize their lessons for language learners while simultaneously scheduling time for direct instruction, active learning, and topic coverage. It was further shown that absent students may still gain from the FC since they need the teacher's presence to answer problems but not for direct teaching. Teachers said that since students could study and replay courses they had problems in understanding, taped lectures aided struggling language learners. Overall, it was found that FC students learned more efficiently than FL eliminated passive learning from the





classroom, assisting students who had to learn challenges and benefiting from the recorded lectures.

#### Recommendations

Internet access to watch videos and other FC materials is not always available and of high quality for all pupils, as noted in this study, and it might occasionally harm the cognitive development of the children due to their poor socioeconomic level as language learners. Teachers need to be aware of the resources that students may or may not have access to under an FC model. If educators decide to apply this paradigm, they should be deliberate about identifying the language learners who might require supplementary access to the curriculum. It is important to inform teachers, administrators, and school board members that while the FL model may not boost student learning, it does increase time for active learning and higher-order thinking (Gough, et al., 2017, p.21). The ministry of education must begin by setting up training courses for teachers and students to gain the knowledge and abilities needed to use FL efficiently. Based on student gender and attitudes about the FL teaching technique, more studies may be required to examine the effect of FL on students' English achievement in subsequent grade levels. The ministry of education should make plans to offer more trustworthy materials in the future and make use of virtual learning by holding several relevant seminars for teachers on implementing FCI in the educational system.



## تێڕوانينهكانى مامۆستايان پەيوەست بە رەچاوكردنى خويّندكاران ئە مۆديّلى فيّربوونى بەرەواژ

#### ابوبكر محمد محموود

E-ISSN: 2522 - 7130 P-ISSN: 2410 - 1036

بەشى زمانى ئىنگلىزى،كۆلىرى پەروەردە، زانكۆى راپەرىن، رانيە، ھەرىمى كوردسىتان، عىراق.

#### يوخته:

ئامانجى ئەم توێژينەوەيە بريتى يە لە زانينى بۆچوونى مامۆستايانى قوتابخانە سەرەتاييەكان بۆ كاريگەرىيەكانى يۆلى بەرەواژ بەينى ئاستى يۆل و بابەتەكان كە لە يەكىك لە قوتابخانەكان تايبەت بە فيربوونى زمانى ئينگليزى وەك زمانى بيانى دەخوينريت لە ھەريمى كوردستان. مامۆستايانى قوتابخانەي برادۆستى ناخكومى لە شارى رانيە بەشدارىيان كردووە لە توپژينەوەكەدا. داتاكان لەرىگەى بەكارھىنانى رايرسی پهکهوه کۆکرانهوه که وهرگيراوه و دهستکاری کراوره لهلايهن توپژهرهوه وهک ئامرازيکيش بهکار هاتووه. (١٨) مامۆستا به شێوهي هەرەمەكى بەشداريان پێكراوه و رايرسىيەكەيان لەسەر ئەنجامدرا.. بەپێى دۆزىنەوەكان،ھەرچەندە بۆ ئەو تەكنەلۆژپايەي كە لە دەرەوەي يۆلەكان يۆپسىتە، مامۆستاپانى بەشداربوو پێيانوايه كه هەندێک له خوێندكاران به زەحمەت دەتوانن دەستيان بەسەرا بگات. ئەنجامەكان دەريدەخەن كە له بواری بهشداریکردنی دایبابان و کوّنفرانسی دایبابان و ماموّستا، ماموّستایانی بهشداربوو به تهواوی هاورا بوون كه له پۆلىكى بەرەواژدا، ۋىدىۆپيەكان پۆلەكە شەفافتر دەكەن بۆ دايبابان،وە پېيانوايە كە گفتوگۆكان لەگەڵ دايبابان زياتر لەسەر فێربوون دەبێت نەک لەسەر رەفتارى يۆل. بەم يێيە، ئەوان يێيانوايە كە ئەو كاتەي بەردەستە لە يۆلى بەرەواژ بۆ چالاكىيەكانى ناو يۆل، رېگە بە فېربوونى چالاكتر دەدات و بېركردنەوەي ئاست بەرز زیاد دەکات بۆ خویندکاران، بە پشت بەستن بەم داتایانەی خوارەوە، و بە رەچاوکردنى فىركارى لە پۆلى بەرەواژدا، لە بوارەكانى فێربوونى كەسى و، كارلێكى نێوان قوتابيان بۆ مامۆستا و، فێربوونى چالاك، و کات بۆ فېربوون. ئەوان پېيان وايە کە پۆلى بەرەواژ کاتېکى زياترى بە مامۆستا داوە بۆ باشترکردن و پشتيواني خويندن بۆ خويندكاران. لەگەڵ ئەوەشدا، بەشداربوان بۆچوونى بەجى و لەباريان ھەيە دەربارەي فٽربووني بەرەواژ بە بەراورد لەگەڵ يۆلى نەرىتى ( يۆلى ئاسايى).

كليله وشەكان: پۆلى بەرەواژ، تێروانىنى مامۆستايان، مامۆستايانى EFL ، پۆلى ئاسايى (نەريتى).





#### REFERENCES

- Ahmad, S.Z., 2016. The Flipped Classroom Model to Develop Egyptian EFL Students' Listening Comprehension. English Language Teaching, 9(9), pp.166-178.
- Ahmed, H.O.K., 2016. Flipped learning as a new educational paradigm: An analytical critical study. European Scientific Journal, 12(10).
- Akçayır, G. and Akçayır, M., 2018. The flipped classroom: A review of its advantages and challenges. Computers & Education, 126, pp.334-345.
- Al-Ghamdi, M. and Al-Bargi, A., 2017. Exploring the application of flipped classrooms on EFL Saudi students' speaking skills. International Journal of Linguistics, 9(4), pp.28-46.
- Al-Harbi, S.S. and Alshumaimeri, Y.A., 2016. The Flipped Classroom Impact in Grammar Class on EFL Saudi Secondary School Students' Performances and Attitudes. English Language Teaching, 9(10), pp.60-80.
- Altemueller, L. and Lindquist, C., 2017. Flipped classroom instruction for inclusive learning. British Journal of Special Education, 44(3), pp.341-358.
- Alsobaie, M.F., 2018. Effective Teaching and Learning: Flipped Learning in the Classroom. Western Michigan University.
- Awidi, I.T. and Paynter, M., 2019. The impact of a flipped classroom approach on student learning experience. Computers & education, 128, pp.269-283.
- Banditvilai, C., 2016. Enhancing students' language skills through blended learning. Electronic Journal of e-Learning, 14(3), pp.pp223-232.
- Bravo, J.C., Intriago, E.A., HolguĆn, J.V., Garzon, G.M. and Arcia, L.O., 2017. Motivation and Autonomy in Learning English as Foreign Language: A Case Study of Ecuadorian College Students. English language teaching, 10(2), pp.100-113.
- Bokhari, H.M., 2016. A case study examining perceptions of female Saudi university students regarding the use of asynchronous online discussion boards. Northern Illinois University.
- Butrymowicz, S., 2012. The promise of the 'flipped classroom'eludes poorer school districts. The Hechinger Report.
- Chen Hsieh, J.S., Wu, W.C.V. and Marek, M.W., 2017. Using the flipped classroom to enhance EFL learning. Computer Assisted Language Learning, 30(1-2), pp.1-21.
- Chen, M.R.A., Hwang, G.J. and Chang, Y.Y., 2019. A reflective thinking-promoting approach to enhancing graduate students' flipped learning engagement, participation behaviors, reflective thinking and project learning outcomes. British Journal of Educational Technology, 50(5), pp.2288-2307.
- Chou, C.P., Chen, K.W. and Hung, C.J., 2021. A study on flipped learning concerning learning motivation and learning attitude in language learning. Frontiers in Psychology, 12, p.753463.
- Creswell, J.W. and Poth, C.N., 2016. Qualitative inquiry and research design: Choosing among five approaches. Sage publications.
- Divjak, B., Rienties, B., Iniesto, F., Vondra, P. and Žižak, M., 2022. Flipped classrooms in higher education during the COVID-19 pandemic: Findings and future research recommendations. International Journal of Educational Technology in Higher Education, 19(1), pp.1-24.
- Dove, A. & Dove, E. (2015). Examining the influence of a flipped mathematics course on preservice elementary teachers' mathematics anxiety and achievement. Electronic Journal of Mathematics & Technology, 9(2), 166-179.
- Dusenbury, M. and Olson, M., 2019. The impact of flipped learning on student academic performance and perceptions. The Collegiate Aviation Review International, 37(1).





- Educause. (2012). 7 things you should know about flipped classrooms. Retrieved from http://net.educause.edu/ir/library/pdf/ELI7081.pdf.
- Ekmekçi, E., 2014. Flipped writing class model with a focus on blended learning. Unpublished Ph.D. Dissertation. Gazi University Graduate School of Educational Sciences, Ankara.
- Engin, M., 2014. Extending the flipped classroom model: Developing second language writing skills through student-created digital videos. Journal of the Scholarship of Teaching and Learning, 14, p.12.
- Freeman, S., O'Connor, E., Parks, J.W., Cunningham, M., Hurley, D., Haak, D., Dirks, C. and Wenderoth, M.P., 2007. Prescribed active learning increases performance in introductory biology. CBE—Life Sciences Education, 6(2), pp.132-139.
- Gaughan, J.E., 2014. The flipped classroom in world history. The History Teacher, 47(2), pp.221-244.
- Gough, E., DeJong, D., Grundmeyer, T. and Baron, M., 2017. K-12 teacher perceptions regarding the flipped classroom model for teaching and learning. Journal of Educational Technology Systems, 45(3), pp.390-423.
- Green, R.D. and Schlairet, M.C., 2017. Moving toward pedagogical learning: Illuminating undergraduate nursing students' experiences in a flipped classroom. Nurse education today, 49, pp.122-128.
- Herreid, C.F. and Schiller, N.A., 2013. Case studies and the flipped classroom. Journal of college science teaching, 42(5), pp.62-66.
- Lin, C. J., Hwang, G. J., Fu, Q. K., and Chen, J. F. (2018). A flipped contextual game-based learning approach to enhancing EFL student's English business writing performance and reflective behaviors. J. Educ. Technol. Soc. 21, 117–131
- Larkin, M., Flowers, P. and Smith, J.A., 2021. Interpretative phenomenological analysis: Theory, method and research. Interpretative phenomenological analysis, pp.1-100.
- Lau, L., 2023. A Study of the Effects of E-learning on the Learning Effectiveness of Students. Journal of Education, Humanities and Social Sciences, 8, pp.1961-1968.
- Midun, H., Degeng, I.N.S., Kuswandi, D. and Ulfa, S., 2019. Effects of inverted classroom and selfregulated learning on conceptual learning. International Journal of Innovation, Creativity and Change, 8(2), pp.181-200.
- O'Flaherty, J., Phillips, C., Karanicolas, S., Snelling, C. and Winning, T., 2015. " The use of flipped classrooms in higher education: A scoping review": Corrigendum.
- Podvorna, L., 2021. The topical issues of the blended learning technology application in the process of foreign language teaching. 29January, 2021, p.129.
- Saleh, M.S. and Nua'man, N.T., 2019. Investigating the Effect of FLIP/LIP Teaching Model on Iraqi Preparatory Pupils' Achievement. Journal of Language Studies, 1(2), pp.78-125.
- Snyder, H., 2019. Literature review as a research methodology: An overview and guidelines. Journal of business research, 104, pp.333-339.
- Sun, Z., Xie, K. and Anderman, L.H., 2018. The Role of self-regulated learning in Students' success in Flipped undergraduate math courses. The Internet and higher education, 36, pp.41-53.
- Wang, J., Jou, M., Lv, Y. and Huang, C.C., 2018. An investigation on teaching performances of the modelbased flipping classroom for physics supported by modern teaching technologies. Computers in Human Behavior, 84, pp.36-48.
- Wu, W.C.V., Hsieh, J.S.C. and Yang, J.C., 2017. Creating an online learning community in a flipped classroom to enhance EFL learners' oral proficiency. Journal of Educational Technology & Society, 20(2), pp.142-157.