

The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

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Abstract

This study aims to identify the effect of the Flipped Learning (FL) strategy on teaching reading comprehension to students of the fifth preparatory class. It develops a null hypothesis stating that there are no statistically significant differences at the level of 0.05 among the mean of scores of both experimental group who adopt the FL strategy and the control group who adopt the traditional method of learning. Therefore, the study designs two equivalent experimental groups of 30 students who studied according to the FL strategy, and one control group of (31) students who studied according to the traditional method during the second semester of the academic year 2019-2020. For eight weeks, a three-period per week class was designed for each group by using Google Classroom (GC) as an educational platform that helps students learn. Having been verified by the experts, a reading comprehension test has been applied. The results have shown that there are statistically significant differences at the level of (0.05) among the mean of scores of experimental and control groups in Reading Comprehension in favor of the experimental group. These differences are attributed to the use of FL Strategy in teaching the experimental group.

Keywords:

Flipped Learning, Strategy, Iraqi EFL Preparatory Class, Performance, Reading Comprehension.

1. Introduction

Language is a means of communication; nowadays English language is considered as the lingua franca of the world since it is considered the first global language which is used in all fields of life as in education, journalism, technology, medicine, commerce, industry, tourism, economy, and politics. Further, English opens doors wide in the academic world, mainly used in studying and teaching, attending conferences and publishing in foreign journals. Hence, learning English language four macro-skills: namely, reading, writing, listening and speaking, enable people to interact successfully with native and non-native speakers of English in academic settings and a great variety of social contexts. In education, the reading skill is of a major importance for students who are learning ESL or EFL, since, in most situations, it is the only readily available exposure to the target language which might not be speaking outside the classroom (Kibui, 2012, p. 13). Moreover, reading can help those learners build their vocabulary and improve their learning skills (Carrell, 1989).

Grellet (1996, p. 8) states, "reading skill should not be separated from other skills". This is everything individuals may say or write about anything they could have read. Krebt and Al-Rifa'i (2013, p. 331) mention that reading ability is regarded as the most fundamental goal for learners in

The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

both the classroom and the extracurricular world; it is a collaborative-constructive process in which readers grasp, interact with, and respond to a text based on what they have already known.

In reading comprehension (RC), as a kind of reading, learners are thinking by digesting all of the words, phrases, sentences, and paragraphs in order to grasp the overall meaning of the texts. Besides, as a fundamental ability in communication, RC could enable students to enhance their learning and follow their interests in all disciplines. Thus, it is essential for EFL students because it exposes them to a live language and allows them to think and express themselves in both speaking and reading (Sikiotis, 1981, p. 300; Ali, et al., 2019).

Furthermore, RC, according to Wigfield et al. (2005, p. 45), is a process that encompasses both the elicitation and the construction of meaning from texts. It essentially consists of a number of cognitive techniques that might aid learners' understanding, such as asking questions, regarding text, assessing one's comprehension, summarizing and activating one's previous knowledge (Wigfield et al., 2005, p. 46).

Focusing on student's and teacher's communication is an effective way to improve the student-teacher relationship. Huang (2016) proposed that communication should be a two-way dialogue in class to improve this relationship. When newer teaching methodologies like blended- or Flipped-Learning (FL) are implemented in class, results have shown improvement in student's and teacher's communication (Bransford et al, 2000). They (Bransford et al, 2000) did not engage FL specifically in their texts and they showed that students who had prior knowledge about a subject had more in-depth discussions about the subject than students who had no prior knowledge.

In a traditional lecture, knowledge is practically and exclusively introduced during lectures while homework assignments can be achieved after that knowledge is learned to enhance understandings (Bransford et al, 2000). Hence, FL has been proposed as a state-of-the-art method for educators to implement in classrooms around the world.

The advantages of FL are copious as it creates a student-centered classroom, increases student participation and motivation, and improves student outcomes (Bishop & Verleger, 2013; Bransford, et al., 2000; Huang & Hong, 2016). Advocates of FL, consequently, have defined it as an "expansion of the classroom" (Bishop & Verleger, 2013, p. 5; Kareem, et al., 2019). This means that FL allows educators to include activities both in class and at home for students. While at-home activities practice memorization and rote learning skills, in-class ones focus on application, analysis, and evaluation. So, as FL is a model that ensures that students correct misconceptions or errors demonstrated during class hours, it permits higher levels of learning to take place in the classroom (Zainuddin & Halili, 2016). In FL, learners can reorganize their own concepts, ideas, and understandings by making it less complicated to access information (Herreid & Schiller, 2013). These benefits are evidence to clarify the way teachers adopt contemporary teaching methodologies like FL.

Consequently, as a strategy of learning FL could be viewed as one of the active learning domains of activities wherein a classroom is considered to be a workshop for doing such activities, discussing ideas, and implementing what the students have learnt outside the class. Then, students will be able to acquire the basic information, construct their learning, and enjoy the freedom of online research. Flipped classroom instruction, accordingly, allows the replacement of direct instruction with videos that can be accessed anytime and anywhere by learners. In addition, such instruction can be achieved by creating a problem-based learning environment during face-to-face interaction (Bergmann & Sams 2012; Talbert, 2012). They argued that the flipped classroom instruction implies a reversal of the normal class set up and the switch between class instruction and homework.

1.1 Statement of the Problem

It is well-known that the primary goal of studying English in Iraqi school courses for students of preparatory schools is to acquire English for the purpose of communication. As a result, the

communication process necessitates a clear and explicit focus on the real development of the four skills: listening, speaking, reading, and writing are the skills that are expected to be developed (Harris & Brown., 2009, p.8).

As far as reading is concerned, RC actually refers to one's ability to comprehend the written content that the author wishes to express. Understanding, therefore, is the heart and purpose of reading since it creates an interactional relationship between the text and the reader (Rivers, 1981, p. 180; Hammad, et al, 2018). Thus, RC is believed to be the ultimate aim of reading since it shows the understanding acquired throughout reading materials.

RC skills, together with other linguistic skills, are supposed to be improved by the syllabus adopted in Iraqi schools by the Ministry of Education. For that purpose, plenty of reading passages is given; yet many students experience comprehension problems. The learners show little signs of content focus, interactivity focus, critical thinking, production, and problem solving because, to the researchers' best knowledge, teachers do everything in the class. It is the teacher who read, translate and even explain the reading text in their native language before asking students to answer the concluded questions.

The traditional way of teaching may appeal beneficial to some teachers and students as for them there are benefits to traditional teaching or lecturing. In recent studies, these benefits have been minimized when new teaching methods are introduced instead (Bransford et al., 2000). This may be clarified because teachers and students have never been exposed to non-traditional lecture or other teaching approaches and are therefore uncomfortable and perhaps more anxious, thereby less able to engage fully in the learning experience as far as students are concerned. This opposes the new trend that states that in new teaching approaches such as FL, prior knowledge is obtained at home and must be done by the students themselves. This saves time in the classroom for the application of prior knowledge and practice with new concepts (Dehham, 2021).

The researchers, in addition to their own observations, have found that some studies in the field of teaching showed that students have a difficulty in comprehending the transcript while reading the text. Such studies have shown that the traditional way of teaching may be ineffective for some students as it focuses on the teacher and does not emphasize the role of students as much as the teacher. Accordingly, the researchers in the present study are attempting to identify some sub-skills such as reading for gist, reading for specific word, and reading for details and their effect on the entire understanding of the reading passage or text.

1.2 Aims

The study aims to investigate the effectiveness of applying the FL strategy to the Iraqi EFL fifth preparatory students' RC. It also aims to show the way those students develop the performance in RC.

1.3 Hypothesis

It is accordingly hypothesized that there is no statistically significant difference between the mean scores in RC of the experimental group who are taught according to the FL strategy and the control group who are taught according to the prescribed method called the traditional method.

1.4 Procedures and Limits

To achieve its aims and verify its hypothesis the study adopts the following procedures: presenting a relevant theoretical background, choosing a sample, dividing that sample into experimental and control groups, selecting an appropriate experimental design based on pre- and post-test, implementing the pre-test to identify the students' level in RC, teaching the experimental group by using the FL Strategy while keeping the traditional method of teaching for the control group, post-testing both groups, analyzing the result by using appropriate statistical techniques, and lastly discussing the obtained results to draw conclusions.

The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

It is worth mentioning that this research confines itself to the Iraqi EFL Fifth Preparatory school students during the academic year 2019-2020, who are studying 'English for Iraq' as a textbook.

2. Literature Review

2.1 Reading Comprehension

Reading, according to Nuttal (1982), is a meaningful interpretation of printed or written linguistic signals. Readers observe symbols and try to figure out what they signify either while perceiving them or shortly afterward to transmit meaning. There are functionally connected elements of reading for the reader. One component considers written symbols to be a visual activity, whereas the other involves explaining or interpreting the meaning of symbols. It indicates that reading is the outcome of the interplay between the reader's linguistic abilities, cognitive skills, and world knowledge and the perception of visual symbols that express language. In this process, the reader tries to recreate the meaning intended by the writer (Dehham, et al., 2021; Rahooomi, et al., 2019 & Rivers, 1981, p. 180)

It is worth mentioning that there is no reading without comprehending and that RC is the act of creating meaning from a text or understanding a read text. Comprehension of a text is a two-way street between the reader's prior knowledge and the text. Hence, effective understanding necessitates the capacity to connect the textual content to one's own prior knowledge. Thus, understanding words, phrases, and full texts requires more than simply language understanding as Smith (1982) thinks that reading a text certainly implies comprehension, and reading is something that makes sense to the reader who tries to perceive the meaning and the messages behind that texts (Abbas, et al., 2018). Moreover, Doyle (2004) clarifies comprehension as the reader's ability to capture the main idea and identify the topic sentence of a text. Rubin (1993) mentions, "reading comprehension is a complex intellectual process involving a number of abilities".

The two major abilities included in RC are word meaning and verbal reasoning. Without word meaning and verbal reasoning, there would be no reading comprehension; meanwhile, without reading comprehension, there would be no reading. Thus, reading needs comprehension. This is what William (2009, p. 5) describes as the process of building up meaning out of the words in a sentence; RC "is the ability to process text, understand its meaning, and to integrate it with what the reader already knows". This goes in line with what Oude (2012, p. 20) thinks of RC as "the ability to derive meaning from any sort of written content.

The primary *abilities* necessary for effective reading comprehension are: (1) knowing the meaning of words, (2) understanding the meaning of a word from context, (3) following the structure of a paragraph and identifying antecedents and references in it, (4) inferring the content of a passage from its literary devices or propositional structures, (5) identifying the main thought of a passage, (6) answering questions about a passage, (7) recognizing the literary devices or propositional structures used in a passage and determine its tone, (8) understanding the situational mood (agents, objects, temporal and geographical reference points, accidental and deliberate infections) communicated for statements, questioning, demanding, and refraining, and finally (9) deducing the writer's goal, objective, and point of view (Davis,1944; Dehham, et al., 2020).

According to Nuttal (1982), there are five types of reading comprehension which can be explained below:

1. Determining, grasping, and finding the main idea in a passage.
2. Finding specific information or important relevant part(s) regardless of the irrelevant one(s).
3. Finding references which entails analyzing and determining the relationship of one language statement to others.

4. Making inferences in good estimates or conclusions made out of the passage's reasoning and logical conclusions.
5. Understanding vocabulary and comprehending the definitions of the terms.

Thus, there must be strategies and exercises for teaching reading activity addressing those five skills.

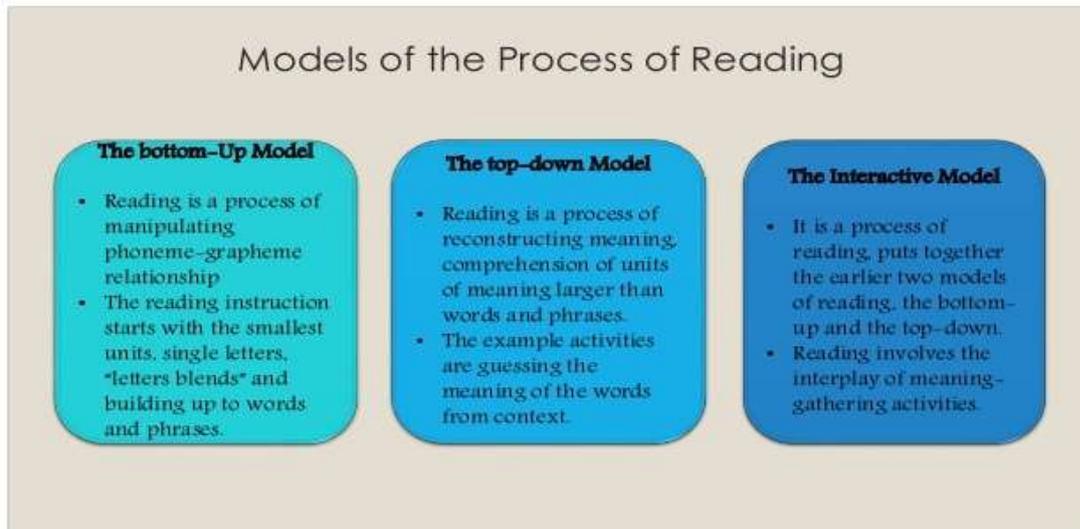
2.2 Models of Reading Process

Reading has been studied by many specialists in different fields including the education system, psychology of language, cognitive psychology and linguistics. Therefore, reading strategies vary. Singer and Ruddle (1985) give the classification for reading process shown in Figure 1 below.

Commenting on the same point, Chastain (1988, p. 222) states that reading process implies an active cognitive system operating on printed material to arrive at an understanding of the message. However, researchers have different views on the processes involved during reading.

Figure 1

Models of the Process of Reading (Singer & Ruddle, 1985)



Farrell (2009, p. 18), for instance, presents the three models of processing reading below:

1) **Bottom-Up processing**

Bottom-up process starts with the comprehension and recognition of individual letters, then words, then groups of words, and then meanings of sentence and finally the whole passage. The reader's role, in such a case, is to deal with each part of the sentences to build up meaning starting from the smaller to the larger part of the text (Manzo and Manzo, 1990, p. 22). The text in this model is apparently built hierarchically.

However, there are several problems with the bottom-up model. First, it takes a long time to transform written words into sounds, especially when reading several hundred pages like novel. Second, some English letters have two ways of pronunciation, for instance, the letter C in the word cat is confusing as to whether it is pronounced /kæt/ or /sæt/ (Nunan, 2015, p. 68).

2) **Top-Down processing**

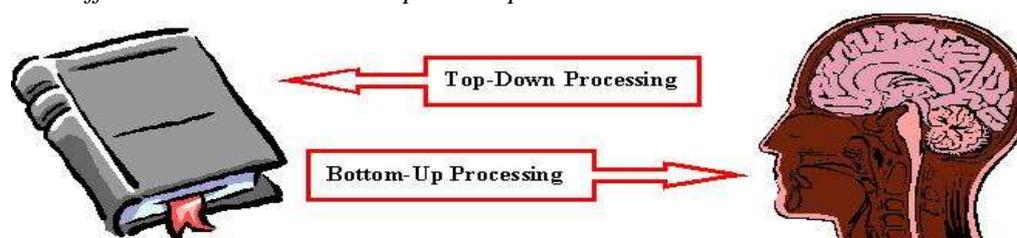
Top-down model concentrates on prior knowledge, i. e., knowledge in the reader's mind rather than what is written on the paper such as vocabulary and meaning, the topic, sentence, and text structures. The reader uses all these elements to predict and hypothesize the forthcoming text. In this way, the process of reading will progress rapidly and smoothly (Tracey and Morrow, 2012, p. 162).

The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

Similarly, Chastain (1988, p. 36) points, "in a top-down approach primary importance is attached to what readers know about reading and about the world in general". Top-down models differ from the bottom-up models, as shown in Figure 2, in that they place little emphasis on the decoding process which is central in the latter (Gjessing and Karlsen, 1989, p. 71). Within the top-down model, reading develops the students' proficiency while the teacher's task is to guide students and facilitate things for them whenever they need (Schumm, 2006, p. 9)

Figure 2

The Difference between Bottom-up and Top-down Models



3) Interactive Processing

Interactive processing consists of the features of both top-down and bottom-up processes. It emphasizes the interrelationship between the reader and the written material (Wang, 2009, p. 44). Therefore, the information derived from both models constitutes the interpretation of the written text (Boyle and Scanlon, 2009, p. 152).

2.4 FL Strategy

Online learning without supplementary classroom teacher-learner contact is an altogether new and different experience for most learners who come from traditional learning modes. This fact creates a need for continuous evaluation of the teaching mode and learners' direction to ensure the best learning opportunities (Aromaih, 2021).

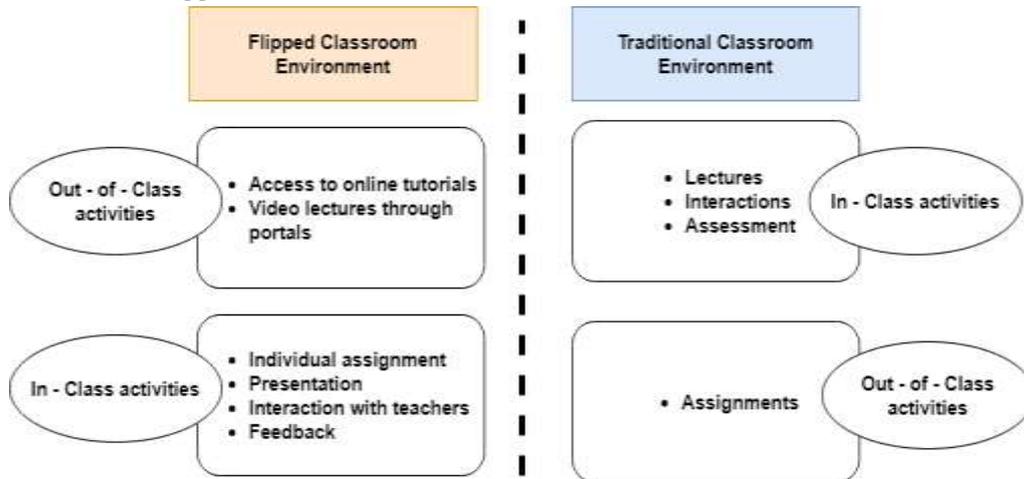
Diab (2016) proves that the use of technology in teaching is necessary for applying flipped classroom instruction. The computer, then, takes over the task of providing the lecture content so as to spend the class time actively by using the learned content. This, in fact, is a teaching approach that was produced for in-person classes and included an at-home online component. Therein, the typical classroom is flipped or inverted. In such an environment, direct instruction takes place at home by using teacher-created resources, allowing class time to be used for exploring and elaborating the content and interacting with peers to meet the learning needs (Kim et al., 2014).

In the same vein, Aromaih (2021) states, "While opting for online teaching, course content and objectives play a major role in deciding whether the mode would be synchronous, asynchronous, or a blend of the two". Furthermore, "student-teacher communication in online classes is necessary to ensure successful language teaching and learning" (Aromaih, 2021). On the other hand, for Bergmann and Sams (2012), flipped classroom teaching is a new teaching technique attempting to improve student engagement and performance by moving the lecture outside the classroom via technology and moving homework and exercises with concepts inside the classroom via learning activities.

On their behalf, Girmen and Kaya, (2019 cited in Alwehebi, 2021) describe a flipped classroom as "a set of pedagogical methods that move information-transmission teaching out of the classroom, use class time for active and social learning, and enable students to complete pre- and/or post-class activities in order to benefit completely from in-class learning". They (2019 cited in Alwehebi, 2021) show that traditional pedagogical practice has always required students to interact with content before it is taken up in the classroom. Thus, mastery of grammar, writing, speaking, society, literature, or any of the other fluencies expressed in the learning outcomes is the major focus in an EFL classroom as shown in Figure 3 below:

Figure 3

Activities in Flipped and Traditional classroom (Alwehebi, 2021)

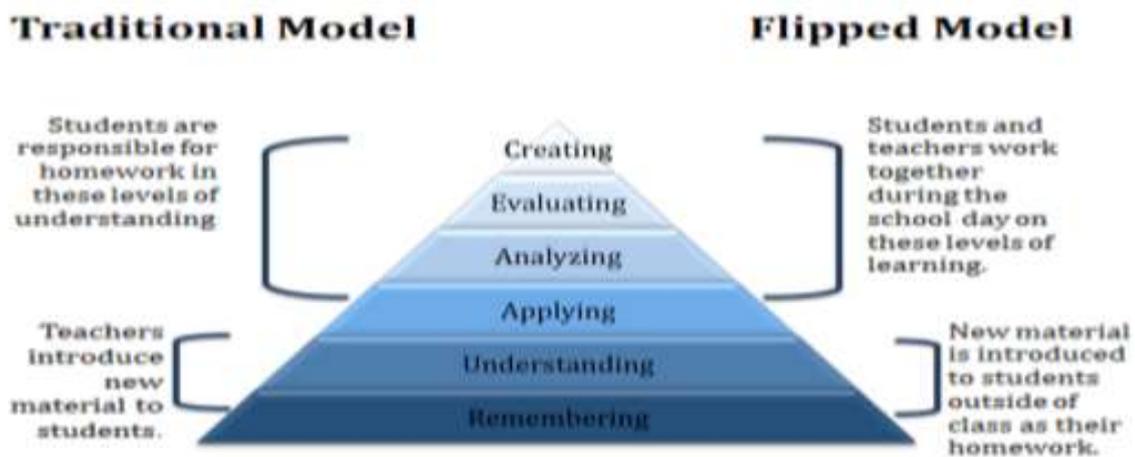


The Vygotsky's and Bandura's theories explained the link between flipped classroom instruction and academic success in the redesigned SAT skills Furthermore, "Blooms' Taxonomy thinking skills are evident in the flipped classroom, because teaching SAT skills through flipped classroom instruction conserved face-to-face time for higher order thinking abilities while sending lower order thinking skills home via video lectures."

Bergmann (2013) suggested that "teachers should shift the highest order thinking skills to the classroom by inverting Bloom's taxonomy" (see Figure 4). " Students can use higher order thinking abilities such as applying, analyzing, evaluating, and producing in the classroom with teacher and peer assistance if educators flip Bloom's taxonomy and transfer the lower stages of remembering and comprehending out of the classroom by using technology (Bergmann, 2013).

Figure 4

Bloom's Taxonomy in Flipped Classroom, (Williams, B. 2013)



2.5 Some Related Studies

In chemistry classes, Ruddick (2012) employed a flipped classroom technique. "Students in flipped classrooms might watch the lesson at home via teacher-created videos and spend class time working on classroom tasks." "The flipped students appeared to be better than the conventional (lecture) students with greater final test scores and overall performance in the class," according to the findings of the study. Furthermore, Johnson and Renner (2012) has a study on 2010-2011 school year,

The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

"the influence of the flipped classroom approach on a secondary computer applications course in a high school environment in Kentucky". The study lasted six weeks and involved two groups: one that received flipped classroom training and the other that received traditional classroom instruction. "A T-test comparing the post-test scores of students who participated in the flipped Excel lesson with those who did not participated found no significant change" (Johnson and Renner, 2012).

Qrquez & Rashid (2017) conducted a study to investigate reading comprehension difficulties faced by students at a university in Jordan. Data were collected using questionnaires which were distributed to 200 students at Yarmouk University. The findings of the study reveal that the students are motivated to learn as they are in dire need for acquiring English. However, they face several problems in the reading process, such as unfamiliar vocabulary and ambiguous words.

3. Methodology

3.1 Experimental Design

The experimental design is a pre and post-test for two groups: control and experimental group (Tavakoli, 2012, p. 264). Both groups are given a pre-test, and the experimental group is only given the FL technique (independent variable); the control group is taught using the traditional manner.

However, a post-test was given to each group to compare the pre-test and post-test scores on the dependent variable (reading comprehension) and evaluate whether or not there is a statistically significant difference between the two groups.

3.2 Population and Sample

3.2.1 Population

During the academic year (2019-2020), the population of the research consisted of fifth-grade female students from preparatory schools in Babil province's city center.

3.2.2 Sample

The sample of the study was drawn from Al-Huda Intermediate School, where 73 pupils were split into two groups, A and B. Section A was allocated to the experimental group at random, whereas Section B was assigned to the control group. There were 36 and 37 students in the experimental and control groups, respectively. Following the first elimination of the repeaters in each group, the number of students in the experimental and the control groups has been reduced to (30) in the experimental and (31) in the control group (see Table 1 below).

Table 1

The Sample

Group	Section	Students' Number	
		Before exclusion	After exclusion
Experimental	A	36	30
Control	B	37	31
Total		73	61

3.3 The Equivalence of the Sample:

Students' age (measured in months), parents' educational level, and students' English achievement in the first-course test of the same academic year are among the factors. These factors were manipulated in order to balance the two groups. When all the external and internal factors that may impact the experimental design were controlled, the two groups were equivalent in all variables.

3.4 Applying the Test

3.4.1 The Final Administration of the Pre-test

On February 24, 2020, pre-tests were administered to both the experimental and control groups, with the results comparing the students' performance in the pre-test to those in the post-test.

3.4.2 The Post-test

On April 19, 2019, a post-test was given to both groups. In the post-test, the pre-test scoring approach, validity, pilot study, item difficulty, item discrimination, and reliability procedures were all repeated. A jury of fifteen applied linguistics and TEFL specialists reviewed the test and made minor adjustments to ensure post-validity.

4. The Results

The pre-test and post-test data are statistically evaluated to achieve the study's goal and test its null hypothesis. It should be emphasized that the purpose of this study is to determine whether or not there is a significant difference between the two groups in the pre-test and post-test.

4.1 Comparing the Post-test Scores in the Experimental and Control Groups

The mean post-test scores for the experimental and control groups are (38.00) and (22.75), respectively, indicating that the experimental group performed better in the FL approach than the control group.

The T-test formula for two independent samples is used to determine whether or not the difference between the two groups is statistically significant. According to the findings, the calculated T-value of the post-test is (5.422), but the tabulated T-value is (2). This implies that there is a significant difference between the two groups at the (0.05) level of significance and within the bounds of (63) degrees of freedom (see Table 2 below). This also implies that the null hypothesis of the study which states that "there is no statistical difference between the students' mean scores of performance of the experimental group which is taught reading comprehension using FL strategy, and that of the control group, which is taught reading comprehension according to the recommended method of teaching, is rejected. The result indicates that there is a statistical difference between the students' mean scores of performance in the two groups as shown in Table 2.

Table 2

T-test Statistics of the Students' Scores in the Post-test

Group	No.	Mean	SD	DF	t-value		Level of Significance
					CTV	TTV	
Experimental	30	38.00	13.75	63	5.422	2	0.05
Control	31	22.75	8.11				

4.2. Comparing the Pre-test and Post-test Scores of the Control Group

The control group's pre-test mean scores is (23.125), whereas the post-test mean scores is (23.593). To assess whether or not there is a significant difference between pre-test and post-test findings, the one-sample T-test formula is employed. The computed T-value is (20.712), while the tabulated T-value is (2) According to the findings, this indicates that there is a little difference between them, i.e., the post-test is slightly higher than the pre-test (see Table 3 below).

Table 3

T-test Statistics of the Students' Scores in the Pre-test and Post-test for the Control Group

Test	No.	Mean	SD	DF	t-value		Level of Significance
					CTV	TTV	
Pre-test	31	23.125	9.061	62	20.712	2	0.05
Post-test	31	23.593	9.122				

4.3 Comparing the Pre-test and Post-test Scores of the Experimental Group

The experimental group's pre-test and post-test mean scores are (21.515) and (38.000), respectively. The one-sample T-test formula is employed once again to determine whether there is an evidence of a difference between the pre-test and post-test findings. The calculated T-test is (15.454), whereas the tabulated T-test is (15.454) at the (0.05) level of significance and with less than (63) degrees of freedom. This implies that the pre-test and post-test are significantly different. As seen in Table 4, the experimental group's post-test outperforms the control group's pre-test.

Table 4

T-test Statistics of the Students' Scores in the Pre- and Post-test for the Experimental Group

Test	No.	Mean	SD	DF	t-value		Level of Significance
					CTV	TTV	
Pre-test	30	21.515	12.949	64	15.454	2	0.05
Post-test	30	38.000	13.756				

4.4 Discussion of the Results

There is a substantial difference between the experimental and control groups, according to the findings of the study. The experimental group's post-test mean score is (38.00) while the control group's is (22.75). This demonstrates that the experimental group appeared much better than the control group. It has been determined that the FL method, which is used to educate the experimental group's fifth grade pupils, is more effective, helpful, and favorable to teaching reading comprehension than the traditional one.

5. Conclusions and Recommendations

Based on the empirical evidence presented in this study, conclusions can be stated as follows:

1. The flipped classroom strategy has had a positive effect on developing preparatory students' reading comprehension in EFL.
2. Using the FL Strategy to teach reading comprehension skills has improved EFL students learning performance.
3. Utilizing the FL Strategy has stimulated students to become more active in learning and provided an environment of fun and interest.
4. FL Strategy shows that students have been more independent since they were given many opportunities to utilize the foreign language without direct instructor direction.
5. FL has been found to be important since it enables the learning session to go beyond the boundaries of the classroom and provides a student-centered learning and autonomous environment where self-efficacy in their ability to learn independently can be realized.
6. A flipped classroom has enabled teachers to apply the new approaches of teaching and liberate them from the traditional ways of teaching.

Hence, this study can pave the way for more thorough studies in future to investigate the effect of flipped model of instruction on other language skills such as writing, listening, and speaking.

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The Impact of Using Flipped Learning on the Performance of Iraqi EFL Fifth Preparatory Students in Reading Comprehension

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