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## Using the flipped classroom model to improve Saudi EFL learners' English pronunciation

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**Abstract**--This research investigated the Flipped Classroom Model (FCM) in enhancing Saudi EFL learners' English pronunciation. The explanatory sequential design with data collection occurring in two phases was used. The first phase includes a pre-test and a post-test of oral pronunciation, while the second phase includes a focus group interview with the students. The research population included all third-grade high school students in Jeddah who study in the boys' high schools affiliated to the Ministry of Education. Furthermore, the sample included all EFL learners at Ibn Hajar Al-Asqalani high school; 62 students who were divided into two groups: a control group and an experimental group, with the same number of participants. The results reflected the effectiveness of the FCM in enhancing Saudi EFL learners' English pronunciation. Moreover, it was found that the FCM increased learners' motivation, autonomy, and provided learning flexibility. The researcher recommended encouraging teachers to use the FCM to teach Saudi EFL learners' English pronunciation.

**Keywords**--flipped classroom model, English pronunciation, Saudi EFL learners, high school.

## Introduction

The rapid advancement of modern technology has paved the way for the use of a variety of instructional strategies and methods in educational settings, which have been developed to serve a wide range of pedagogical goals and educational approaches. In this respect, Djebbare and Djebbare (2021) noted that massive technological advancements have made it urging to implement technology in teaching. The use of technology in education is associated with different methods and models. Some examples of such models are the blended learning and the model of the flipped classroom. These model shave brought a crucial shift in the way of transferring knowledge from instructors to students, as opposed to the traditional approach (Delialioğlu & Yildirim, 2007). They provide instructors with the opportunity to devote class time to getting students involved in exercises rather than spending it on initially introducing new concepts (Kvashnina & Martynko, 2016; Kurt, 2017).

Numerous studies dealing with the Flipped Classroom Model's usefulness in EFL classes have shown its effectiveness in enhancing different language skills. In this context, AlSmari (2020), Chatta & Haque (2020), Alnuhayt (2018) and Pozo Sánchez et al (2020) found that the deployment of the FCM enhanced students' learning achievement, compared to the traditional classroom. Other studies revealed that participants were pleased with the practice (Chatta & Haque, 2020; Sidky, 2019; Alnuhayt, 2018). Al-Amri (2022) noted that prior research has shown various benefits of the Flipped Classroom (FC). These benefits pertain mostly to improving the learning outcomes of students, boosting their learning motivation and engagement, making better use of class time, and assisting them in developing a customized and autonomous learning style.

Cheng et al (2020) commented that the vast majority of FC interventions are executed similarly. Students gain access to resources outside the class through an online learning platform or network. This platform aims to facilitate the learning process surrounding these resources. In this respect, there are three primary tactics employed in the classroom: subject discussions, performing exercises, and team projects (Cheng et al., 2020). In recent years, the FC concept, which emphasizes learner-centered education, has garnered significant interest from many individuals around the world. People are optimistic today that the FCM would motivate students to play an active role in their own learning. The point is that learners take an active part in their own education when they are given opportunities to participate in meaningful activities. They are independent learners who actively seek out new material rather than relying on lecturers.

When attempting to learn a second or foreign language for real-world communication, it is important to utilize the language correctly and appropriately in terms of its grammar, syntax, pronunciation, and socio-pragmatic aspects. In this context, Muhammad and Othman (2018) commented that, in the past, the training of pronunciation took precedence over the instruction of certain of these components, which were emphasized in second or foreign language instruction. In English language classes, teaching and practicing good pronunciation are frequently ignored (Darcy et al., 2021). Due to the difficulty of learning English pronunciation, since spelling and pronunciation are different concepts with little

in common, English pronunciation is a crucial component of language instruction. If proper pronunciation is not taught and practiced, students will adapt English pronunciation to the forms of their mother tongue since speech sounds, word stress patterns, the rhythm of speech and intonation can be substantially different in the learners' native tongues (Reid & Debnarova, 2020).

Though good pronunciation is essential to efficient communication, it has received little emphasis in English language schools (Darcy et al., 2021; Foote et al., 2016). Research examining teachers' perceptions of pronunciation teaching found that teachers are aware of the significance of pronunciation. However, they lack time, advanced training, competence, and availability of resources for teaching pronunciation (Baker, 2014; Couper, 2017; Darcy, 2018). It has been revealed by a number of previous studies that Saudi EFL learners' pronunciation of English is poor despite the fact that they are aware of correct pronunciation as an essential component of effective oral communication (Al-Rubaat & Alshammari, 2020; Naser & Hamzah, 2018). Regardless of the fact that Saudi EFL learners study English for more than six years in the classroom (Shehzad et al., 2019a; Shehzad et al., 2019b; Shehzad et al., 2019c), they still find it difficult to pronounce English sounds and communicate in English (Naser & Hamzah, 2018).

The pronunciation tasks in English textbooks adequately provide students with up-to-date pronunciation training materials, such as a focus on producing appropriate English vowels and consonants. Unfortunately, using these kinds of exercises, students can only learn how to pronounce particular English sounds precisely rather than developing fluency and incorporating pronunciation into real-world communication (Purwanto, 2019). Previous research reflected that EFL learners in Saudi Arabia have bad pronunciation which could be the outcome of a number of factors, such as interference from their mother tongue (Al-Rubaat & Alshammari, 2020; Elmahdi & Khan, 2015), unqualified and incompetent teachers (Naser & Hamzah, 2018), ineffective teaching methods (Alfehaid, 2015), and learners' negative attitudes towards pronunciation learning (Naser & Hamzah, 2018). On the other hand, there is a dearth of studies into the psychological aspects that can influence the pronunciation abilities of Saudi EFL learners (Al-Rubaat & Alshammari, 2020).

The Saudi EFL learner's difficulties in English pronunciation suggest that the traditional methods have not always worked. This necessitates the exploration of novel methods to improve EFL pronunciation instruction. Therefore, this research investigates how the FCM can improve Saudi EFL learners' pronunciation in English at secondary schools in Saudi Arabia. It compares the FCM with the traditional teaching of English pronunciation and explores students' perspectives toward this model. Much specifically, this research investigates how the flipped classroom enhances Saudi high school EFL learners' pronunciation. Thus, it is important to English language teachers, curriculum designers, students, supervisors, and researchers. Based on the foregoing, the following questions emerge:

1. What are the effects of using the FCM to enhance students' pronunciation accuracy in English?

2. What are students' perspectives of the FCM in learning English pronunciation?

### **Literature Review**

The existing research on language acquisition has given much importance to pronunciation which includes language sounds and their features. In this respect, Harmer (2007) describes pronunciation as a language's sounds, word and sentence emphasis, and pitch and intonation to express feeling and meaning. Moreover, AMEP research center (2002) defines it as sound creation for meaning. It includes parts, stress, timing, rhythm, intonation, and phrase (suprasegmental features).

The importance given to pronunciation is based on the assumption that an individual's English proficiency can be determined based on their own English pronunciation (Gilakjani, 2012). The quality of their pronunciation can have a negative impact on their English proficiency, while mispronunciation can cause misunderstandings and hinder communication. Furthermore, good pronunciation allows listeners to quickly and accurately evaluate a speaker's language proficiency, even if they make several grammatical errors. In this context, Nurullayevna (2020) stated that strong pronunciation enables listeners to effectively comprehend speakers, but poor pronunciation leads to confusion and miscommunication, even among speakers with advanced grammar and vocabulary.

Gilakjani (2012) revealed that English pronunciation is an integral component of English instruction, and pronunciation exercises assist students to gain confidence with a variety of sounds and sound characteristics and enhance their communication skills. The characteristics of speech sounds, which include segmental features (phonemes), state of vocal cords, place of articulation and manner of articulation, are important topics of phonology. In this respect, phonemes are associated with sounds and might vary from one person to another. For instance, the letters "p" and "b" in the phrases cup and cub are distinct. However, it should be cognizant of the fact that replacing one phoneme with another alters the meaning of the words. In this respect, there are two types of phonemes: consonant sounds and vowel sounds (Kelly, 2000).

Sounds are mainly categorized as vowels and consonants. A vowel sound, as mentioned by Fromkin et al. (2018), is a sound created without the considerable restriction of the air traveling through the oral cavity. Therefore, vowel sounds are created with a somewhat unrestricted flow of air. They are frequently voiced (Yule, 2014). In this respect, Kelly (2000, p. 31-33) presented three categories of vowels as follows:

1. Closed vowel sounds (/i:/, /ɪ/, /ʊ/, /u:/).
2. Mid vowel sounds (/e/, /ə/, /ɜ:/, /ɔ:/).
3. Open vowel sounds (/æ/, /ʌ/, /ɑ:/, /ɒ/).

He also referred to diphthong which he defined as the combination of two vowel sounds. Following the articulation characteristics, diphthong sounds are divided into three categories:

1. Centering diphthongs (/ɪə/, /ʊə/, /eə/),
2. Closing diphthong ending in /ɪ/ (/eɪ/, /əɪ/, /eə/),
3. Closing diphthong ending in /ʊ/ (/əʊ/, /aʊ/).

On the other hand, consonant sounds are produced as a result of airflow obstructions. Fromkin et al. (2018) define a consonant as an airstream-constricted sound. In this context, consonants are categorized into two groups; voiced and voiceless. As the vocal folds come together, air comes from the lungs and pulls them apart, creating a vibrating sound which is called voiced. On the other hand, the voiceless sound is created in case the vocal folds are wide apart and air from the lungs flows between them (Yule, 2014). English has 24 consonants and they are divided into two categories (Low, 2015):

1. Fifteen voiced consonants (/b/, /d/, /dʒ/, /g/, /v/, /ð/, /z/, /ʒ/, /m/, /n/, /ŋ/, /l/, /r/, /w/, and /j/).
2. Nine voiceless consonants (/p/, /t/, /tʃ/, /k/, /f/, /θ/, /s/, /ʃ/, and /h/).

But the classification of sounds into vowels and consonants is not sufficient for delineating the characteristics of language sounds. That is, there are certain suprasegmental features which, according to scholars like Gilakjani (2012), have a connection to sounds on a macro level. In this connection, Kelly (2000, p. 3) stated that suprasegmental features are speech features that typically apply to sets of segments or phonemes. In this regard, stress and intonation are employed to ensure that pronunciation and speech are easily understood.

The characteristics of speech sounds and their importance for language proficiency necessitate the adoption of effective instructional strategies and methods which help in overcoming the challenges that learners may face as they try to improve their English pronunciation. In this respect, recent research has proved the effectiveness of following instructional strategies based on modern technology in facilitating the learning process. One of those instructional strategies is known as the flipped classroom. The idea of a 'flipped classroom' is defined as a two-part, student-centered learning strategy comprising interactive learning activities within the lesson as well as direct computer-based individual instruction outside of the course (Bishop & Verleger, 2013). It is also defined as a method that tries to improve the effectiveness of lectures by transmitting knowledge to students through videos, podcasts, conversations, group projects, and applications throughout the course (Milman, 2012).

The flipped classroom model consists of four distinct components which must be examined by teachers who want to attain this strategy (Flipped Learning Network, 2014). The attributes of this method, whose English equivalent is 'Flip' are explained by referring to their initial letters:

1. Flexible Environment: This represents the availability of a place and time flexibility for learning.

2. Learning Culture: The source of information in a typical teacher-centered method is the instructor. In the flipped classroom method, the student-centered approach replaces the teacher-centered approach.
3. Intentional Content: Teachers using flipped classrooms consider both how to help students acquire cognitive understanding and how to use education to promote fluency.
4. Professional Educator: The role of educators utilizing the FCM is greater than that of educators using the traditional model. Educators in flipped classrooms continuously observe students throughout the course, evaluate their work, and provide comments (Flipped Learning Network, 2014).

The FCM depends on a socio-constructivist method of education. Its use of information and communication technology may suggest a socio-constructivist approach to teaching and learning. Therefore, technology in education may also help students capture high-cognitive activities including abstraction, exploring, learning, decision-making, reasoning, and analysis when solving problems (Huang & Hong, 2016). Some researchers have highlighted the responsibility of the teacher in a socio-constructivist classroom which is similar to that of the FC. In this respect, teachers are viewed as skilled learners who may help students use cognitive processes, including self-testing, expressing knowledge, asking direct questions, and reflecting rather than lecturing. They organize knowledge around important ideas that spark students' curiosity, teach them new things, and connect them to their prior learning (Laiseca & Elena, 2022).

Previous studies on FCM in EFL classes have revealed its positive effect on learning. In this respect, Al-Sudais (2019) measured the FCM's effect on the academic achievement and motivation of female college students. She found that the experimental group outperformed the control group on the academic attainment post-test and motivation scale. Another study was done by Abu Sa'aleek (2020) who examined eighth-grade Jordanian EFL students' English reading comprehension through flipped learning. The instructional technique favored the experimental group's post-test mean scores. In her thesis, Barakat (2021) examined how the flipped classroom affects first-year undergraduate students' essay writing and English writing attitudes. The results showed that students benefited from the flipped classroom by improving their essay-writing abilities and students had a positive attitude toward writing in English. Moreover, AlSmari (2020) examined the flipped classroom's impact on EFL undergraduates' pragmatic competence as well as language proficiency by focusing on conversational implicatures. The results showed a significant increase in pragmatic competence and language acquisition. In addition, Sheerah and Yadav (2022) used the FCM to improve college-level EFL students' speaking skills. The results reflected that the flipped classroom helped students become more fluent, confident, and competent in their production sessions.

The growing need for adopting modern instructional strategies, like the FCM, to teach English pronunciation for EFL learners is motivated by the results of many studies which revealed that EFL learners face certain difficulties in English pronunciation. In the Saudi context, for instance, Abker (2020) examined Saudi EFL students' pronunciation of English morphemes at Albaha University. Pronouncing English morphemes is the study's main goal. The researcher used

oral recorded tests and Descriptive Statistical Technique. The finding reflected that Saudi students have difficulties in pronouncing English nouns and verbs. The researcher recommended that students should be provided with more classroom and conversational practice with regard to pronouncing plural nouns and verbs in English. Moreover, Jathmi & Alqahtani (2021) explored the difficulties encountered by Saudi EFL first-year students at the University of Jeddah in creating the /p/ sound. This includes its characteristics and location of articulation. 15 first-year English language students were sampled. Data was collected through observations and a questionnaire. The results showed that University of Jeddah first-year EFL students had the most difficulties in pronouncing the /p/ sound.

Almusharraf (2021) examined Saudi EFL students' pronunciation confidence, attitudes, and practice. 336 Saudi undergraduate EFL students majoring in English were assessed. Statistical analyses examined learners' pronunciation confidence, phonetic course enrolment, travel abroad, and views regarding pronunciation confidence. The results showed that learners feel confident as they pronounce native-like English. Moreover, there was no statistically significant difference between those who had taken a phonetics course and those who had not in terms of pronunciation confidence.

Al-Yami & Al-Thwary (2021) examined Saudi EFL learners' difficulties in pronouncing English consonant clusters. 134 Saudi female EFL first-year Najran University students were sampled. Tests and questionnaires were used for data collection. The results reflected that the participants had difficulty in pronouncing consonant clusters. In this respect, most errors occurred at the coda, especially for the four-consonant pattern. Participants simplified consonant cluster pronunciations via epenthesis, deletion, substitution, or a combination. They attributed their pronunciation problems to a lack of pronunciation conventions, language instruction, and native language.

## **Methodology**

The explanatory sequential design with data collection occurring in two phases is used. The first phase includes a pre-test and a post-test of oral pronunciation, while the second phase includes a focus group interview with the students. Moreover, quasi-experimental designs split the sample into experimental and control groups. The experimental group is taught using the FCM for two weeks. On the other hand, the control group is taught through the traditional method. Both groups are given an oral pronunciation pre-test, which is done before the experiment, and an oral pronunciation post-test. Furthermore, the thematic analysis is used to analyze the participants' responses to the interview which is conducted in the second phase.

## **Research Population**

The population refers to the group of people from which a study's statistical sample is drawn (Momoh, 2022). In this study, it includes all third-grade high school students in Jeddah who study in the boys' high schools affiliated to the

Ministry of Education for the academic year 1443 / 1444 H. Their ages ranged from 17 to 18 years old.

### **Participants**

The sample is determined by convenience sampling, and it includes 62 students from Ibn Hajar Al-Asqalani high school in Jeddah in the academic year of 2022. They are split into two groups: a control group and an experimental group, with the same number of participants.

### **The Implementation of the FCM:**

The implementation of flipped classes spanned two academic weeks. One week before deploying the FCM, the teacher introduced the students to the FCM and highlighted its characteristics and differences from typical classrooms. He also introduced Youglish, an internet website meant to assist users to improve their pronunciation in the English language, to the students and answered their questions and any concerns related to using this website. Moreover, the teacher discussed the required tasks with the students. The FCM is then implemented through the following:

1. Dividing the class into groups of five members.
2. Sending the video recordings and Youglish links for the lessons in advance to the students through Madrasati platform, an e-learning management platform provided by the Saudi Ministry of Education (Ministry of Education, 2022).
2. Sharing key instructional materials and posting activity descriptions via the Madrasati platform.
3. Posting additional materials, PowerPoint files, and YouTube videos to enhance students' learning.
4. Encouraging students to engage in learning discussions through the platform by posing questions or sharing comments and notes.
5. Monitoring the students' performance in homework assignments and providing assistance when necessary.
6. Meeting with the students in English classes, answering their questions about any points they were unable to understand well in the lesson or assignments at home, discussing the YouTube and Youglish videos with them, and asking a student from each group at a time to pronounce a word from the assigned words and checking the correct pronunciation while providing feedback.
7. Getting the students to complete the tasks for the lesson in groups or individually.
8. Checking students' engagement in the tasks by going around the classroom and providing any necessary feedback and support.
9. Reminding students of the topics to be covered in the upcoming class and the required homework.



## Research Instruments

### Oral Pronunciation Test

This test is conducted to measure Oral Pronunciation accuracy (consonants, vowels, diphthongs, and stress) among third-year high school students. Before starting the experiment, the oral pronunciation pre-test measured third high school students' equivalence level and homogeneity level in their oral pronunciation skills. Moreover, the oral pronunciation post-test was ultimately adopted to investigate the effectiveness of employing the FCM in the Saudi EFL classroom in enhancing English pronunciation for high school students.

### The Validity of the Test

#### Face Validity

A number of skilled experts who are specialized in English language and methodology at Jeddah University, the Ministry of Education, and experienced English supervisors referred the tests. The comments, recommendations, and suggestions of the referees were taken into consideration. There were no comments regarding the modification of the test items.

#### The Internal Consistency Validity

This type of consistency reveals the relationship between the degree of each item and the total degree of the test. Besides, it illustrates the relationship between the average of each aspect and the total degree. This validity is calculated by using Pearson Correlation Coefficient.

Table 1  
The Correlation Coefficient between each Item's Score and the Total Number of Items

Items	Pearson Correlation	Sig.	Items	Pearson Correlation	Sig.
1	.864**	.000	9	0.854**	.000
2	.868**	.000	10	0.831**	.000
3	.835**	.000	11	0.789**	.000
4	.846**	.000	12	0.864**	.000
5	.700**	.000	13	0.816**	.000
6	.742**	.000	14	0.829**	.000
7	.773**	.000	15	0.847**	.000
8	.884**	.000			

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

According to Table (1), the correlation coefficient between each item's score and the total number of items is statistically significant at (0.05). It indicates the consistency of the test and its validity as a research instrument.

### The Reliability of the Test

Reliability denotes the consistency of individuals' scores. Reapplying the scale to the same persons would yield the same findings, indicating that the application conditions had no effect on the scale. In this study, the test's reliability is assessed with Cronbach's alpha, split-half reliability, and inter-rater reliability.

#### Cronbach's alpha

Table 2  
Cronbach's Alpha value of the Test

No. of Items	Test	Cronbach's Alpha
15	Oral pronunciation test	.965

Table (2) revealed a high Cronbach's Alpha value. This evidently shows the high reliability level of the research instrument.

#### Split-Half

Table (3) shows the results of reliability as follows:

Table 3  
The Split-Half Reliability Coefficient of the Test

No. of items	Spearman-Brown Coefficient / Equal Length	Getman correlation
15	.902	.948

The results reflected that the Split-half coefficient is (0.902), while the Getman correlation is (0.948). If the reliability coefficients are greater than (0.70), the results are accepted (O'dah, 2002, p.176). This evidently shows that the test's reliability is good and consistent.

#### Inter-Rater Reliability

**This type of reliability refers to** 'a way to measure the agreement level between multiple judges or raters' (Zack, 2021). Krippendorff's alpha coefficient is an effective instrument for determining rater reliability. It is the only inter-rater reliability indicator that, despite the limitations, measures the level of agreement between raters (Nili et al., 2017). Table (4) presents the data of reliability.

Table 4  
The Inter-Rater Reliability Coefficient Using Krippendorff's Alpha

Items	Krippendorff's alpha	Items	Krippendorff's alpha
1	.9077	9	.8416
2	.8571	10	.8335
3	.8425	11	.7632

4	.8425	12	.9226
5	.9335	13	.8049
6	.8323	14	.7732
7	.8807	15	.8760
8	.8100		

Table (4) above embodies Krippendorff's alpha statistic for each of the 15 words of the test ranged between (0.7632 - 0.9335). Typically, Krippendorff's alpha= (0.80) is cited as the norm for a good reliable test, with a minimum of (0.67) (Krippendorff, 2004, p.241). This demonstrates that the test's inter-rater reliability test was high and strong.

### **The Oral Pronunciation Assessment Rubric**

The Oral Pronunciation Assessment Rubric aimed to evaluate students' oral pronunciation. A rubric denotes a tool or collection of rules used in evaluations to ensure the consistent application of learning standards, learning objectives, or learning expectations in the classroom. It is also used to assess students' achievement (Glossary of Education Reform, 2013). In this research, third high school students' oral pronunciation is assessed by using an oral pronunciation assessment rubric adapted from TFU Foreign Language Assessment Rubric. This type of assessment was also used in other research like Aulia (2020). The scoring rubric included five levels of pronunciation and was adapted from TFU Foreign Language Assessment Rubric as presented in Table (5) below:

Table 5  
Oral Pronunciation Rubric

Category	1-Not able to perform	2- Inadequate	3- Needs improvement	4- Meets expectation	5- Exceeds expectations
Pronunciation	Can't understand what the student says.	Frequent problems with pronunciation and stress. Voice is too quiet to hear. Hard to understand.	Pronunciation, rhythm, and stress errors sometimes make it difficult to understand the student.	Pronunciation, rhythm, and stress are almost clear and accurate, but only occasionally difficult to understand.	Pronunciation, rhythm, and stress are almost always clear and accurate.

### **Focus Group Interview**

Focus group interviews provide a deeper knowledge of a topic and may be more beneficial than individual interviews when it comes to generating new ideas (Breen, 2006). This type of interview denotes a technique commonly used as a qualitative approach. It implies that the researcher meets with the participants mainly to investigate a specific topic (Cornwall & Jewkes, 1995; Creswell, 2013; Morgan, 1995). The researcher is a facilitator or moderator. He should be attentive and always promotes group interaction in a focus group, which is also a discussion in which the format is question-and-answer (Creswell, 2013; Krueger

& Casey, 2015). This research employed a focus group interview as its primary qualitative data collection method so as to gain a comprehensive understanding of the issues.

The participants in the Focus Group Interview include six students from the experimental group. All of them are Saudi third-year high school EFL students with the same background. The final selection of six participants is based on their willingness to take part in the focus group interview. For protecting the privacy of participants, the researcher informed the participants that pseudonyms would be assigned to them, and their real names will not be used in the research. Moreover, the researcher made it clear that acquired data would be kept private, used exclusively for research, and no one's identity would be revealed. The questions were presented in Arabic and English to elicit more trustworthy responses from the students. However, students preferred using Arabic in order to feel at ease and openly express their opinions. During the focus group interview, the researcher played the role of facilitator and also an investigator.

The focus group interview was audio recorded and the recordings were immediately transferred to a secure data storage device. The interview session lasted between 20 and 25 minutes and was conducted in Arabic, audio recorded, translated into English, and transcribed by the researcher at the conclusion of the session to produce data that was then thematically coded and analyzed. This enabled the researcher to replay and re-listen to the content of the recorded interviews in order to refine the transcripts. Following Braun and Clarke's (2006) six phases, an inductive thematic analysis was conducted: data familiarization, data coding, looking for themes, reviewing themes, defining and labeling themes, and writing up. After doing data analysis, a second expert reviewed and examined the focus group interview transcription. The two experts familiarize themselves with the data by reading the transcripts. The differences between the results of the two analyses were addressed and negotiated.

## Results

The results are presented in two aspects according to the research questions: the effects of the FCM on learners' English pronunciation and learners' perspectives of the FCM in learning English pronunciation.

### The Effects of the FCM on Learner's English Pronunciation

For identifying the significance of differences between the post-test scores of the two groups, an independent sample t-test was done. The differences are shown in Table (6):

Table 6  
T-test Independent Sample Differences between the Experimental and the Control Groups in the Oral Pronunciation Post-test

Group	N	Mean	Std. Deviation	t	df	Sig.	Sig. level
Control	31	33.419	10.569	3.797	60	0.000	Sig.

Experimental	31	43.516	10.369				
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“t” table value at (60) df. at (0.05) sig. level equal 2.00

“t” table value at (60) df. at (0.01) sig. level equal 2.66

Table (6) reveals that the absolute value of the calculated t-test (t-test = 3.797) is more than the critical value (t-critical = 2.0) at a level of 0.05 and a freedom degree of 60, with the p-value = 0.000 < 0.05. The result indicates that there are differences at the significance level ( $\alpha \leq 0.05$ ) in favor of the experimental group between the mean scores of the experimental group and the control group on the oral pronunciation post-test. There are also substantial differences in favor of the experimental group between the means of the experimental group (43,516) and the means of the control group (33,419). These results demonstrate that FCM is an effective method for improving English pronunciation.

### Effective Size and Cohen's d

A measure of effect size provides a standardized measurement of an effect's intensity or size. Moreover, a statistical significance test indicates how certain we could be that an effect exists. In this respect, a measure of effect size, such as Cohen's D, provides a consistent method for evaluating the effect's magnitude. For the independent samples T-test, Cohen's d is calculated by dividing the mean difference between the two groups by the pooled standard deviation. It is the appropriate effect size estimate if two groups have identical means and standard deviations (Social Science Statistics, 2022).

The following formula has been used to determine Cohen's d:

$$\text{Cohen's } d = \frac{m_2 - m_1}{SD \text{ pooled}}$$

where:

$$SD \text{ pooled} = \frac{m_2 - m_1}{\sqrt{((SD^1)^2 + (SD^2)^2)/2}}$$

Table 7  
Standard Effect Size Levels

Effect Size	Small	Medium	Large
Cohen's d	0.2	0.5	0.8

Source: Cohen, J. (1988).

Table 8  
Independent Sample T-test (Cohen's D)

Test	Cohen's d	Effect Size
Oral Pronunciation Test	0.94	large

From table (8), the value of **Cohen's d** =0.94 which is larger than (0.8) indicates that teaching via FCM has improved the EFL pronunciation of high school students. Table (9) shows the paired sample t-test statistical analysis between the mean scores of the experimental group in the pre-test and the post-test. The absolute value of the calculated t-test (t-test = -5,753) is more than the critical value (t-critical =2,04) at a significance level of 0.05, with a degree of freedom of (30) and a p-value of  $0.000 < 0.05$ , indicating that there is a difference at the significance level ( $\alpha \leq 0.05$ ) between the pre-test and post-test mean scores of the experimental group in the oral pronunciation test. The difference favors post-test performance.

Table 9  
Paired Sample T-test Statistical Analysis between the Mean Scores of the Experimental Group in the Pre-test and the Post-test of Oral Pronunciation

Test	Experimental Group Test	Sample Size	Mean	S.D	t-test	P-value
Oral Pronunciation Test	Pre-test	31	33.7419	10.414	-5.753	0.000
	Post-test	31	43.516	10.369		

"t" table value at (30) df. at (0.05) sig. level equal 2.04

"t" table value at (30) df. at (0.01) sig. level equal 2.75

### **Learners' Perspectives of the FCM in Learning English Pronunciation**

For the qualitative component of this research, the responses of students were coded and thematically evaluated. In this respect, the qualitative thematic analysis of the data collected from the focus group revealed four significant themes about the perspectives of the FCM for learning English pronunciation.

#### **Motivation**

The majority of students indicated that using FCM to learn English pronunciation motivated them to study. In general, the examination of the students' replies to the focus group interview demonstrated that the FCM had a favorable impact on the motivation of every single student. S2 made a comment about motivation by saying:

'I felt good listening to different native speakers saying the words in a simple way. This makes me feel I am not weak in the English language.'

Besides, S3 commented:

'I liked that the videos are short and don't take much of my time and also the video shows the transcript, which makes it easy to find the word I am looking for.'

S5 shared the same viewpoint and said:

'Using the videos motivates me to learn. I usually get bored or sleepy after reading a book. Also, the videos are simple and suitable for my English language level. This keeps me more interested in learning.'

### **Student Autonomy**

The discovery of the students was that they are in control of their own learning. A number of participants valued the independence granted by the FCM to the students in selecting what and how to view videos and access other online resources. They could freely select educational videos to view numerous times and bypass the less useful ones. For instance, S1 stated:

'Learning this way helped me be independent in learning English and learning the language by myself. There is no need to take English courses or pay a tutor since you can learn by yourself.'

S2 commented:

'I loved how I can get prepared for saying the words at home so when I come to class, I feel more confident.'

S4 claimed that:

'Videos help with listening to the correct pronunciation. I keep saying the words that I focus on. This is like I am practicing speaking in English with someone else.'

### **Flexibility in learning**

Learning flexibility is another feature that was brought up by the students. The FCM online learning videos have provided students with a degree of flexibility with regard to time and location. This in turn provided students with a comfortable learning environment to study and practice independently. Besides, the ability to select from a variety of videos offered students a significant opportunity for practice that can aid in the improvement of their English pronunciation.

For example, S5 said:

'The instructions were clear and easy to follow and using Youglish website was easy. You can write any word and find different videos. This makes it easy to choose which one you like and listen to it.'

S3 echoed the same idea, stating:

I liked the availability of different videos showing the pronunciation for the same word and the best thing about these videos is that the people are in real-life situations. They are not acting, and they are talking spontaneously. I can say it improved my English accent.

### **Difficulties in Learning English Pronunciation**

Although the majority of students found Youglish website useful for learning English pronunciation, one student had difficulty understanding the available videos. Due to his lower English proficiency than the majority of his classmates, the student was unable to comprehend the vast majority of the offered videos. The comments of S6 interviewed below clarify this issue more clearly.

‘I cannot say that this is my best way to learn English pronunciation because there are many words that I don’t understand.’

‘I wish there is an option where I can choose easier videos for beginners' level in the English language so I can learn better from more simple sentences that are close to my level and understand them easily.’

### **Discussion**

The results of the current research are generally similar to those from previous studies with regard to the contribution of the FCM to the improvement of students’ outcomes and feedback. Previous research showed the effectiveness of the FCM in developing EFL learners' performance in different language skills (AlSmari, 2020; Abu Sa'aleek, 2020; Braiek & Onaiba, 2018; Barakat, 2021). Furthermore, the current results agree with the related studies’ results which revealed the effectiveness of the FCM in increasing learners' motivation (Zheng et al., 2020; Al-Sudais, 2019) and autonomy (Al-Amri, 2022; Sheerah & Yavid, 2022). However, the previous research on the FCM focused largely on investigating its effect on different English language skills, yet it never tackled specific language areas such as English pronunciation.

The results from the oral pronunciation post-test revealed that the use of FCM improved Saudi EFL students' English pronunciation significantly. Students’ scores in the experimental group (which is taught English pronunciation through FCM) significantly increased compared to the control group. Similarly, Al-Mofti (2020) found that using FCM improved students' English pronunciation and they expressed positive feedback and satisfaction with the use of FCM. The focus group interview with the participants affirmed a generally positive attitude towards the FCM as an effective method in enhancing Saudi EFL English pronunciation. The FCM motivated the students to prepare before the class by watching the videos and listening to the audio. Some students expressed their high motivation as well as their willingness to practice English pronunciation relying on their current knowledge and experience of using the English language. Due to the thousands of videos available in Youglish, boredom was not an issue for the students.

Students' interviews indicated that learning flexibility is a big advantage of FCM, which provided them with a sort of flexibility with regard to time and place. It provided them with a comfortable learning environment to learn and practice. This type of flexibility in choosing different videos provided students with real practice opportunities so as to improve their English pronunciation. Furthermore, the students could listen to the videos at their own place while understanding the



other materials. This means that the students had constant learning opportunities.

The findings pointed out the positive impact of FCM on students' autonomy. Since the FCM gives students more control and responsibility over their own learning, this can help them to become more independent and take ownership of their learning, thus leading to improved autonomy. Additionally, flipped classrooms often use technology and digital resources, which can give students more access to materials and resources, allowing them to work at their own pace and increase their autonomy. This autonomy has been reflected in multiple ways such as enhancing learners' creativity and encouraging them to share their opinions and monitor their own learning progress.

The findings of the qualitative analysis of the focus group interview with students revealed that one student was dissatisfied with the use of Youglish website as the main tool to support or improve his English pronunciation. He claimed that the provided videos are difficult to understand due to their lack of language proficiency and lack of exposure to the English language in natural settings. Videos with complex grammar, unfamiliar vocabulary, and fast-paced dialogue can be especially difficult to follow.

Furthermore, the results indicated one participant does not favor the flipped classroom implementation to enhance Saudi EFL English pronunciation. He claimed that the provided videos were difficult to understand since they use complex sentences and they are a reason for his low level in the English language. The two problems were explicitly evident in the answers of the student with a negative attitude toward the FCM. These issues should be considered in future occasions when implementing the FCM.

## **Conclusion**

The FCM has a considerable effect on the Saudi EFL students' English pronunciation. This research investigated the effect of the flipped classroom on English pronunciation and learner attitudes toward the FCM. After implementing the FCM, the pronunciation of the English learners improved, according to the results. The average post-test value was higher than the average pre-test score, indicating that the students performed better in the post-test than the pre-test. In addition to the impact of the FCM on the learners' English pronunciation, this research identified the learners' attitudes regarding learning this instructional model. The qualitative analysis revealed key themes such as motivation, student autonomy, flexibility in learning, and learning challenges.

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