TEST Engineering & Management

January - February 2020
ISSN: 0193 - 4120 Page No. 154 - 167

Facilitating Aural-oral skills of Engineering Students through the Flipped Classroom

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Article Info
Volume 82
Page Number: 154 - 167
Publication Issue:
January-February 2020

Abstract

Higher education in India that remained traditional for relatively long time is now shifting towards more effective, active, flexible and student-centered teaching-learning process. One such novel pedagogical model that alleviates the restrictions of traditional lecturing method is the Flipped classroom. Recently the flipped classroom model has been recommended to scaffold this paradigm shift in higher education. A lot of researchers/teachers consider the traditional lecture method of teaching less effective compared to active learning methods. Nevertheless, research on the effectiveness of the flipped classroom in higher education is at a nascent. Very few studies have attempted to investigate students' perceptions of learning through the flipped classroom method. This research aimed at developing the aural-oral skills of engineering students through the flipped classroom method and to examine their learning experience of the designed OER (audio/video resources) as a learning tool. For the purpose of the study, 60 I year engineering students of MJCET,Hyderabad, India have been selected as a study group last year. Three components were taken into consideration to evaluate the influence of the flipped classroom model on students' learning experiences. 1) Effectiveness of the designed Open Education Resource in developing learners' listening and speaking skills and in minimizing errors in spoken English 2) the student's attitude and general perception of learning through this innovative flipped classroom model. 3) the student's experience of using audio/video lectures as a learning tool.

The study used two data collection methods: 1. The aural-oral skills test (pre-test and post-test in listening and speaking skills)

2. The questionnaire had two sections with 30 items in total. Section-1 had questions on learners' perceptions/ experiences of the flipped classroom and section-2 had questions on evaluation of students' learning experiences from audio/video resources and through the designed OER. The pre-tests were conducted before the participants underwent the designed course while the post tests were administered after the completion of the course. The post-test scores were then compared with the pre-test scores to measure the difference between them. However, the questionnaire was administered to the participants of the study after the completion of the course in Sept.2018. The study documented and analysed the data collected from the pre and post listening and speaking tests, as well as from the questionnaire.

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The key findings and the data analysis of the study revealed that there was a noticeable difference between the scores of pre-listening and post-listening tests. The average score of correct answers increased significantly whereas the average score of wrong answers decreased. From the comparison table, it was evident that nearly 90 per cent of the students were found to be 'excellent' in improving their Listening Skill (see table-1). While the table -2 provided evidence for significant increase in students' speaking skills. The average of good and satisfactory percentages increased drastically and the average of not satisfactory % declined. The result eventually proves the study's viewpoint by presenting higher values towards the effectiveness of the designed flipped classroom activity and the chosen OER for developing the targeted skills.

To conclude, the finding of the study (differences between the tests scores) reveal that students' aural-oral skills can be developed when these skills are supported and taught in tandem through the flipped classroom method. Thus, the flipped classroom is a win-win proposition model that can address various challenges associated with traditional method of lecturing and facilitate collaborative and interactive learning practices. The most important strategy of Flipped classroom method is utilizing the classroom time for more engaged and effective learning of skills such as application, analysis etc. (Higher levels of Bloom's taxonomy-Krathwohl, 2002).

Article History
Article Received: *14 March 2019*
Revised: *27 May 2019*
Accepted: *16 October 2019*
Publication: *02 January 2020*

Keywords: *The Flipped Classroom, Aural-Oral skills, OER, ESL, EFL.*

I. Introduction

English for Engineers

The importance of communication skills has increased significantly in recent times. Many multinational companies consider communications skills more important than technical skills. They prefer candidates who possess decent communication skills to those who do not. Given this situation, most of the professional colleges have recognized the importance of communication skills and have set up language labs to cater to the ever-growing communicative needs of the learners. Previously, the English was just a source for gaining a good score, but it has now emerged as an essential skill for a successful career. Jenson (2000) states that companies look for myriad of new competencies combined with an enriched ability to communicate well. The communication skills play a vital role in build coming confidence that can help to communicate with all kinds of people with ease. It also allows a person to integrate into a team effectively, resulting in an increase in productivity. Usually, in India, good communication refers to how well one can communicate in the English language. Also, English is the preferred medium of communication for businesses compared to other languages.

In professional careers, employees use communication skills for multiple purposes such as sharing ideas, providing resolutions, reporting findings and results, and for discussions among peers and with customers. It is therefore necessary for professional students to integrate the requisite communication competence and to recognize its various nuances and styles during their formal education.

It is usually stated that communication skills "should be fostered in engineering education ... because they are qualities that employers look for ... [and] should be part of any tertiary education". The American Computing and Accreditation Commission (ABET) asserts that a professional student must be proficient in the use of oral, written and graphical communication both in non-

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technical and technical settings which is an essential and desired student outcome.

Engineering graduates, for maintaining a strong relevance with the global market, require a comprehensive range of skills. The most important among these is the Communication skill. It is considered one of the 11 key outcomes essential for an undergraduate student pursuing an engineering program as per the ABET Engineering Criteria 2000. Such skills are desirous of a professional who seeks a career in the global arena. However, multilingualism as well may have an added advantage in makingup of the new global engineer.

II. Review of Literature

Importance of Listening Skill

Listening plays a pivotal role in developing effective communication. It paves the way to how one speaks. That is to say how one speaks greatly depends on what one listens. This also holds good for learning mother tongue. According to mother tongue approach to language learning, a child learns to speak its mother tongue by listening to its parents and other people around it. A child observes actions, postures gestures to formulate vocabulary in a particular social context from the people closely associated to the child. Littlewood (1984) asserts that "The child imitates the sounds and patterns which he hears around him." As listening forms the basis for speaking, there exists a strong connection between listening (a receptive skills) and speaking (a productive skill). It is this relationship that generates verbal expression. It is often said that people with speech problems especially with articulation disorders, can also have hearing problems. Interestingly enough, a mild hearing problem may affect how one articulates the sounds one hears. However certain birth defects also affect speech.

Listening is primary to all the four basic skills of language learning. Also, it is one of the important skills which people use while speaking. Rost (1991). feels that recently listening has started to receiving greater importance both in EFL and ESL classrooms. In second language acquisition research, listening is considered more important for its major role in providing comprehensible input.

Speaking Skills - Successful Learners

Speaking is the most important skill one can acquire. It is a significant tool to measure the progress of a person. Acquiring good speaking skills is important to be a proficient speaker and an effective communicator. Successful learners are those who can "converse in a clearly participatory fashion; initiate, sustain, and bring closure to a wide variety of communicative tasks; narrate and describe with paragraph-length connected discourse . . . [and] understand main ideas and most details of connected discourse on a variety of topics beyond the immediacy of the situation" (Hadley, 1993). However non-successful learners are those described by themselves and others as not able to communicate effectively in English.

Traditional Classroom Vs Flipped Classroom

Education and teaching at a higher level in India has remained teacher-centred for a relatively long time. The chalk and talk method where a teacher plays the role of a central pillar (imparting knowledge to students) is traditional. However, over the past 30 years, higher education and especially the traditional method of lectures, have been intensely criticized. This criticism has led to the identification of certain problems of traditional methods of teaching such as students remain passive in traditional lectures because the method doesn't integrate intellectual engagement with the material, and therefore they lose attention quickly, the pace of the lectures doesn't meet the needs of all learners. Most practitioners do not consider traditional lectures suitable for developing higher-order skills like application and analysis (Cashin, 1985; Bonwell, 1996; Huxham, 2005; Young, Robinson, & Alberts, 2009). Thus, a lot of researchers/teachers consider the traditional

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lecture method of teaching less effective compared to active learning methods (Marbach-Ad, Seal, & Sokolove, 2001; Jungst, Licklider, &Wiersema, 2003). However, In Spite of the comprehensive review, the traditional lecture model of teaching continues to remain the principal instructive strategy in higher education (Roehl, Reddy, & Shannon, 2013).

The flipped classroom is a reversal of traditional method of teaching where students are exposed to the material or content first outside of class, usually through notes (reading) or audio/videos. And then, the harder tasks such as application, problem-solving, discussion or debates are carried out in the class i.e.during the class time. (Vanderbilt University, Center for Teaching). The term flipped classroom was used and promoted by teachers Aaron Sams and Jon Bergman from Woodland Park High School, Colorado in 2007 when they believed that class time could be best spent recalling and guiding knowledge and offering feedback rather than providing direct instruction. Bergman and Sams (2012) justified that direct instruction might be provided to students as a pre-recorded content or video to engage with in advance any time before the class. This flipping frees up the class time for in-class activities that offer detailed and thorough exploration of the content. The core objective of the flipped classroom method is to promote active learning practices that offer greater opportunities to students to acquire higher levels of skills such as application of conceptual knowledge rather than factual recall.

One of the major weaknesses of the lecture method, according to those favouring active learning methods, is that it allows the learner to remain as passive recipients of information that has been simplified by the professor (Hansen & Stephens, 2000, p. 42). Strategies which promote active learning should be based on meaningful interactive learning sessions. students must be encouraged to be involved more in the subject-matter via activities such as debates, discussion, hands-on activities, and problem-solving. Thus, students feel more independent and take responsibility for their own learning (Machemer& Crawford, 2007). However, students habituated to remain inactive may have a "low tolerance for the challenge" (Hansen & Stephens, 2000, p. 46). A few active learning activists, consider learning through traditional lectures relatively superficial and temporary (Phipps, Phipps, Kask, & Higgens, 2001; Moust, Van Berkel, & Schmidt, 2005).

A significant change can be brought up in the traditional lecture method of college courses by introducing active learning methods designed to reinforce course objectives of learning knowledge, integrating skills, or promoting attitudes. Techniques recommended in this context are short writing periods, using pauses, think-pair-share activities, quizzes, using lecture summaries and a few assessment techniques. And to promote activities at the appropriate level, use of higher level of skills of Bloom's taxonomy are also suggested. A few research suggests that, engaged or active learning method (compared to the lecture mode) enhances student achievement (O' Sullivan & Copper, 2003; Christianson & Fisher, 1999), student involvement (McClanahan & McClanahan, 2002), and integration of concepts learnt over time (Berry, 2008). A few researchers consider lecture mode superior (Struyven, Dochy, & Janssens, 2008), or at least similar (Van Dijk, Van Den Berg, & Van Keulen, 2001), based on certain assessment criteria. Perhaps for teachers who lecture well, the lecture method is effective and for teachers who are adeptat developing meaningful interactions and in-class activities, active methods are more effective and productive.

Although several empirical research was carried out on the flipped classroom method, it is now being implemented in higher education. For example, Davies, Dean, and Ball (2013) studied comparatively three different instructional methods in an information systems spreadsheet

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course and found that learners who participated in the flipped classroom course were more satisfied and convinced with the learning strategy of FC compared to the other participant groups. McLaughlin et al. (2013) and McLaughlin et al. (2014) in the findings of their study of pharmacy students' perceptions on the flipped classroom method revealed that most learners prefer to have study material prior to class and to use class time for application and problem solving. Moreover these students considered themselves more active and engaged than students taking traditional classes or courses.

Several investigations proved that most learners appreciated the FC method as they could learn at their own pace and also that they would choose the flipped classroom over traditional lecture (Butt, 2014; Davies et al, 2013; Larson & Yamamoto, 2013; McLaughlin et al., 2014; Roach, 2014; Gilboy et al., 2015). While comparing the results of learning outcomes, Love, Hodge, Grandgenett, and Swift (2014) illustrated higher percentages and grades for students learning through the flipped-classroom as compared to those learning via traditional approach. Hung (2015) revealed the same findings for English language learners. Another comparative study between traditional mode of learning and the flipped classroom model conducted by Findlay-Thompson and Mombourquette (2014) presented no considerable differences in academic outcomes. Most of the research studies suggest that the advantages of the flipped classroom model in higher education, outweighs the advantages of traditional classroom. However, the studies relating to learners' experience of the flipped classroom method is at a nascent stage and require a thorough investigation into the learners' perceptions, its merits, demerits and uses. Thus, the domain is open for investigation and more detailed research works are emphasized by many (Bishop &Verleger, 2013; Uzunboylu &Karagozlu, 2015; Betihavas et al., 2015; Gilboy et al., 2015).

III. Research purpose

This study aims at facilitating aural-oral skills of engineering students and at examining their learning experience through the flipped classroom method. Following three components were taken into consideration for the purpose of the study. 1) Preparation and development of innovative strategies to help learners enhance the targeted skills (listening and speaking) in integration and minimize their errors in spoken English 2) the student's general experience and perceptions of learning through flipped classroom 3) the student's experience of using audio/video lectures as a mode of learning.

IV. Method

This study was exploratory, quantitative cum qualitative and interpretive. It employs mixed-method research for improving the credibility and authenticity of the results. Along with the mixed method, the researcher adopted the one-group pre-test-post-test research design which allowed the researcher to analyze the effectiveness of the course content. A pretest-posttest design is usually quasi-experimental where participants are studied before and after the intervention program. The pre-test and post-test help researchers to investigate the improvement in targeted skills of participants in the given research.

The present study was conducted on a group of engineering students who often used smartphones (with internet connectivity) both at college and at home. The designed OER "**The Essential Language Skills for Engineers**" was administered to the study group as a course to investigate its impact on the aural-oral skills of the students through the flipped classroom method. It was assumed that the designed course may facilitate students develop certain strategies for integration of the targeted skills. This could be possible only if the students took the post-test

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after the course. As this design suited the aim /objectives of the study, it was adopted.

The data generated from the designed course working with the experimental group was analyzed and interpreted by the researcher in the context of the research objectives. No Standard Statistical package was used because of its own limitations and weakness.

Participants

The target population of this study was Bachelor of Engineering (B.E) first year B.E. first year (Electronics and Communication Engineering) students of Muffakham Jah College of Engineering and Technology, Hyderabad. 60 students (ages 18 to 20) who enrolled in the first year B.E. course for the academic year 2018-19 participated in the study which was conducted during their first semester for 2 months starting from 2nd August 2018.

The participants were divided into groups/batches of 15-20 each to undergo the designed course (content and tasks) to be delivered through the flipped classroom method.

Data collection: Instruments used

Instruments used

This study usedtwo instruments for data collection:

1. The aural-oral skills test (pre-test and post-test in listening and speaking skills)

2. The questionnaire on student's learning experience of FC and their experience of using audio/video lectures as a mode of learning.

1. The Aural-oral skills test

This test involves two tests namely, pre-test and post-test. The pre-tests were conducted before the administration of the course and post-test after the completion of the course. The post-test scores were compared with the pre-test scores to observe whether or not there was any significant enhancement in the targeted skills. The resultant change would validate the assumption that the designed course and the flipped classroom method used were effective.

The Pre-tests (listening)

Two tests were taken from IELTS Listening part 1 and 2 to detect the actual levels of learners' performance. These tests were conducted twice(before and after)as pre-listening and post-listening tests.

In part 1 of the IELTS test, the experimental group listened to a conversation in which an aspiring businessman inquires about courses. (Test -1:
https://www.examenglish.com/IELTS/IELTS_listening_part1.htm)

Activity : After listening to the recording they were supposed to complete each blank/gap with no more than THREE words.

In part-2 they listened to a radio programme and then wrote answers to 10 questions.

(Test - 2:
https://www.examenglish.com/IELTS/IELTS_listening_test2_part1.htm)

The Pre-tests (Speaking)

Two speaking tests were conducted to measure the actual levels of learners' speaking skills before the intervention. Test -1 includes short speeches and test-2 Role-play. Same tests were administered to the study group after the completion of the designed course in the form of post-speaking test. The post-test scores were then compared with the pre-test scores to measure the difference.

In test-1, each of the students was given the following two topics for short speech. They chose a topic and delivered a short speech.

a) Your memorable moment in life.

b) Importance of your chosen field of engineering.

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Assessment Procedure

In this test, two examiners evaluated students' speaking skills using the following parameters.

1. Content of the Message

Was the central idea of the topic properly dealt with?

Did the learner possess the required knowledge of the subject?

Were the main points discussed appropriate?

2. Fluency

Did the student put efforts to speak?

Did he have pauses and hesitations?

Was he able to compose complete sentences?

3. Grammar and Vocabulary

Did he use proper lexical forms and grammar?

What was the level of errors committed?

4. Discourse Management

What cohesive devices did he use to make his speech coherent?

Did he follow sentence syntax?

5. Pronunciation

Was the examinee able to articulate intelligible utterances?

Did he speak with neutral accent or some standardization of spoken English?

In test-2, learners were given the following two topics for Role-play. This activity was done in pairs. Each pair assumed the roles and played them out.

a) Discussions on studies and academics at a college canteen

b) Casual talk among friends about a favorite hero, sports or movie.

Assessment Parameters

In this test-2 (interactive mode) learners' language appropriateness in the given context was assessed qualitatively using the following parameters along with the parameters used in test-1.

1. Questioning skills

Does the learner frame question sentences properly?

Was he able to set indirect and direct questions?

2. Comprehension (listening)

Does the learner comprehend the message transmitted by the interlocutor?

How Many times did he need repetition of the message?

was he able to respond to certain subtle messages?

3. Interactive Communication

Did the learner actively participate in the discourse?

Was he able to recognize others' opinions and respond accordingly?

Did he use expressions of agreement and argument effectively?

Was he able to take turns to express his opinions and views?

Assessment Scale

Following scale order was adopted from the IELTS with minor adaptations. The IELTS score was actually on a 9-band scale of ability ranging from the Non-User to the Expert User. However, this was modified and restricted to three-band scale of ability: 1-Not-satisfactory, 2-satisfactory and 3-excellent (good) user

3. Excellent User

In this parameter,the student was supposed to have complete functional knowledge of the language with minimal errors.

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2. Satisfactory User

A learner should possess effective command over the language and have basic communication skills in his own field.

1. Intermittent User (Not-Satisfactory)

An examinee was not able to communicate in any form. He was able to use isolated words or short sentences in familiar situations.

2. The Questionnaire

The designed questionnaire had two sections with 30 items in total. The questions were designed to study learners' perceptions of the flipped classroom in general and audio/video as a learning tool.

- Section-1 had open-ended questions for evaluation of students' experiences and perceptions of learning through the flipped classroom
- Section-2 comprised questions for evaluation of students' learning experiences from audio/video resources and through the designed OER.

The questionnaire was administered to the participants of the study after the completion of the designed course (flipped classroom sessions) in Sept.2018. The study documented and analyzed the data collected from the questionnaire and also students' performance in the post tests.

Course structure

The course content was developed as an Open Education Resource (OER). Open Education Resources are online freely available, openly licensed text, media, and other digital assets which are useful for teaching, learning, and evaluating as well as for research purposes. Simply put, an OER is a freely accessible online resource which offers teachers, researchers and others to explore and seek open and online educational resources and otherinstructional materials.

The designed OER resource (audio/videos) titled "**Essential Language Skills for Engineers**" was delivered to students through the link https://1032group11.wordpress.com. This OER **w**as designed and created during the project work done as part of AICTE approved FDP on Use of ICT in Education for Online and Blended Learning, organised by IIT Bombay. It primarily focused on equipping students with the essential language skills, especially aural-oral . The flipped classroom activity included the learning objectives to strengthen learners' understanding of the concept and fundamentals of listening strategies, barriers, and types etc. as out of class activity and think-pair-share as in-class activity.

Put differently, the designed OER course aimed at providing students with the background knowledge (understanding of the underlying concepts and strategies), and procedural knowledge (application of the knowledge gained and concepts learnt). See Fig. 1 for the pedagogical structure.

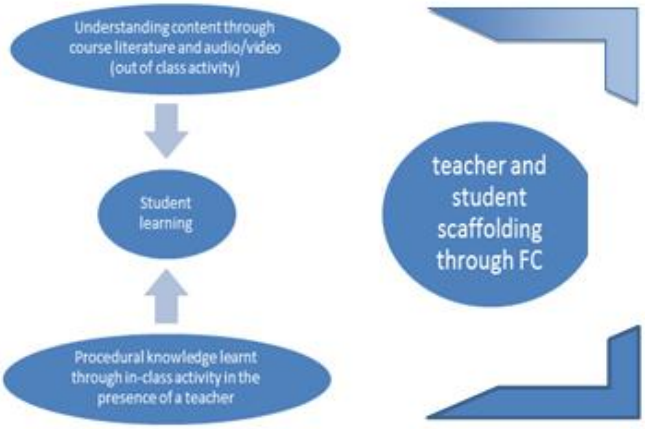

Figure-1

The course content comprised the following audio/video resource**s:**

Audio :

1. Importance of listening
2. Barriers to listening
3. Types of listening.

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4. Effective listening strategies.

video :

5. How to speak so that people want to listen
6. Five ways to listen better
7. Talk nerdy to me
8. The magic of role-playing

A Sample Resource

Title: Talk Nerdy to me: Making Effective PowerPoint Presentations

Learning Objectives

After using this OER, the learner will be able to:

1. Understand the importance of PPT how effectively they should be made and used.
2. Learn to internalize the strategies discussed in the video
3. Learn how complex information can be shared easily for non-scientists
4. Understand dos and don'ts and types of PPTs.
5. Identify and demonstrate the characterizing features of the activity

Out of class activity

- OER is downloadable from **www.languageskillsforengineers.wordpress.com**
- Target Audience: I year Engineering Students (any domain)
- Tags: Flipped Classroom, course content, resources, assignments, Quiz, Think-Pair-Share
- OER developed in WordPress.com
- Learners had the liberty to choose their own topic for making a PPT.

In-Class Activity

- Learners make their own presentations that they had made in out of class activity.
- Even a team of two members can make a presentation if it is long
- Time: 10 minutes
- Feedback is provided by the assessor or teacher about the performance
- Learners are also encouraged to ask questions for clarifications if any

V. Results

All the above mentioned resources were delivered to the students' mobile phones well in advance so that they could access it and develop an understanding about the subject and be ready for the in-class activity. Think-pair-share activity was carried out in the classroom in the presence of the teacher. After the completion of the course, the following results were obtained through the post listening and speaking tests. The same pretests were administered to the participants after the completion of the flipped classroom activity to measure the performance before undergoing the course and after.

Comparison of the scores obtained from pre and post-listening tests-1 and 2

The following table shows the average scores of pre and post-listening tests.

Tests	Part-1 and Part-2		Total (%)
	Average of Correct Answers (%)	Average of Incorrect Answers (%)	
Pre-Listening	45	55	100
Post-Listening	88	12	100

Table 1

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In the table above the total average scores of correct answers is 45% and 55 % for incorrect answers in the pre-listening test. This means that the experimental group had difficulties in listening comprehension and therefore could not perform well in the pre listening test. However, there is a noticeable increase in the average scores of correct answers (88 %) in the post-listening test. And the average of incorrect answers has decreased to only 12 %.

The following table shows a comparison of the total average scores of pre and post-speaking tests-1and 2

Tests	Total average of Good	Total average of Satisfactory	Total Average of Not Satisfactory	Total %
Pre-speaking Test-1 & 2	23.84 %	32.77 %	43.38 %	100
Post-speaking Test-1 & 2	45.37 %	41.36 %	13.26 %	100

Table-2

The study also investigated the influence of the course materials chosen for speaking skills in addition to listening. Qualitative analysis was done to evaluate the difference between the score of pre-test and post-test of speaking skills. Certain criteria was used to measure the performance of speaking skills. Comparison of the total average scores shows that the post-test scores of the participants are significantly greater than that of pre-test scores. The total average of good % has increased significantly from 23.84 to 45.37 %, while the total average of satisfactory % has increased from 32.77 to 41.36 %. And there is a drastic decrease in the total average of not satisfactory % i.e. from 43.38 to 13.26 %.

Interpretations of the Post-Listening & Speaking tests-1 and 2

Upon comparison, it was observed that there was a noteworthy difference between the scores of pre-listening and post-listening tests. The average score of correct answers increased considerably while the average of wrong answers declined. Hence it was evident that nearly 90 per cent of the students were found to be 'excellent' in improving their Listening Skills.

Table-2 showed that the students developed their speaking skills significantly as there was a relatively bigger difference between the scores of pre-speaking and post-speaking tests. The average scores of good and satisfactory percentages went up drastically, whereas the average score of not satisfactory decreased. Hence, it could be validated that the selected audio/video material and the flipped classroom method had a progressive impact on the learners.

The result eventually certified the study's standpoint by presenting higher values towards the impact of designed flipped classroom activity. Therefore it can be stated that the Flipped classroom method and chosen OER audio/video materials had helped the students to improve their aural-oral skills to a certain extent.

Students' general perceptions of learning through flipped classroom

Most participants of the study appreciated the flipped classroom strategy. Out of 60 respondents, 45 students gave a positive feedback towards learning through flipped classroom after the course (75 %). Many of them valued the use of audio/video materials provided to them ($M = 4.12$, $SD = 1.09$), mobility and flexibility of the FC model ($M = 3.82$, $SD = 1.08$), that learning at one's own pace ($M = 3.76$, $SD = 0.92$), Learning is supportive ($M = 3.55$, $SD = 1.12$), and that motivation to active learning through FC ($M=3.39$, $SD=1.11$), and enhanced peer-

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collaboration (M = 3.16, SD = 1.02).Moreover, few students felt that they experienced more responsibility towards learning (M = 3.89, SD = 0.95) in a flipped classroom activity.

Table 3 Evaluation of students' experiences post flipped classroom activity

Learning experience through the flipped classroom	Number	Percent	M	SD
Favouring learning through flipped classroom after the course				
Yes	45	75.00		
No	15	25.00		
Learning from videos – excellent	60		4.12	1.09
Mobility and flexibility as a learner	60		3.82	1.08
Feeling of responsibility towards learning	60		3.89	0.95
Freedom to learn at one's own pace	60		3.76	0.92
Learning activities are more conducive/supportive/effective	60		3.55	1.12
Motivation to learn more and actively	60		3.39	1.11
Enhanced experience of peer-collaboration	60		3.16	1.02

Table -3

Items measured on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree

The above table showed that the flipped classroom strategy and audio/video as a learning resource for understanding and acquiring knowledge resulted in building strong motivation, active and enhanced learning experience. During the investigation of factors affecting student's learning experiences of audio/video as a learning tool, numerous details expressing positive attitude emerged. (see table - 4 for details). Students strongly agreed that pausing and resuming function of a video was worthwhile as it enabled them to learn at their own pace (M = 4.52, SD = 0.85), rewind (M = 4.48, SD = 0.87) and fast-forward video (M = 4.03, SD = 1.35). Provision to access when mobile. (M = 3.99, SD = 1.26), motivated to learn more effectively (M= 3.53,SD=1.20) and videos result in more peer discussion (MD = 1.44, SD = 0.51).

Table 4 Evaluation of Students' experiences of learning through audio/video

Effectiveness of audio/video for learning	n	M	SD
Pausing and resuming a video – useful	51	4.52	0.85
Rewinding functions of a video	48	4.48	0.87
Forwarding function of a video	30	4.03	1.35
Freedom to access content in a mobile way	60	3.99	1.26
Video as a resource motivated me to learn more effectively	60	3.53	1.20
Learning through video resulted in more peer discussions	60	1.44	0.51

Table -4

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Items measured on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree

VI. Conclusion

The present study revealed that the flipped classroom method used for developing the aural-oral skills of tertiary level ESL students from Engineering colleges was helpful. The experimental group made significant progress in the targeted skills at the end of the research period; the percentages of the post-listening and speaking tests are statistically higher than that of the percentages of pre-tests which indicates the authenticity of the findings: the effect of the Flipped classroom method of imparting aural-oral skills.

To scaffold communicative skills of the learners, teachers as facilitators can choose suitable material from freely available online resources and designing befitting tasks favourable for their kind of students. The tasks must be designed to support the targeted skills and according to their level of proficiency. Theme and background information can also be discussed to provide an overview of the topic and theme. This plays a pivotal role in the ESL context because in first language, students have ready access to language used in meaningful contexts, and they incorporate needed patterns from those models into their own changing and evolving the linguistic system. However, in the second language classroom learners often lack the chance to develop an adequate language base from which to produce messages they would like to communicate. Therefore, use of comprehensible materials in the classroom can aid to alleviate this problem. Thus, all tasks that are conducted during the lab sessions should serve to facilitate communicative fluency in each of the other language skills including listening and speaking. The learners can pick up the targeted skills at a much higher level of proficiency when the aural-oral skills are taught together in integration. In addition to these, peer-group interactions, use of online resources (oer) and the flipped classroom method increase students' motivation and improve their level of comprehension.

How can knowledge and skills be acquired easily? As proposed by one of the theories of learning, people usually learn by mentoring and interacting with peers, parents and knowledgeable and skilled people around us. Zone proximal development is a model which was made by Lev Vygotsky an influential psychologist. Considering Vygotsky's principle of proximal development (ZPD), the interactive and small group learningmethodology works the best in ESL context. The mixed-ability groups were found to be most benefited amongst others. Teams of 4-5 members with different abilities offer a kind of help to low achievers and average learners. It opens doors for spontaneous and natural interactions among learners. Flipped classroom method ensures best learning experience with minimal apprehensions and inhibitions. Out of class, In-class activities and think pair-share activitiespave the path to lively discussions in real-life situations and thus lead to complete comprehension of the topic. The FC method not only triggers discussions but also help learners develop comprehensible output.

To conclude, the finding of the study (differences between the tests scores) reveal that students' aural-oral skills can be developed when these skills are supported and taught in tandem through the flipped classroom method. Thus, the flipped classroom is a win-win proposition model that can address various challenges associated with traditional method of lecturing and facilitate collaborative and interactive learning practices. The most important strategy of Flipped classroom method is utilizing the classroom time for more engaged and effective learning of skills such as application, analysis etc. (Higher levels of Bloom's taxonomy-Krathwohl, 2002).

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