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# Learning Communicative English Using Flipped Classroom Approach via Curriculum Information Document Online System (CIDOS)

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## Abstract

Flipped learning or flipped classroom has been introduced and applied in teaching and learning. Some may realize the concept while some are simply implementing it without knowing the term. This approach is introduced to encourage active learning and to attract students to interact with others. Flipped classroom suits students at higher learning institute because it develops critical thinking and problem-solving skills. Hence, this approach was introduced to enable students to learn at their own pace while hands-on activities are done in the classroom. The objective of this paper is to investigate perceptions of Malaysian polytechnic engineering students on learning Communicative English using flipped classroom approach via a learning management system called CIDOS. Specifically, the current study explored engineering students' views, benefits, and challenges of learning through flipped classroom approach. This study utilized an online reflection questionnaire consisting of both close and open-ended questions with 140 semester three engineering students undertaking Communicative English 2 course at a Malaysian polytechnic. The finding was analysed using SPSS and based on the analysis, the results indicated most engineering students had positive attitudes on the use of flipped classroom approach, preferred flipped classroom approach to traditional teaching approach and would like to continue learning through the flipped classroom approach. Although the analysis of results indicated positive outcomes, attention to possible challenges was also highlighted. In brief, flipped classroom has been well received by the respondents but, there are challenges and other aspects to be investigated prior to applying the approach in teaching.

**Keywords :** *Flipped classroom; Views, Benefits; Challenges; Communicative English, Technical*

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## I. INTRODUCTION

Communicative competence is a crucial skill required for working purposes[25]. It gives benefits to students when attending interviews and this separates them from other candidates. In addition, excellent communicative competence hinders employees from misinterpretation and negative impact related to communication[31]. It also smoothens international communication[29]. The responsibility to develop proficient future workforce are mainly shouldered by the English language lecturers. Thus, it is paramount for English language lecturers to use the most effective teaching and learning approaches to prepare their students for future workplace expectations. Integration of technology is seen as an essential feature of educational settings in this 21st century and flipped classroom approach is an approach that supports

blended learning by integrating technology. Flipped classroom is one of the modern methods of teaching, which has recently been implemented as an alternative method of teaching[47]. However, previous studies have indicated that there is still lack of studies focusing on flipped classroom learning in English as Second Language (ESL) at higher learning institute setting[21],[12]. There are three types of flipped learning which are traditional flip, in-class flip and mastery flip[1]. For traditional flip, videos are provided for the students to acquire basic knowledge of specific lessons, while the in-class activities focused on critical and creative thinking, and problem-solving skills[23]. The second type is in-class flip with the same elements of traditional flip, but students watch videos in class and work with other students and complete the task too[5]. As for the third type, mastery flip allows students to

work in small group or individually at suitable pace and being summatively assessed[2]. It is hoped that implementation flipped classroom in teaching of Communicative English may encourage students to practice the language out of the classrooms. This approach allows students to study the topic given according to their own pace outside classroom time, while hands-on activities are conducted during class time in the classroom[15]. Flipped classroom provides flexibility because it allows many elements of learning including assessments and problem-

## II. LITERATURE REVIEW

In the 21st century, the possibilities offered by technology in pedagogical practices are limitless. As teaching and learning approaches today have incorporated the latest technology, flipped learning has also included the element of e-learning in its implementation. This element is used to encourage students to learn via technology. As mentioned by Bruniges[6], new and creative approaches need to be introduced via new technologies because students nowadays prefer to use them. Flipped classroom was introduced by Jonathan Bergmann and Aaron Sams with the objective to help trainees who missed their training session, which video and other learning materials were prepared for them to learn[20]. This approach was introduced by Jonathan Bergmann and Aaron Sams for trainees who had missed class; they used live video recordings and screen casting software to record lectures, demonstrations, and slide presentation with annotations and posted them for the trainees to watch and read[20]. Furthermore, with proper use of video, it can be an effective tool for learning[22]. Among the most referred definition of flipped classrooms is from Butts[7] which the focus is on moving the way teaching material is delivered from in class to outside of class via video recorded lectures, and other suitable means, while learning activities are organized in class with the objective of collaboration and interactive among students. Commonly, lectures and learning activities are organized in class, however, for flipped classrooms, students are given the task to study the topic before the class. The materials which can be in the form of video and other formats are prepared by instructors. During class, lectures might be replaced with activities, but students are still allowed to enquire for any explanation on the topic. However, Bishop and Verleger[4] have narrowed down the definition of flipped classrooms which divided it to interactive group learning activities inside classroom and direct computer-based individual instruction outside classroom. Learning in the classroom is no longer sufficient as nowadays

based inquiries to be added. Sharing of videos is another element in flipped classrooms and YouTube videos have been used widely as public video sharing platform worldwide. With flipped classrooms, lectures can be done outside of class time, while focus has shifted to learning activities[41]. This approach suited the pedagogical situation during the recent pandemic of Covid-19.

students are eager to explore learning themselves using technology. Hence, flipped classroom has been implemented to enable students to guided self-exploratory learning. A study which involved students in South Korea found that they scored significantly higher as compared to students who were non-flipped classrooms, and they also enjoyed learning in flipped classroom[28]. In another study with students from University of Maeau found positive attitude of flipped classroom[11]. It might also enhance student learning achievement and satisfaction[32]. Apart of that, flipped classroom gives more satisfaction to students and they may be more satisfied with the method[33]. However, flipped classroom challenges instructors and students. Instructors have to prepare the materials including recorded lecture materials[37], and apart of that, they have to guide, facilitate, support, give feedback, and evaluate the learning process[48], while some students have difficulty adjusting their own learning time[26]. In another study, it was found that students enjoyed learning in flipped classrooms[24]. In another study with a class of students from University Malaya discovers that the students gave positive perceptions on flipped classroom and positive impact to shy and quiet students[46]. Rajesh (2015) has proved that flipped classrooms have transformed the shy students, the ones with lack of confidence and motivation to communicate in English and they seemed to enjoy hands-on activities[34]. In another study, students reported that flipped learning is effective for their learning[9]. A study with Jordanian private universities also found that the students have high perception on flipped classroom[1], thus, it can improve students' interest to learn English and in addition it is expected that this approach could solve TVET trainees' issues[30].

In flipped classroom, teacher functions as facilitator[15], while content is shared via video on online platforms[2]. This approach enables the learning process to be more individualized and personalized[40]. It means that students can design

and arrange their schedule according to their preference of time and method. Many studies have been done which discover that student achievement and satisfaction in learning have improved[10], [16], [39]. Nevertheless, there is also study which found opposite finding which students were less satisfied in flipped classroom because they felt that they have extra work in flipped classroom[32]. Flipped classrooms have received well acceptance, nevertheless there are challenges to investigate such as the quality of video, and training for instructors[21].

So, the impact is students enhanced their interaction with classmates and lecturers[14], [43], [42]. Wilson (2013) also found that flipped classrooms increased students' interaction as well as performance[44]. Flipped learning also instills good relationship between instructors and students[38]. In brief, this approach is said to be student-centered[20], improve learning experience and capture students' attention to learning[35] and it transforms instructors' role to be facilitator[18].

With the development of technology, flipped classrooms can be a standardized teaching and learning approach at higher learning institute (McKnight & Arfstrom, 2013) as students nowadays are fully exposed to use of the easy access technology. In a study conducted, it was concluded that flipped learning are beneficial such as students are able to manage their own learning according to their ability, they can be prepared before they go to class, they are able to solve their learning issues in class and increase their participation when they are in class, while in another study with diploma students from Sunway University, Malaysia, flipped classrooms have successfully developed higher-order thinking skills and increase their motivation to learn English[21].

Considering the significance of the flipped classroom approach and the lack of research on the use of flipped classroom approach in the teaching and learning of Communicative English courses at Malaysian polytechnic context, this study aims to gain insights of Malaysian polytechnic engineering students views in terms of the use of flipped classroom approach via CIDOS platform. In addition, the benefits and challenges of utilizing flipped classroom approach were also explored.

### III. RESEARCH METHODOLOGY

The participants in this study were composed of 140 diploma students from two engineering departments namely Mechanical and Aircraft Maintenance

engineering departments at a Malaysian polytechnic. Among these participants, all 140 engineering students responded to the questionnaire while 112 students provided their responses to the open-ended questions which required them to write a brief reflection pertaining to the benefits and challenges of learning Communicative English through a flipped classroom approach.

The 140 engineering students were undertaking Communicative English 2 course where they are required to attend face to face classes regularly and complete four main assessments namely oral presentation, assignment, test, and a role play. In addition, the Department of Polytechnic Education has standardized that 70% of the courses offered at Malaysian polytechnics must implement blended learning. Therefore, a Learning Management System (LMS) called The Curriculum Information Document Online System (CIDOS) which was developed by the Instructional and Digital Learning Division (BIPD), the Department of Polytechnic Education was used as a pedagogical tool to implement and facilitate flipped classroom approach.

At the beginning of the semester students were introduced to the flipped classroom approach and the use of CIDOS to support their learning practices. Students were taken to the computer lab for the first week and were guided by the lecturer to join the CIDOS platform. In the flipped classroom approach, the students use of CIDOS platform lasted for 10 weeks. The lecturer uploaded materials consisting of lesson videos, YouTube videos related to the topics, website links and articles each week to the CIDOS platform one week prior to the face-to-face class session. For instance, in the first week the lecturer carefully selected resources such as lecture videos, YouTube videos, relevant websites, posters and advertisements related to the first topic Products and Services. Students were then asked to come up with their own product description and review videos and post it on the CIDOS platform. The lecturer would facilitate by providing feedback and encouraged their peers to make comments on their friends' product or service description and review videos in the CIDOS forum platform before the class. In this way, it is aimed that students and their peers could have an opportunity to observe, analyse and comment on the way products and services are described. This will then further lead to active discussion and constructing knowledge session in the classroom. Upon the completion of the first topic, students are required to take charge of preparing their own oral presentation videos for assessment and upload it in the CIDOS platform. Similarly, in the following weeks, the resources related to other remaining topics in Communicative English 2 course were provided in the CIDOS

platform, a week ahead. This will be followed up with interactive and collaborative activities in the classroom to enrich their content knowledge regarding the topics.

Upon the completion of 10 weeks of flipped classroom approach, data were collected through a questionnaire developed using Google Docs. The questionnaire was adapted from the study exploring students' perception on flipped classroom approach among community college students carried out by Fathilah Begum and Siti Shuhaida (2021)[15]. The 15 items specifically explored students' views in terms of their attitudes, experience, and motivation towards learning Communicative English through the flipped classroom approach. The participants were asked to indicate their agreement on a five-point Likert scale ranging from strongly agree, agree, neutral, disagree and strongly disagree. In addition, participants were required to write a brief reflective response to two additional open-ended questions related to the challenges and benefits of the flipped classroom approach. The Google Docs

questionnaire link was provided to the students through CIDOS platform.

To ensure reliability of the questionnaire item, Cronbach Alpha Internal consistency was computed. Based on Cronbach's Alpha reliability method, an alpha value of .65 to .95 is satisfactory. If the alpha value is < .65, this means that the ability of the instrument to measure the variable is low, and if the alpha value is > .95, means that the items overlap with one another. Figure 1 shows the results of the Cronbach Alpha reliability test for the questionnaire is .952. This means the instrument used in this research is highly reliable with 15 items.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.952	.952	15

Figure 1 Reliability Test

#### IV RESULT AND DISCUSSION

In this section of the study, the analysis of results is discussed in two main sections based on the research questions. The first section presents Malaysian polytechnic engineering students' views of learning Communicative English using flipped classroom approach, while the second section outlines excerpts of the responses related to the benefits and challenges of using the flipped classroom approach.

Table 1 Student's views on learning Communicative English through flipped classroom approach

Item	Mean	Standard Deviation
1. I have heard about flipped classroom approach before.	3.757	.77619
2. I understand the concept of flipped classroom approach.	3.835	.76441
3. I find the flipped classroom approach easy to adapt and more engaging than traditional learning approach.	3.957	.71843
4. I prefer the flipped classroom approach to the	4.150	.66706

traditional learning approach (teacher controlled).		
5. I understand the videos and online articles shared by my lecturer.	4.007	.68379
6. I find the flipped classroom allows me to control my own learning.	3.914	.70441
7. The flipped classroom approach helped me to understand the content/topic easily.	3.857	.68458
8. I am more actively engaged in the activities given by my lecturer using the flipped classroom approach.	3.885	.71051
9. I am able to keep up with my lessons in Communicative English classes using flipped classroom approach.	3.914	.69412

10. I learn Communicative English course better when I have a positive attitude.	3.914	.66230
11. My attitude in learning Communicative English has improved when flipped classroom approach is used.	3.885	.71051
12. I feel that I am more motivated to learn Communicative English when flipped classroom approach is used	3.907	.71868
13. Flipped classroom approach gives me greater chance to communicate and collaborate confidently with my lecturer and friends.	4.007	.68379
14. I feel happy to learn Communicative English using the Flipped classroom approach.	3.993	.73452
15. I want to continue learning using the flipped classroom approach.	4.014	.68892

13 (M= 4.007) in which the participants reported that they want to continue learning using the flipped classroom approach and the flipped classroom approach has provided them better opportunity to communicate and collaborate confidently with their lecturer and peers. A similar study analysed student teachers' perceptions towards flipped classroom approach and the results supported the findings of the present study by reporting the flipped classroom model is well received positively by the student teachers and they were willing to continue learning using the approach. On the other hand, the mean value for Item 1 (M=3.757) was recorded as the lowest mean score compared to other items. It suggests that the flipped classroom approach might have been a new concept of learning approach for some students.

Next, qualitative data collected through two open-ended questions pertaining to the benefits and challenges faced by Malaysian polytechnic engineering students in learning Communicative English through flipped classroom approach were analysed and grouped according to the in Table 2. The most mentioned beneficial aspect of the flipped classroom approach was related to access to a variety of learning resources. Students have mentioned "practical way to obtain course materials" and "we don't have to waste time to find relevant resources". Therefore, CIDOS can be regarded as an excellent platform that supported the implementation of flipped classroom approach.

	Mean	Min	Max	Range	Max / Min	Variance	N of Items
Item Means	3.926	3.757	4.150	.393	1.105	.008	15

Figure 2 Summary Item Statistics

Table 1 depicts the analysis of results in relation to Malaysian polytechnic engineering students views on learning Communicative English through the flipped classroom approach. As shown in Table 1, the means of 14 items out of 15 items in the questionnaire are considered high because it was above 3.80 (refer to Table 2). Based on Figure 2, the overall mean value of all the 15 items is M=3.926, with the minimum mean value was 3.757 (Item 1) while the maximum mean value was 4.150 (Item 4). Thus, it can be inferred that the participants have positive views in relation to learning Communicative English through flipped classroom approach.

Specifically, Item 4 (M=4.150) obtained the highest mean score indicating that the participants prefer the flipped classroom approach compared to the traditional teaching approach. Besides, it also important to highlight Item 15 (M=4.014) and Item

In addition, the flipped classroom approach has encouraged students to take control of their own learning and promoted a more student-centred learning experience. For instance, some students commented that "I can study and revise anytime at my own pace" and "I can be independent and decide when the best time is for me to study" and "flipped classroom method is more student-centred compared to traditional method". This is in agreement to finding from other study which flipped learning provides student-centered learning[49]. Besides, flipped classrooms are found to be promoting a more collaborative learning situations by providing students the opportunity to interact actively with their peers and lecturer and boosted their confidence and motivation in learning. For example, some participants stated that "I come to class more prepared and motivated" and "I am more confident to communicate with my lecturer and friends." In short, the respondents showed positive views on flipped classroom and it is in line with finding from previous studies with positive perception and attitude as compared to traditional classroom[54]. Although previous studies explained that

students had a positive perception and attitude toward flipped

classrooms than traditional instruction (Onojah et al., 2019),

Table 2 The benefits and challenges of learning through flipped classroom approach

Benefits	Challenges
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<ul style="list-style-type: none"> <li>• Access to a variety of learning resources</li> <li>• Student-centred learning experience</li> <li>• Collaborative learning situation</li> <li>• Enhanced confidence and motivation to learn</li> </ul>	<ul style="list-style-type: none"> <li>• Slow internet connectivity</li> <li>• Lack of time to study the resources before class</li> </ul>
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Table 2 also listed the challenges faced by the students in terms of learning Communicative English through flipped classroom approach. Firstly, since the flipped classroom approach via CIDOS platform requires students to use the internet, barriers regarding slow internet connectivity were highlighted by most of the students. Some of the students indicated that “the internet line is very slow and frustrating” and “we can’t access internet at all the places around campus - only at certain place and it is slow”. This finding is similar to other studies which highlighted financial investment to develop flipped classroom[50]. Next, lack of time to study the resources before class was also reported as a challenge for students. Students reported that “we are busy with lots of assignments and lab work” and “no time to study earlier because our timetable is

#### IV. CONCLUSION

The current study explored the views, benefits, and challenges of polytechnic engineering students in relation to learning Communicative English course at a Malaysian polytechnic. The analysis of data carried out in this study suggested that the flipped classroom approach is well received and beneficial for students. Although majority of the students found that flipped classroom approach is better than the traditional teaching approaches and are interested to continue learning using the flipped classroom approach, slow internet connectivity and lack of time were the two main challenges highlighted by them. Therefore, efforts to eliminate the challenges are vital to provide a more successful and sustained flipped classroom learning experience for students. Future studies could focus on exploring the lecturers’ flipped classroom teaching practices, experiences and whether it impacts their future pedagogical practices. In addition, students personality and their preferred learning strategies may be looked into towards flipped learning.

packed”. This is in line with the limitation reported by Danker (2015) whereby students come to class unprepared for flipped classroom. Students with difficulty to complete the pre-task given before the classes might not find this approach is suitable to them [51],[52],[53].

Therefore, these challenges should be evaluated carefully, and lecturers should take proactive measures to eliminate these barriers. They could request better internet connectivity at their institution to support as sustain the use of flipped classroom approach. At the same time, it is essential for lecturers to check on their students whether they have completed their online tasks and try to integrate them in the classroom in a way.

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