

**THE EFFECTS OF FLIPPED LEARNING WITH
PEER INSTRUCTION ON ESL STUDENTS'
ENGAGEMENT AND READING
COMPREHENSION**

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by

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LIST OF ABBREVIATIONS

CL	Cooperative Learning
CALL	Computer Assisted Language Learning
ELP	English Language Proficiency
ESL	English as a Second Language
LMS	Learning Management System
EG	Engagement Questionnaire
FL	Flipped Learning
FLO	Flipped Learning Only
FLPI	Flipped Learning with Peer Instructions
FC	Flipped Classroom
PI	Peer Instruction
RCT	Reading Comprehension Test
CGPA	Cumulative Grade Point Average
ICT	Information and Communication Technology
SLA	Second Language Acquisition

**KESAN *FLIPPED LEARNING* DENGAN INSTRUKSI RAKAN SEBAYA
TERHADAP PENGLIBATAN PELAJAR YANG MENGAMBIL INGGERIS
SEBAGAI BAHASA KEDUA DAN KEFAHAMAN BACAAN**

ABSTRAK

Kajian ini mengkaji kesan *flipped learning* dalam meningkatkan penglibatan dan kefahaman bacaan pelajar yang mengambil Inggeris sebagai bahasa kedua. *Flipped learning* dalam sistem pengurusan pembelajaran berserta slaid PowerPoint dan bahan-bahan pada laman atas talian telah digunakan dalam instruksi kelas dan diaplikasikan oleh instruksi rakan sebaya untuk manfaat pengajaran yang efektif. Sejumlah 170 sampel, dengan masing-masing 85 sampel, mengikuti 5 minggu kajian eksperimental dengan reka bentuk faktorial 2 x 2, untuk mengkaji kesan *flipped learning* (hanya-FLO dan dengan rakan sebaya-FLPI) berserta variabel moderator – kemahiran bahasa (tinggi-rendah) dan jantina (lelaki-perempuan). Terhadap penglibatan pelajar dan kefahaman bacaan. Dapatan daripada analisis ANCOVA menunjukkan bahawa pelajar yang mengikuti mod FLPI mengatasi pelajar yang mengikuti FLO dengan min yang diselaraskan 4.052. Pelajar yang mengikuti FLPI juga memperoleh skor penglibatan lebih tinggi apabila dibandingkan dengan pelajar mod FLO. Walau bagaimanapun, tiada kesan interaksi yang signifikan di antara FLPI, FLO dan penglibatan pelajar dengan kemahiran bahasa dan jantina. Selain itu, tiada kesan interaksi yang signifikan antara jantina dengan tahap kecekapan pada skor min yang diselaraskan pada purata penglibatan pelajar. Pelajar perempuan mendapat skor min yang diselaraskan lebih tinggi untuk purata penglibatan berbanding pelajar lelaki dalam kedua-dua kumpulan FLO dan FLPI. Untuk kefahaman bacaan, skor min FLPI yang diselaraskan dan kemahiran tinggi adalah lebih tinggi berbanding skor min FLO

yang diselaraskan dan kemahiran rendah. Sebaliknya, skor min yang diselaraskan untuk pelajar lelaki adalah lebih tinggi berbanding skor min yang diselaraskan untuk pelajar perempuan. Tidak sahaja didapati bahawa tiada kesan interaksi yang signifikan di antara kumpulan (FLO dan FLPI) dan tahap kemahiran (tinggi dan rendah) tetapi juga di antara jantina dan tahap kemahiran, pada skor min yang diselaraskan untuk kefahaman bacaan. Pada dasarnya, kajian ini menyarankan untuk satu pemahaman baru tentang bagaimana FLO boleh memberi faedah terhadap penglibatan dan kefahaman bacaan, tetapi tidaklah sebaik FLPI apabila dibandingkan dengan hasil dapatan daripada penglibatan dan juga kefahaman bacaan. Dapatan daripada kajian ini boleh meningkatkan peluang untuk para pengkaji dan komuniti dalam bidang akademik berkolaborasi pada peringkat nasional, serantau dan juga antarabangsa. Kolaborasi ini membuka peluang kepada pembangunan secara teori dan juga praktis berkaitan *flipped learning*, instruksi rakan sebaya, penglibatan pelajar dan kefahaman bacaan.

THE EFFECTS OF FLIPPED LEARNING WITH PEER INSTRUCTION ON ESL STUDENTS' ENGAGEMENT AND READING COMPREHENSION

ABSTRACT

This study examines the effects of flipped learning on enhancing ESL students' engagement and reading comprehension skills. A flipped learning – LMS- installed with the PowerPoint slides and materials on an online site was brought into classroom instructions used by peers for the benefit of effective teaching. A total of 170 samples, with 85 samples each, underwent a five-week, 2x2 factorial design experimental study. The effects of flipped learning only and with peer instruction (FLO, FLPI) as well as its associated moderating variable, language proficiency (high-low) and gender (male-female) on students' engagement and reading comprehension were examined. Results from the analysis of Covariate (ANCOVA) show that students who underwent the FLPI mode outperformed students who underwent the FLO for adjusted mean difference of 4.052 similarly students from the FLPI given higher engagement score when compared to students from the FLO mode. However, there was no significant interaction effect between the FLPI, FLO and students engagement in language proficiency and gender. Moreover, there is no significant interaction effect between gender and proficiency levels on adjusted mean score in average students' engagement. In regards to reading comprehension, the adjusted mean score of FLPI and high proficiency are higher than the adjusted mean score of FLO and low proficiency. In contrast, the adjusted mean score of male students is higher than the adjusted mean score of female students. Not only there is no significant interaction effect between groups (FLO and FLPI) and proficiency levels (low and high), but also between gender and proficiency, on adjusted mean score in reading comprehension.

Ultimately, this study urges for a new understanding of how the FLO can be useful for engagement and reading comprehension, but not as effective as the FLPI, when compared to the same results of engagement and reading comprehension. The finding of this research could increase the opportunities for collaboration between researchers in computer assisted language learning (CALL) and the academic community at the national, regional and international levels. This collaboration could lead to theoretical and practical development regarding flipped learning, peer instruction, student engagement and reading comprehension.

CHAPTER ONE

INTRODUCTION

1.1 Overview

It is fundamental for students of English as Second Language (ESL) to acquire the four basic language skills namely speaking, listening, writing and reading. However, Hermida (2009) noted that among these language skills, reading is one of the vital skills which first-year students should master. Thus, English reading comprehension and engagement are incorporated into the curriculum in order to increase the achievement of ESL/EFL students (Vongkrachang & Chinwonn, 2015). Therefore, reading engagement refers to interaction with text in a motivated and strategic manner (Guthrie & Wigfield, 2004). The engagement of students in reading could be improved when some instructional practices are employed in order to foster the reading contexts. Accordingly, students who have high reading engagement but lower parental income and education have greater achievement in reading compared to students who possess lesser reading engagement and equivalent family backgrounds (Guthrie, Schafer & Huang, 2001).

Thus, Van Keer and Verhaeghe (2005) revealed that instruction that uses various strategies have the capability to produce greater strategic readers and improves reading comprehension. This study was one of the first to extensively examine the theory of Schema through the impact of flipped learning on students' reading rating in a university. It also investigated how course learning environment factors impacted student ratings of learning engagement in English course.

This study comprises measurement techniques which ask respondents some questions which are related to aspects of flipped learning (FLO) and flipped learning with peer instruction (FLPI) approaches (i.e. independent variable). It observes their

effects on improvement of students' engagement and reading comprehension (i.e. dependent variable) via their variations in language proficiency (high or low) and gender (male or female) which are the moderating variables.

English language is considered and taught as a second language in Malaysia, and it is fundamental to both future professional achievement and academic studies (Department of Higher Education, 2010). In Malaysia, ESL students require additional incessant determination for their extensive expanse of time in reading textbooks and other academic materials (Mohd. Zin.& Rafik-Galea, 2010). Therefore, this lack of reading customs could result in low reading comprehension as well as low language proficiency (Faizah, Zalizan & Norzaini, 2003; Normazidah, Koo & Hazita, 2012). Researchers have highlighted low interest and low proficiency level in English language as the main factors which contribute towards students' problems in English language (Faizah et al, 2003). Undoubtedly, this feature actually dampens and impedes the learning of language independently.

Similarly, the utilization of e-learning approach in the universities to promote learner's development has been emphasized by the Malaysian Government because it is a learner-centred learning method for innovative teaching (Ismail, 2001). Thus, policy makers and Higher Education institutions have recently directed Faculties to generate innovative teaching programs or pedagogies as ways of enhancing instructions.

The present study seeks to investigate one of the techniques which is required in tertiary level known as Flipped learning method to be utilized for Computer Assisted Language Learning (CALL) and Second Language Acquisition (SLA). Student engagement in reading comprehension activity was not defined clearly in Flipped Learning (FL).English reading comprehension classes has shown lack of reading

habits which lead to low reading comprehension as the main reason that the students disengagement. Moreover, the purposes of this study are also to illustrate how to implement the flipped classroom in-class effectively by peer instruction strategy and to describe undergraduate students' engagement during English reading comprehension activities among undergraduate fresh students compared to students who have been learning in FL without peer instructions.

Therefore, the purpose of this study is to examine the efficiency of flipped learning only (FLO) and flipped learning with peer instruction (FLPI) techniques on the engagement and reading comprehension of students with regards to their language proficiency and gender. Besides, this study demonstrates the effective implementation of the flipped classroom in both out of class and in-class as well as explains the level of engagement and reading comprehension of undergraduate first year students.

1.2 Background to the Study

Among the four language skills namely speaking, listening, reading and writing, one of the most fundamental skills of learning a language is reading (Kustaryo 1988). It is a linguistic process which engages language users. It is also a transactional process since the reader gives the text meaning as well as creates personal meaning via exchange with the author. Thus, reading signifies an active quest for meaning which encompasses the connection between language and thought, as well as a cultural process since what amounts to acceptable reading practice is defined culturally (Davenport, 2002, p.5).

For example, Turner and Paris (1995) noted that peer comments, observations of the progress of their peers and working with others could stimulate their engagement and interests. Instruction which integrates social relations regarding text intensifies the

motivation of students to read thereby enhancing their achievements in reading comprehension (Guthrie et al., 2007).

Furthermore, Malaysian undergraduates that have high English proficiency have greater critical thinking abilities (Rashid & Hashim, 2008). Malaysia's institutions of higher learning that receive the students face the difficulty of assisting the students to develop their English language proficiency up to a level which is necessary for effective academic pursuits (Chan & Yap, 2010). This denotes an alarming condition that requires attention since a developing nation such as Malaysia aspires to be a strategic actor in the global business world. From the above problems, higher institutions in Malaysia commenced English language courses in order to improve the level of English among undergraduates (David, Thang & Azman, 2015). It had been revealed by empirical studies that ESL students with low proficiency lack the determination and motivation to improve their language proficiency, particularly their writing skills (Hsu & Chuen, 2008).

The dynamic and ever changing relationship between literacy and technology had been documented, and it has great influence on social practices (Robertson, 2008). Thus, comprehension refers to the process of creating sense out of a text (Goodman, 2003). Hence, both the text and the reader plaud knowledge and social context in order to understand the text. Conversely, the text contains semantic and syntactic information, and effective processing of this information leads to comprehension (Goodman, 2003).

Some Malaysian scholars are confident of the methods employed to teach English language in the universities in Malaysia (Naginder, 2006; Nor Hashimah Jalaludin et al., 2008). However, the use of such practices for the teaching of ESL reading can only train the students to accomplish the task of

comprehension without giving them the proper comprehension of the whole text. Nambiar (2005) noted that students who study in the university for the first time could face stressful experiences. Hence, effective instruction becomes fundamental in schools in order to increase the reading comprehension of students that have low achievement (Lai, et al., 2009). It was argued by Lai et al. that localized and informed expertise are essential for a successful comprehension instruction. It has also been shown that the utilization of digital text has the capacity to improve comprehension of students from different ability groups (Gil-Flores et al. 2012; Millset al., 2006, Robertson, 2008). Trilling & Fadel (2009) highlighted that today's students should be able to communicate and cooperate with others to make strong fundamentals of good communication-speech, writing, and reading. Those suggestions to meet the objectives of Malaysian curriculum which include the leading of a thinking and technology literate workforce with a view to achieving physical, intellectual, spiritual and emotional development of the individuals (Ministry of Higher Education, 2006).

As an innovative instructional method, flipped learning lays emphasis on learner-centered instruction. In essence, the students are requested to inspect the site of the Learning Management System (LMS) during their personal time. Thereafter, they are expected to answer some questions regarding what they have learnt from the task, and the way they tackled the task. Later, some grouping approaches followed peer instruction during the class. Hence, instructors should perceive flipped learning method as one of the instructional techniques which should be given adequate consideration. Roach (2015) posited that Flipped learning seems to improve the engagement of students and leads to greater second language proficiency, encourages active involvement, and focuses the learning on students and their ideas rather than the teacher (Leis, Tohei, & Cook, 2015).

Several kinds of blended learning have been developed, and Flipped classroom represents one of the variants applied in contemporary teaching and learning environment (Govindaraj & Silverajah, 2017; Kim, Kim, Khera, & Getman, 2014; Poon, 2014). Jonathan Bergmann and Aaron Sams initially introduced the flipped classroom for students who missed classes by using live video recordings and screen casting software to record lectures, slide presentations with annotations and demonstrations and posted them for the students to read and watch (Bergmann & Sams, 2012).

Strayer (2012) opined that the conventional lecture and homework sessions are reversed or inverted in a flipped classroom. This is because the students are given online material to enable them gain the required knowledge prior to the class. Then, the active learning takes place during the class time as well as the clarifications on the utilization of content in terms of cooperative learning, peer instruction, case studies, small groups, discussions or simulation experiences and utilization of the knowledge. This research uses the Peer Instruction (PI) technique proposed by Mazur (1997) in the learning structure. Thus, students learn in this learning approach involved by ConcepTest through social interaction with their peers and teacher in order to attain their learning objectives and improve their level of engagement and comprehension. The class time is principally utilized for group work activities, while the course content which is given to the students for self-study prior to the class time could be provided in the form of PowerPoint slides, pre-class reading, video casts, Lecture Maker, PDF and exercises.

In addition to increasing knowledge, flipped learning can positively change learners' attitudes and thinking. As compared to other traditional learning, the differential effects of studying in a flipped learning setting were examined on self-

efficacy beliefs, intrinsic motivation and learning performance (Teng, 2017; Thai, Wever & Valcke, 2017; Zainuddin, 2018), creative thinking (Al-Zahrani, 2015), metacognition and critical thinking (Van Vliet, Winnips & Brouwer, 2015).

Beginning from the mid-1990s, students' engagement has increasingly become a fundamental topic in academic literature (Trowler, 2010). Hence, flexible learning methods have the capability to improve the engagement of students in learning through the provision of opportunities to students to have greater control over the content and learning activities as well as over the study place and time (Gonyea & Kuh, 2009). It has been advocated that two vital components which ensure effective students learning experiences in higher education include robust engagement of students with course material and students' interaction with peers (Xia, Fielder & Siragusa, 2013).

Bandura (1986) posited that the best way to gather information concerning the engagement level with regards to learning task is to pay adequate attention to the engagement of students during learning. Although the concept of student engagement is widespread in institutions of higher learning in Canada and USA (Kazmi, 2010), but discussion on this concept recently commenced in other regions of the world including Australia (Griffin & Wood, 2006). In Malaysian context, similar scenario of disengagement could be noticed in the universities because of the constructs of the concept of student engagement namely "student-faculty interaction" and "active learning" (Teoh, 2013). As noted by Mo, Singh and Chang (2013), student engagement is fundamental for learning, because it enables the students to attain greatly valued outcomes of education namely academic progress, achievement and retention (Mason, O'Connor, & Broadfoot, 2010; Healey, Jenkins, & Lea, 2014; Jang, Kim, & Reeve, 2013).

Engagement refers to active involvement of students in the learning process or activities, and it has a multidimensional construct which comprises the three supportive different academic progress such as behavioural, cognitive and emotional aspects (Christenson, Reschly, & Wylie, 2012). In fact, behavioural engagement concerns making progress in learning a second or foreign language, since it enables students to be attentive to information sources, devote their effort as well as continue in the presence of hindrances. Thus, emotional engagement enhances the curiosity of students and reduces their frustration and anxiety. Cognitive engagement arises when students utilize sophisticated learning approaches to conduct mental simulations in order to identify and solve problems. Christenson et al. (2012) posited that the above-mentioned students' engagements are the three empirically certified pathways to academic advancement. However, the fourth pathway is agentic engagement (Reeve, 2013). Proactively, students could contribute to instruction flow in order to improve their learning as well as to negotiate their required interpersonal support so as to invigorate their task-related motivation namely asking questions, expressing their preferences and revealing their interests, needs and wants to the teacher.

Practically, students who are agenticly engaged take action before the beginning of the learning activity transactionally as they negotiate for a learning environment which is more motivationally supportive (Reeve, 2013). The other three kinds of engagement mainly take the instruction of the teacher as given, and the students utilize their emotion, behaviour and cognition as means of transforming teacher-provided instruction into student-acquired knowledge, skill and understanding (Fredricks, Blumenfeld, & Paris, 2004). It has been empirically shown that agentic engagement; (a) only modestly correlates with the other three parts of engagement and (b) explains distinctive variance in the positive outcomes of students which cannot be

explained by the other three aspects (Reeve & Tseng, 2011). In other words, students who are agentially engaged take achievement-fostering action which is beyond their cognitive, emotional and behavioural engagements.

Students are expected to show high abilities of content mastery; while the teachers synthesize materials which inculcate the techniques of creating, appraising and analyzing knowledge as well as understanding, remembering, and applying terms (Bloom, et al., 1956; Clark, 2015). Based on Bloom's Taxonomy, instructors can utilize flipped classroom methods to distinct learning levels. Basically, within the luxury of their homes, students use the lower cognitive levels (comprehension and knowledge) but engage in application, synthesis, analysis or evaluation as they come to class (Brame, 2015). Thus, it is difficult for students to utilize what they learned especially when the content was not learnt beforehand. This is because it is logically difficult for individuals to apply what does not exist, or what they do not have. According to Eikmeier and Vandersteen (2015), it had been argued that Bloom's Taxonomy represents a sliding scale rather than a hierarchy of achievement because students seldom remain at one level during an entire class.

As faculty instructors function as both a sage on the stage and guide on the side, they structure their course in order to satisfy the current students' demands and the pleas for accountability via distinctive pedagogies in active learning like peer instruction. This is because student-centered instruction and active learning motivate students to be enthusiastically involved in discussions, writing, reading, or problem-solving activities (Prince, 2004). Moreover, Swain (2000) posited that individuals could appropriate collaborative discussion learning for future use. Studies have shown that students learn best when they are actively engaged with the material and utilize the concepts which they learnt (Smith, 2008). Hence, recent techniques in education

requires a shift from teacher-centred approaches to learner-centered methods by embracing techniques like peer instruction. Some studies have demonstrated that peer instruction has positive effect on engagement of students and learning (Deslauriers, Schelew, & Wieman, 2011; Ryan et al., 2015). As observed by Hutchinson (2007), learning is a social process, and technology-based learning environments occupy a crucial role in enhancing active cooperative learning.

Some researches noted that cooperative learning (CL) technique increases the achievement of students and offers them the opportunities to acquire the skills in English communication (Dzakira & Idrus, 2003; AbdelWahab-Mahmoud, 2014). Thus, cooperative learning involves students working together in a group in order to achieve their goals of learning via discussion and peer feedback. Theoretically, Johnson, Johnson and Smith (2007) posited that cooperative learning is well-founded in the theory of social interdependence. One of the strategies of cooperative learning is known as Peer Instruction (PI). Butchart, Handfield & Restall (2009) opined that peer instruction connotes simple method which makes lectures more effective, more engaging, and more interactive for learning experiences.

Peer instruction technique emphasizes a student-centered method which literally consists of flipping the classroom. It had been revealed by previous researches that Peer Instruction is very effective in many disciplines especially in the Sciences (where it was initiated), albeit seldom in foreign languages and humanities. Furthermore, Dumont (2014) and Butchart et al. (2009) contended that students usually experience greater level of engagement when they have discussions with their peers.

Succinctly, Peer Instruction (PI) represents a simple technique of integrating some vital engagement and interaction in lectures. The technique works in such away

that after teaching a topic for about 10-15 minutes, the teacher asks multiple-choice questions in order to ascertain the level of understanding of the topic by the students (Mazur, 1997). All the students are requested to “vote” for the answer to the question. Thus, flashcards or simply showing of hands could be used for the voting. Fautch (2015) demonstrated the effectiveness of flipped learning in small classes, while Schell and Mazur (2015) applied flipped learning in conjunction with peer instruction in Chemistry. Dumont (2014) also implemented Flipped learning together with Peer Instruction for two different groups at the Western University of Applied Sciences. While one group were taught civil engineering, the other was taught English as a foreign language. According to Mazur (1997), active learning techniques stimulate students to intensely engage in their learning, while utilizing a collaborative teaching approach known as Peer Instruction. Similarly, Foldnes (2016) posited that the use of cooperative learning approach with flipped learning enhance the academic performance of students.

Bergmann and Sam (2012) focused on flipped learning method and posited that inverted classroom or classroom flip represents an innovative classroom structure which employs technology to move the lecture out of the classroom, as well as employs learning activities to move homework and practice with concepts in the classroom. In the flip learning, an online platform namely Learning Management System (LMS) was employed to present the content of the lecture outside the classroom. This innovation regarding the way of introducing course content to students as well as engaging them represent a substantial innovation compared to the lecture-homework cycle prevalent in traditional classrooms (Lage, Platt & Treglia, 2000).

According to Freeman et al. (2014), students who are taught with the traditional lectures method are 1.5 times more likely to fail compared to students who are taught

with motivating and interactive learning techniques. Hence, it could be asserted that language students will most likely attain desirable results if they utilize the appropriate technique when tackling a distinctive task such as flipped learning. Finally, the teachers should train the language students the way to utilize suitable strategy in handling a particular task such as new strategy or multimedia like flipped learning with a view to boosting their engagement level. However, the description of flipped learning indicate that the introduction take place outside of the class, while engagement level ensues inside the learning. Furthermore, Adams, Garcia & Traustadóttir (2016) observed the existence of limited studies on gender differences regarding flipped learning because of insignificant differences between female and male.

Bishop and Verleger (2013) opined that the literature regarding flipped classroom's effectiveness is growing and diverse. For instance, among the outcome variables which have been considered include environment of learning, performance of student and student perceptions (Bishop & Verleger, 2013; Love, Hodge, Grandgenett, & Swift, 2013). Besides, the studies also differ in terms of methodology, ranging from single-group studies (without controlling for confounding variables) through pre-post designs (which examine the change that occur from one period to another due to changes in teaching method), to studies that used treatment (such as flipped classroom) and control (such as lecture) groups (Lage et al., 2000; Davies et al., 2013; Strayer, 2012; Love et al., 2013; McGivney-Burelle & Xue, 2013). Therefore, Malaysian students can be assisted by flipped-learning technique to promote their English course engagement, especially in reading comprehension skills. Hence, it is fundamental for the language instructors to consider the learning strategies of the students and endeavour to know these strategies with the aim of supporting students who are less successful to attain success as well as master the specific

language. The teacher could utilize strategies to assist the students in order to uphold their confidence and engagement with a view to achieving the objective of learning the specific language. Moreover, it has been asserted that technology and literacy have ever changing and dynamic relationship. Until recently, the teaching of writing and reading skills were the main concentration of language learning, but literacy in a language is gradually conceptualized as a social practice (Baynham & Prinsloo, 2009). Additionally, Li-Juan (2007) posited that one of the vital factors used to assess the linguistic competence of a learner is reading comprehension.

1.3 Problem Statement

The situation of disengagement in the Malaysian context could be observed following the constructs of student engagement namely active learning and student-faculty interaction (Thang, 2005). Moreover, Thang and Azarina Alias (2007) reported that most university students (in both private and public universities) in Malaysia typically experience learning process which is teacher-centered. This viewpoint is consistent with Dasari (2009) who documented that Asian students are considered as having low level of participation in class. Zainal Abidin Sayadin (2007) further posited that the proportion of students who asked their lecturers questions during class lectures is below 20 percent. Furthermore, Abdullah, Bakar and Mahhob (2012), Siti Maziha and Nik Suryani (2011) opined that students still remain negatively passive participants, quiet, unconcerned and uninterested about class activities and lessons, and consequently stay in their own silent world. Nevertheless, it would be difficult to describe the actual level of students' engagement, when there is no direct measurement of the engagement of students.

Thus, universities and colleges are confronted with rising pressure of ways to improve the outcomes of students that eventually have significant impact on perseverance, retention and completion (Leach & Zepke, 2011). It is fundamental to note that due to lack of satisfaction or understanding, environmental factors, innovative instruction or local education services' accessibility, engagement might not occur (Kettlewell, Southcott, Stevens, & McCrone, 2012). According to some scholars and educationists, the engagement of disengaged students is considered as one of the greatest challenges confronting educators, because about 25% - 66% of students appeared disengaged (Harris, 2008, p. 57; Christiansen & Salm, 2015).

Similarly, the role of the gender of students in Second language acquisition (SLA) has not received adequate attention of researchers (Gass & Mackey, 2013; Herschensohn & Young-Scholten, 2013). Moreover, it has been revealed by some researches that females often perform better than males, and some studies in Asia reflect this perspective. Pae (2004) for instance, reported that females perform better than males in reading comprehension in Korean English foreign language (EFL) students. In essence, it was revealed that female language students had greater benefits from higher educational training relative to their male counterparts in adult second language acquisition (Van der Slik, van Hout & Schepens, 2015).

The researches conducted on ESL reading strategies showed that Malaysian students find it difficult to achieve reasonable proficiency level in English. This problem persists even having spent eleven years in school learning English (Nor Hashimah, Norsimah & Kesumawati, 2008). The main cause of the low proficiency level according to available literature is the instructional approaches employed in reading (Normazidah et al., 2012). Thus, Zare and Othman (2013) observed that insufficient teaching strategies or approaches in language reading

classrooms are responsible for the difficulties faced by students in understanding written texts. The effectiveness of these flipped learning in the teaching of English language has not been thoroughly explored (Basal, 2015; Huang & Hong, 2016; Leis, 2015; Shaffer, 2016; Yu, 2015).

According to Davis (2004), learners who have cognitive and behavioural engagement in the learning task may partly take place or may be totally absent. Reeve (2013) and Osman, Jamaludin, and Mokhtar (2014) corroborated this standpoint when they asserted that engagement is important for the learners to learn, and added that engagement signposts achievement. The current study has used an engagement investigation based on Reeve's (2013) four aspects of engagement which includes Cognitive Engagement (CE), Emotional Engagement (EE), Behavioural Engagement (BE) and Agentic Engagement (AE). However, the learners might not possess high degree of all these four kinds of engagement at a time.

Therefore, this study aims to investigate the effects of FLO and FLPI of the engagement and reading comprehension.

1.4 Research Objectives

The researcher applied the flipped learning approach in the teaching to facilitate reading comprehension among undergraduate students. The study is intended to achieve the following objectives:

1. To examine the effects of Flipped Learning Only (FLO) and Flipped Learning with Peer Instruction (FLPI) on students' engagement in an Academic English course with regards to their proficiency.
2. To examine the effects of FLO and FLPI on students' engagement in an Academic English course with regards to their gender.

3. To examine the effects of FLO and FLPI on students' reading comprehension in an Academic English course with regards to their proficiency.
4. To examine the effects of FLO and FLPI on students' reading comprehension in an Academic English course with regards to their gender.

1.5 Research Questions

The research questions for this study are:

- 1- What is the effect of Flipped Learning on students' engagement in an Academic English course?
 - a. Is there any significant difference in students' engagement between both treatment FLO and FLPI?
 - b. Is there any significant difference in students' engagement between high and low language proficiency students in FLO and FLPI treatment mode?
 - c. Is there any significant difference in students' engagement between male and female students both treatment modes?
- 2- What is the effect of Flipped Learning on students' reading comprehension in an Academic English course?
 - a. Is there any significant difference in the students' reading comprehension between both treatment FLO and FLPI?
 - b. Is there any significant difference in the students' reading comprehension between high and low proficiency students in FLO and FLPI treatment modes?

- c. Is there any significant difference in the students' reading comprehension between male and female in both treatments condition FLO & FLPI?

1.6 Research Hypotheses

From the research questions, eight hypotheses are formulated. There are several reasons that constitute to this formulation. First, the null hypotheses provided the researcher with the starting point for statistical tests. It also allows the researcher to test the significant level α , at 0.05 and therefore concludes to either reject or accept the null hypothesis statements. Second, the sample of the study is from the same population and the chances that the groups will not differ in terms of their performance in the learning are high. The hypotheses that correspond to the research questions are as follows:

H₀₁: There is no significant difference in students' engagement when treated with the FLO and FLPI with regards to their proficiency.

H_{01a}: There is no significant difference in students' engagement when treated with the FLO and FLPI with regards to their high proficiency.

H_{01b}: There is no significant difference in students' engagement when treated with the FLO and FLPI with regards to their low proficiency.

H₀₂: There is no significant difference in students' engagement when treated with the FLO and FLPI with regards to gender.

H_{02a}: There is no significant difference in the male students' engagement when treated with FLO and FLPI.

H_{02b}: There is no significant difference in the female students' engagement when treated with the FLO and FLPI.

H₀₃: There is no significant difference in students' reading comprehension when treated with the FLO and FLPI with regards to their proficiency.

H_{03a}: There is no significant difference in students' reading comprehension when treated with the FLO and FLPI with regards to their high proficiency.

H_{03b}: There is no significant difference in students' reading comprehension when treated with the FLO and FLPI with regards to their low proficiency.

H₀₄: There is no significant difference in students' reading comprehension when treated with the FLO and FLPI with regards to their gender.

H_{04a}: There is no significant difference in the male students' reading comprehension when treated with FLO and FLPI.

H_{04b}: There is no significant difference in the female students' reading comprehension when treated with the FLO and FLPI.

1.7 Research Significant

This study is fundamental because it seeks to determine new ways that will improve the teaching and learning of English language in Malaysia. Basically, the teaching and learning of English language in Malaysia typically focused on the use of the language classrooms for reading comprehension. One of the rationales why this study is conducted is because of the necessity for literacy pedagogy such as flipped classrooms method that may enhance students' engagement in English course both within and outside the classrooms in Malaysia's public universities. Thus, this study's findings could be of immense value to the stakeholders in the education sector namely lecturers, students, colleges or universities in Malaysia as well as the Ministry of Higher Education (MOHE).

The research explored the effect of CALL on improving ESL learners' reading comprehension skill in the Flipped learning. It is based on the use of technology inside and outside the class to improve the learners' reading comprehension skill. It is important to emphasize that flipped learning belongs to a sub-division of second language acquisition (SLA) with the CALL (May, 2014). Hence, Leis et al. (2016) posited that the utilization of mobile technology and computer should not occupy the center stage in the class, rather they should be employed as teaching aid so that the teachers can spend adequate time in giving individual instruction to their students. As observed by Morgan (2014), the use of lecture method by the teacher to deliver lecture once in the class makes it difficult for students who have lower abilities to clearly understand the subject. Because Flipped learning has some features which enable students to interact in the class, its' effective implementation enhances active learning and ultimately improves students' level of engagement and achievement (Baepler, Walker & Driessen, 2014; Siegle, 2011). Moreover, an insight into the effects of flipped learning with peer instruction strategy on students' engagement and reading comprehension could have possible impact on the ways to prepare, organize and deliver flipped learning more suitably.

1.8 Theoretical Framework

This study used the following theories:

- i. Vygotsky's Social constructivist theory (1978)
- ii. Engestrom's Activity-theory.(1987)
- iii. Carrell and Eiserhold's Schema Theory.(1983)

1.8.1 Social Constructivist Theory

The flipped learning approach has built on the interaction environment so that the social constructivism is the theory which supports social activities in the class. The theory has three rudimentary principles assumed by Vygotsky (1978) include: (a) students create their own knowledge representations, (b) learning occurs via active participation or experience and exploration (which reveals the discrepancies between present representation of knowledge and their own experiences), (c) learning occurs in a social setting (where there is interaction among students, peers as well as other learning community's members). According to the constructivist theory, the interaction between students, as well as the interaction between student and their teacher is essential in class environment. Thus, Vygotsky (1978) opined that cognitive development commences with an interaction. Accordingly, the knowledge of the learner is regarded as adaptive; hence the instructor's responsibility is to stimulate the way of thinking of the student (Keengwe, et al., 2009).

1.8.2 Activity Theory (Engestrom, 1987)

The Activity theory represents an interdisciplinary technique to human sciences which has its origin from the cultural-historical psychology school of thoughts, introduced by Vygotsky. The theory considers as its unit of analysis, the object-oriented, artefact-mediated, and collective activity system, thereby connecting individual subject to the social structure (Engestrom, Mitteenen, & Punamki, 1999). In essence, Daniels (2016) highlighted the seven elements of Activity Theory as follows: (i) an individual or group of persons who are engaged in an activity, (ii) the object of an activity, (iii) diverse kinds of tools such as Flipped learning devices which are utilized in online discussion, (iv) LMS, (v) the rules of every learning community's

member, (vi) division of labour between the objects, and (vii) the learning outcomes that work collectively in order to achieve it.

1.8.3 Schema Theory

The schema theory states that any spoken or written text does not have meaning by itself. In the context of reading, a text simply offers directions to a reader on how to retrieve or create meaning using previously attained knowledge. Hence, the understanding of words, sentences or entire written texts necessitates the capacity of an individual to connect the material to his/her own knowledge. Therefore, effective reading involves an integration of already stored and structured non-visual information in the brain and the current printed and visual information (Carrell & Eisterhold, 1983). The schemata is described by Cohen et al. (1993, p. 28) as “packets of information stored in memory representing general knowledge about objects, situations, events, or actions”. Furthermore, the Schema theory is associated with top-down reading processing that permits the readers to create predictions regarding the forthcoming text as well as enhance their abilities to complete the gaps especially when the ideas are not clearly specified in the text (Alderson, 2000). The summary of schema theory posits that an individual should relate the new ideas or things with already known background knowledge or information, concept, or previous experience in order to comprehend the new ideas or things. Hence, the comprehension as well as the interpretation of new ideas is contingent upon the prevailing schema in mind, and there should be a cohesion between the input information and the existing schema (Qun Li, 2014).

The accumulation of knowledge in schemata and scripts enhance our understanding of the connections and interconnections, as well as function effectively

in different contexts. Consequently, the totality of our schemata and scripts could be considered as our understanding of the world. Apparently, the greater the experience we possess, and the greater the accuracy and precision we generalize, classify, predict and differentiate, the higher we are likely to effectively function in diverse settings (Ruddell, 1997). As a result, lack of prior or background knowledge substantially contributes to the difficulties in reading comprehension. So, this theory is carefully employed with flipped learning and peer instruction technique that concentrate on the previous or background knowledge of the learners before the commencement of, during and after the class.

The goal from using FL is to provide the necessary instructional content to students in advance outside of the classroom. It requires the students to attempt to study it prior to in-class learning, and it meets the constructivist definition of learner-centered education (Jarvis et al., 2014). Learning, from the constructivist perspective, is the process through which learners construct knowledge by themselves instead of receiving information passively (Vygotsky, 1978). In flipped learning, the emphasis is on learners actively participating in their own learning as the makers of meaning and knowledge through diverse interactions.

Therefore, the theories mentioned above form the present study's theoretical framework as is illustrated in Figure 1.2.

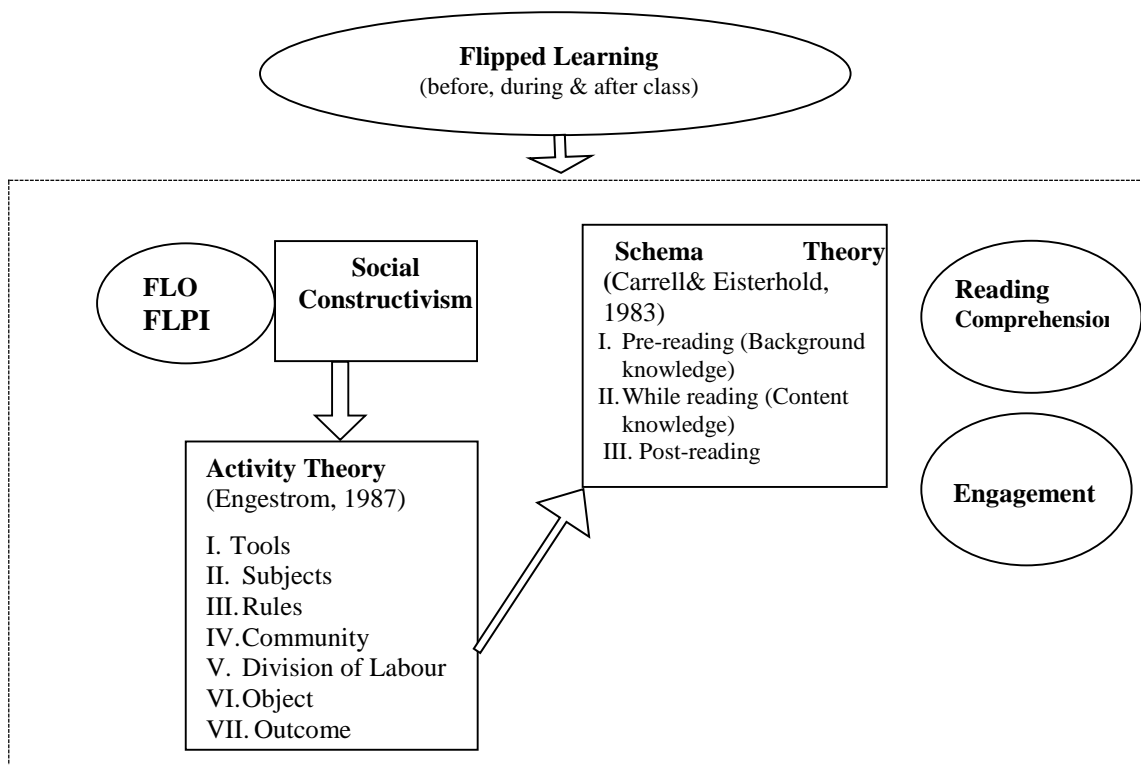


Figure 1.1: Theoretical framework

1.9 Research Framework

The research framework employed in this study indicates three variables namely dependent, moderating and independent variables (Figure 1.2). The dependent variables include students' engagement and students' achievement in reading comprehension, while the independent variables include Flipped Learning Only (FLO) and Flipped Learning with Peer Instruction (FLPI). Moreover, English language proficiency and gender are the moderating variables. In order to ascertain the effects of FLO and FLPI on engagement and reading comprehension, the study respectively used questionnaire and reading comprehension tests in English Course.

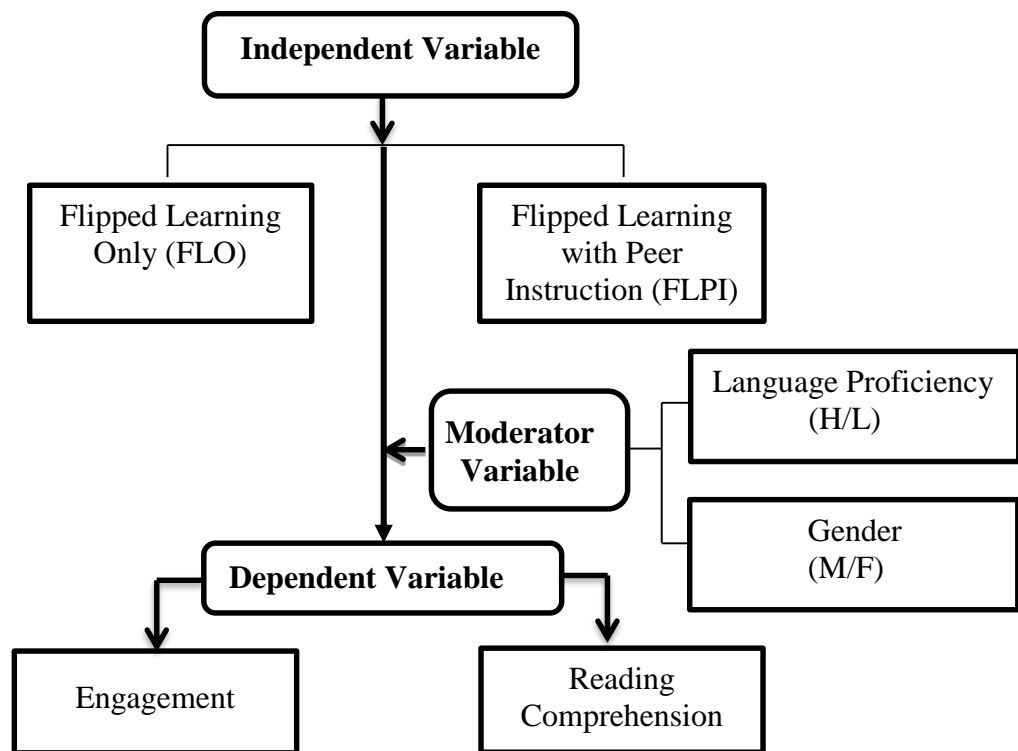


Figure 1.2: Research framework

1.10 Operational Definitions

a) Flipped Learning: The concept of FL used in this present study is consistent with the definition of Flipped Learning given by Brame (2012, p.1). According to Brame, it involves students having access to new material outside the classroom often through lecture videos or reading, and thereafter utilizes the class time for the tougher work of acquiring that knowledge through problem-solving, debates or discussion. Hence, the content of the instruction prepared in PowerPoint slides in this study is presented outside the classroom through LMS. During the in-class activities, students and teacher focus on substantial amount of problem solving or quizzing of the reading passages in English as well as other active learning activities executed by FLO and FLPI approach that coerce students to apply, retrieve and extend the material which have been learnt outside the classroom.

(b) Student Engagement: Student engagement involves the interaction among energy, time as well as other resources, by the students and their institutions in order to maximize the experiences of students and boost their outcomes of learning, achievement, development as well as institution's reputation (Trowler, 2010). According to Reeves (2013), student engagement refers to the motivation factor on the outcomes of students, with the agentic engagement centered on connecting motivation and outcome. Thus, the dependent variables in this present study are the four factors of engagement highlighted by Reeves such as cognitive, emotional, behavioural and agentic engagement.

(c) Reading comprehension: This entails the processes by which the reader makes meaning out of the symbols offered on a page. Having created the word as well as its phonological characteristics and grammatical significance to other words in bigger structure such as a phrase or sentence, the readers begin to understand the connotation of the sentences. The connection is to create the total meaning as well as to acquire the proposed message. Thus, this process of reading necessitates being active, and it is complex. The understanding of text typically encompasses processing at diverse levels (Kintsch et al., 2005). It also entails the interpretation of the meaning in connection to background information or knowledge, texts interpretation and evaluation in line with the goals and purposes of the readers (Grabe, 2014). According to this current study, reading comprehension of students involves the abilities of students to respond to the tasks of reading comprehension. The grades earned by the students are most typically used to measure students' achievement in a class (Butzler, 2014). Therefore, this research utilizes the post-test of reading comprehension passage, which is calculated based on 20 marks.