

**THE USE OF PEER INSTRUCTION IN A FLIPPED
LEARNING ENVIRONMENT IN TEACHING
ESL STUDENTS ARGUMENTATIVE
ESSAY WRITING**

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UNIVERSITI PENDIDIKAN SULTAN IDRIS

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THE USE OF PEER INSTRUCTION IN A FLIPPED LEARNING
ENVIRONMENT IN TEACHING ESL STUDENTS
ARGUMENTATIVE ESSAY WRITING

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ABSTRACT

The study investigates the effects of peer instruction and examines students' participation in a flipped learning environment on ESL students' argumentative essay writing performance and critical thinking. A mixed-method design was used. A total of 120 upper-intermediate English proficiency students from a university in Malaysia were chosen as participants for seven weeks. Quantitative data were analysed using descriptive statistics and one-way analysis of variance (ANOVA). Descriptive interpretations and thematic analysis were used to analyse the qualitative data. The results indicated a significant difference in mean scores for writing performance in the posttest between the experimental group (group work in a flipped learning environment) ($M = 63.95, sd = 13.04$) and the control group ($M = 56.65, sd = 11.15$). There is also a significant difference in mean scores for critical thinking in the posttest between the experimental group (pair work in a flipped learning environment) and the control group (mean difference = 3.800, $p < .05$) as well as the experimental group (group work in a flipped learning environment) and the control group (mean difference = 5.525, $p < .05$). The qualitative analysis of the student assessment form (pair work and group work), lesson study logs, EdPuzzle video quizzes, and samples of student worksheets revealed ESL students' participation by engaging themselves in interactions during in-class writing activities, contributing knowledge to others, getting prepared with the essential concepts and content before class, focusing on the task and assessing the quality of argumentative writing. Overall, the use of peer instruction in a flipped learning environment enhances students' writing performance, critical thinking and participation in argumentative essay writing. The study implicates that the use of peer instruction in a flipped learning environment can be an alternative pedagogical approach to enhance the teaching and learning of argumentative essay writing.



PENGGUNAAN ARAHAN RAKAN SEBAYA DALAM PERSEKITARAN PEMBELAJARAN BERBALIK UNTUK PENGAJARAN PENULISAN ESEI ARGUMENTATIF PELAJAR ESL

ABSTRAK

Kajian ini menyiasat kesan arahan rakan sebaya dan mengkaji penyertaan pelajar dalam persekitaran pembelajaran berbalik terhadap prestasi penulisan esei argumentatif dan pemikiran kritikal pelajar ESL. Reka bentuk kaedah campuran digunakan. Sejumlah 120 orang pelajar di peringkat pertengahan atas bagi kursus *English Proficiency* dari sebuah universiti Malaysia dipilih sebagai peserta kajian selama tujuh minggu dengan menggunakan kaedah persampelan mudah. Data kuantitatif dianalisis menggunakan analisis deskriptif dan inferensi iaitu analisis varians (*ANOVA*) satu arah. Interpretasi deskriptif dan analisis tematik digunakan untuk menganalisis data kualitatif. Dapatan kajian menunjukkan bahawa terdapat perbezaan skor min ujian pasca yang signifikan bagi prestasi penulisan esei antara kumpulan eksperimen (kerja berkumpulan dalam persekitaran pembelajaran berbalik) ($M = 63.95, sd = 13.04$) dan kumpulan kawalan ($M = 56.65, sd = 11.15$). Terdapat perbezaan yang signifikan dalam skor min ujian pasca untuk pemikiran kritikal antara kumpulan eksperimen (kerja berpasangan dalam persekitaran pembelajaran berbalik) dengan kumpulan kawalan (perbezaan min = 3.800, $p < .05$) dan juga kumpulan eksperimen (kerja berkumpulan dalam persekitaran pembelajaran berbalik) dan kumpulan kawalan (perbezaan min = 5.525, $p < .05$). Bagi data kualitatif, analisis borang penilaian pelajar (kerja berpasangan dan kerja berkumpulan), log pembelajaran pelajar, kuiz video EdPuzzle dan sampel kerja pelajar menunjukkan penyertaan pelajar ESL dengan melibatkan diri dalam interaksi semasa aktiviti penulisan dalam kelas, menyumbangkan pengetahuan kepada orang lain, bersiap sedia dengan konsep dan isi penting sebelum kelas, menumpukan perhatian pada tugas dan menilai kualiti penulisan hujah. Secara keseluruhannya, penggunaan arahan rakan sebaya dalam persekitaran pembelajaran berbalik dapat meningkatkan prestasi penulisan, pemikiran kritis dan penyertaan pelajar dalam penulisan esei argumentatif. Implikasi kajian iaitu penggunaan arahan rakan sebaya dalam persekitaran pembelajaran berbalik boleh menjadi pendekatan pedagogi alternatif untuk meningkatkan pengajaran dan pembelajaran penulisan esei argumentatif.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ASRAW	Analytic Scoring Rubric for Argumentative Writing
BBA	Bachelor of Business Administration
B. Com	Bachelor of Commerce
CALL	Computer-Assisted Language Learning
CAPs	Critical Agenda Projects
CBL	Challenge-based learning
CBM	Curriculum-Based Measures
CBT	Computer-based training
CCTS	Creative and Critical Thinking Skills
CCTTX	Cornell Critical Thinking Test
CEFR	Common European Framework of Reference for Languages
CMS	Content Management System
CT	Critical Thinking
CTS	Critical Thinking Skills
EFL	English as a Foreign Language
ELL	English Language Learners
ELT	English Language Teaching
EP3	English Proficiency 3
EP4	English Proficiency 4
ESL	English as a Second Language

ESP	English for Specific Purposes
FLPI	Flipped learning with peer instruction
FLO	Flipped learning online
F2F	Face-to-face
HOTS	Higher-Order Thinking Skills
ICT	Information and Communication Technology
IELTS	International English Language Testing System
JiTT	Just-in-Time Teaching
KRA	Key Result Area
L1	First language
L2	Second language
LANs	Local Area Networks
LMS	Learning Management System
MEB	Malaysia Education Blueprint
MEC	Malaysian Examination Council
MFE	MOOC, Flipped Classroom & ESP
MOHE	Ministry of Higher Education
MOOCs	Massive Open Online Courses
MUET	Malaysian University English Test
NHEAP	National Higher Education Strategic Plan
PALS	Peer-Assisted Language Strategies
PBL	Problem-based learning
PCs	Personal computers
PI	Peer Instruction

SLW	Second Language Writing
SPSS	Statistical Package for Social Science
SRS	Student Response System
STEM	Science, Technology, Engineering, Mathematics
TED	Technology Education Design
TESOL	Teaching English to Speakers of Other Languages
UiTM	Universiti Teknologi MARA
UKM	Universiti Kebangsaan Malaysia
UMS	Universiti Malaysia Sabah
Unimas	Universiti Malaysia Sarawak
UPM	Universiti Putra Malaysia
UPSI	Universiti Pendidikan Sultan Idris
VLE	Virtual Learning Environment
WBT	Web-based training
ZPD	Zone of Proximal Development
4IR	Fourth Industrial Revolution

APPENDIX LIST

- A Pre- & Post Tests
- B Holistic Scoring Rubric
- C Reflection Question for Lesson Study Logs
- D Student Assessment Form (Pair Work)
- E Student Assessment Form (Group Work)
- F Google Slides (Workshop for Teachers)
- G Step-by-Step Training for Students (Edpuzzle.com)
- H Pre-Class Materials
- I Lesson Plans
- J Learning Materials
- K Expert Validation Checklist
- L Class Participation Content and Construct Validation Form (Pair Work)
- M Class Participation Content and Construct Validation Form (Group Work)
- N Informed Consent Form (Students)
- O Teacher Consent Form
- P Expert Validation Feedback (Validator 1)
- Q Expert Validation Feedback (Validator 2)
- R Pretest and Posttest Mean Scores (Writing Performance)
- S Pretest and Posttest Mean Scores (Critical Thinking)
- T EdPuzzle Video Quizzes Scores (Before the Class)
- U (Pair work) Worksheet 1 (S5 & S6)
(Pair work) Worksheet 3 (S13 & S14)

- V (Group work) Worksheet 1 (Group 2)
(Group work) Worksheet 3 (Group 5)
- W Worksheet 3 (Pair 5, Pair 6, Pair 10 & Pair 11)
- X Worksheet 5 (Group 5 & Group 9)
- Y Worksheet 6 (Group 5 & Group 6)
- Z Samples of Argumentative Essay (Pair 3 & Pair 5)
- AA Samples of Argumentative Essay (Group 4 & Group 8)



CHAPTER 1

INTRODUCTION



This chapter provides an overview of current trends in teaching and learning in higher education. This chapter also presents statement of the problem, purpose of the study, research objectives, research questions, research hypotheses, significance of the study, conceptual framework, and operational definition of terms. The scope and limitations of the study as well as the organisation of the thesis are also outlined.

1.2 Background of the Study

Since the early 1960s, English language teachers have witnessed dramatic changes in the ways that language is taught (Gaudart, 1987; Hazita Azman, 2016). The focus of





instruction has moved from the teaching and learning of discrete grammatical structures to the fostering of communicative ability (Rajendran Muthiah, 2015; Zhang & Barber, 2008). As for language pedagogy, it has gradually shifted away from teacher-centred to student-centred approach (Pamela, Melor Yunus & Maslawati Mohamad, 2018; Suriati Salleh & Nurahimah Mohd Yusoff, 2016). The role of the learner has changed from being a passive recipient of grammatical structures to that of creator and user of language. Methods have also changed from emphasising the acquisition of information to one of constructing meaning. It is through such changes and development that computer-assisted language learning (CALL) has come to age and it is now known as one of the most significant areas of innovation in language education (Jing Shao, 2012; Stickler & Shi, 2016). The current trends and developments of teaching and learning in higher education rely very much on technology.



Nowadays, various technologies are incorporated into teaching and learning of language skills in higher education classrooms in Malaysia (Abbas, Lai, & Hairul Nizam Ismail, 2013; Amelia & Mohamad Jafre, 2018; Zamzami Zainuddin & Mohammad Attaran, 2015). Over the past 15 years, technology has swiftly developed and changed the face of education all over the world (Grajek, 2016). In Malaysia, this revolution began with the emergence of the term “e-learning” beginning of the year 2000. E-learning or electronic learning is defined as teaching and learning online via the Internet or through network technologies to access the content anytime (Goi & Ng, 2009; Waleed Mugahed Al-Rahmi, Mohd Shahizan Othman & Lizawati Mi Yusuf, 2015; Zhang, Zhao, Zhou & Nunamaker, 2004). In addition, Norazah, Mohamed Amin and Zaidan (2011) have also defined e-learning as “an interactive environment that allows students and lecturers to interact with each other and with other students using





information technology tools and applications” (p. 81). In other words, e-learning makes use of the Internet and digital technologies to deliver instructions synchronously or asynchronously to anyone who has access to a computer with an Internet connection.

In support of this trend or long-term growth, e-learning had been identified as one of the Critical Agenda Projects (CAPs) and a Key Result Area (KRA) under the National Higher Education Strategic Plan (NHEAP) 2007-2010. Ministry of Higher Education (MOHE) was entirely responsible for the successful implementation of e-learning in higher education institutions (Embi, 2011). The government had assigned a highly funded budget for the development of e-learning policy, governance of e-learning, e-learning training, e-learning integration in teaching and learning, learning management system (LMS), e-learning in research and publication, e-content development, and quality assurance (Embi, 2011; Nuraihan Mat Daud, 2014). Since then, the education field has evolved along with more e-learning interventions, particularly in the delivery system of higher education. Physical textbooks are no longer considered as an important element of knowledge acquisition (Grapragasem, Krishnan & Azlin, 2014). Instead, many educators are required to change the way they think and use information, and also change the way to communicate with students. They are encouraged to modify their teaching practices based on the use of different technologies in their lessons. To date, many positive reactions have been received from various educational institutions including a recent study conducted by Nor Aniza and Chua (2015) who has confirmed that educators are beginning to accept the use of technology in their classrooms to provide better teaching and learning experiences (Goi & Ng, 2009; Johan Eddy Luanan, Nor Aziah Alias & Jasmine Jain, 2014; Norizan Abdul Razak, Hussein Alakrash & Yasmin Sahboun, 2014).





The first electronic supplement to conventional classroom training was computer-based training (CBT), delivered via electronic media (CD-ROM and DVD) to individual personal computers (PCs) of local area networks (LANs) (Goi & Ng, 2009). Back then, the English teachers delivered their language lessons using sound and video features (Mukundan & Nimehchisalem, 2011; Normah Yusof, 2012; Shyamlee & Phil, 2012). With the advent of web technology led to web-based training (WBT), educational coursewares were developed as kits for teachers, trainers and as tutorials for students via the Internet. The rapid growth of web-based technologies and the high usage of the Internet have made teaching and learning via the Internet, or e-learning, more viable in recent years. Many universities, polytechnics, and community colleges have set up own portals to offer an e-learning environment either as teaching aids to support conventional teaching approach or as a teaching medium for distance learning or off-campus programs (Ghavifekr & Mahmood, 2015; Goi & Ng, 2009; Siti Sarah & Issham Ismail, 2011).

The e-learning interventions have further transformed the roles of teachers, mindsets and how teaching and learning activities are conducted from passive learning to active learning and from the traditional classroom to modern classroom (Adam & Nel, 2009). These changes have embraced new terms of e-learning such as web conferencing, learning management system (LMS), cloud computing, mobile learning, virtual learning, blended learning, and hybrid learning (Johan Eddy Luaran et al., 2014). LMS is an instructional platform that helps teachers to deliver, track, report on and manages learning content, learner progress and learner interaction over the Internet (Cavus & Muhammed Sharif, 2014; Linder, Bruenjes & Smith, 2017). Besides that, it also helps to increase students' participation in online activities that could enhance their





learning attainment. In Malaysia, most of the higher education institutions have their own LMS. For instance, iFolio is the LMS for *Universiti Kebangsaan Malaysia (UKM)* staff and students, Putra LMS for *Universiti Putra Malaysia (UPM)*, MyGuru for *Universiti Pendidikan Sultan Idris (UPSI)*, SmartUMS for *Universiti Malaysia Sabah (UMS)*, i-Learn Portal for *Universiti Teknologi MARA (UiTM)* and eLEAP for *Universiti Malaysia Sarawak (Unimas)*. Although several studies have reported higher level of students' satisfaction with regards to online learning experience across various disciplines (Basioudis, Lange, Suwardy & Wells, 2012; Cole, Shelley & Swartz, 2014; Fauziah Sulaiman, 2013; Ghaderizefreh & Hoover, 2018; Mbetse, 2015), most of these studies acknowledged the fact that there are problems in sustaining students' willingness and interest to engage in online activities. Harrison, Gemmell and Reed (2014), for example, found that while students were generally satisfied with their experience in a web-based course, they were expecting more teacher presence and group dynamics. The same findings are noted in the two studies conducted by Gedera, Williams and Wright (2015) and Mohd Khalid and Don Quick (2016), which clearly indicate students' expectations towards building a social practice and enhancing better engagement in online learning platforms.

In relation to this, blended learning has been regarded as a crucial attempt to sustain students' participation and promote students' engagement in the online learning environment (Hrastinski, 2019). Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that one compliments the other. Blended learning encourages students to become more actively involved in online activities that sharpen their critical thinking and problem-solving skills (Chuah & Hong, 2014; Yeen-Ju, Mai & Bhawani Selvaretnam, 2015). In addition, studies have also





found that teachers are using blended learning approach to support student collaboration, project-based learning and to reduce class time (Bath & Bourke, 2010; Napier, Dekhane & Smith, 2011; Smith, 2010; Vaughan, 2014). Blended learning allows students to work at their own pace with teacher support (Bowon Kim, 2015; Cleveland-Innes & Wilton, 2018).

Referring to the ninth shift in the Malaysia Education Blueprint (Higher Education) 2015-2025, the latest trends of e-learning are in digital technologies and social media, flipped classroom, massive open online courses (MOOCs) and micro-credentials (Ministry of Education Malaysia, 2015; Commonwealth Tertiary Education Facility, 2020). Digital technologies and social media are found everywhere nowadays, and their emergence has influenced education through the way people think and communicate (Afendi Hamat, Mohamed Amin & Haslinda, 2012; Afendi Hamat & Haslinda, 2019; Najwa Hayaati, Normazla & Shaharudin Ismail, 2014; Song, Murphy & Farley, 2013). Some examples of digital technologies and social media are *Facebook*, *Twitter*, *Instagram*, *Linkedin*, *YouTube*, *Foursquare*, *Flickr*, *Pinterest*, *Vimeo* and *Tumblr*. As for MOOCs, providers such as *Coursera*, *Open Learning*, *edX*, *Udacity* and *Futurelearn* offer free and multi-course specialisations from the reputed universities worldwide (Mansor Fadzil, Latifah & Tengku Amira Munira, 2015; Rai & Chunrao, 2016). Learners can take a course with no limit on attendance. This is necessary to encourage learners to be engaged in learning at their own pace and time. Both traditional and modern course materials for learning are made available in MOOCs (Johan Eddy Luaran et al., 2014; Mohamed Ally, Embi & Norman, 2019). Some courses allow learners to earn a verified certificate of achievement after having completed all the assignments. MOOCs are suitable for students, teachers, and adult





learners who like to update knowledge and acquire new skills for professional development (Bowon Kim, 2015; Patru & Balaji, 2016).

Flipped classroom is a form of blended learning whereby students watch video lectures, PowerPoint presentations, podcasts and complete quizzes prior to class (Guy & Marquis, 2016). During formal class time, flipped classroom eliminates whole-class lectures and replaces them with collaborative and interactive activities. To date, there are a few articles reviewing flipped classroom have been published (Birgili, Seggie & Oğuz, 2021; Estes, Ingram & Liu, 2014; Hamdan, McKnight, McKnight & Arfstrom, 2013) and most of them explicitly focused on Science, Technology, Engineering, and Mathematics (STEM) education. Previous studies have recommended expanding flipped classroom approach to non-STEM fields, particularly in the humanities, arts, and social sciences (Hung, 2015; Zamzami Zainuddin, Hussein Haruna, Xiuhan Li, Yin Zhang & Samuel Kai Wah Chu, 2019; Zamzami Zainuddin & Siti Hajar Halili, 2016). Thus, considering the recommendation, this study focuses on flipping English proficiency classes at one of the public universities in Malaysia. Flipping English proficiency classes is considered necessary to have more time and space to practice writing in class actively. The usual time for English proficiency class is only two hours a week.

Within the two hours, various language skills and tasks need to be covered by the teacher. Due to time constraints, students are most likely not to spend much time practicing whatever they have learned in the class. Therefore, the teacher will give students homework to be done at home. The chances of not completing their homework are high. This results in the teaching and learning process not to fall in the right place.





That is why flipping English language proficiency classes is encouraged. It inverts the traditional teaching methods, delivering instruction online outside the class and moving homework in the classroom. It can help establish an interactive, collaborative, and supportive English writing learning environment for students. It can also motivate students to learn argumentative essay writing more by providing ample time for them to engage with the learning both inside and outside the classroom with the teacher's assistance.

As this study focuses on flipping English proficiency classes, the researcher intends to narrow down the research to argumentative essay writing only. This is because argumentative essay writing is quite crucial for tertiary students and many students are found struggling to compose an effective argumentative essay (Campbell & Filimon, 2017; Maleerat Ka-kan-dee & Sarjit Kaur, 2014; Maleerat Ka-kan-dee & Sarjit Kaur, 2015; Peloghitis, 2017). Furthermore, within the framework of the flipped classroom itself, various teaching strategies can be applied by the language instructor to conduct outside and inside classroom activities. Unfortunately, none of the studies has researched a specific teaching strategy that might be useful in the flipped learning environment. By examining the integration of the right teaching strategy in the flipped learning environment can help the educators to maximise the teaching and learning process. Hence, this encouraged the researcher to investigate the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and participation.





1.3 Statement of the Problem

The use of English language in the higher education context is indispensable across the academic domain. Undergraduate students at the tertiary level in Malaysia are expected to read plenty of books and references to build knowledge and write in English for academic purposes. This requires students to learn and master good writing skills as they have to produce written assignments almost every week for every course they enrol. Specifically, argumentative writing is an important genre of writing for university students to express their point of view in academically appropriate forms and strategies (Lam, Hew & Chiu, 2018; Maleerat Ka-kan-dee & Sarjit Kaur, 2014). Although many researchers have confirmed argumentative writing as the hardest form of writing, it is still considered essential as it involves creative, logical, and persuasive thinking styles (Ferretti, Andrews-Weckerly & Lewis, 2007; Neff-van Aertselaer & Dafouz-Milne, 2008; Schneer, 2014). Furthermore, argumentative essays are primarily a social practice that requires the writer to construct a reasoned argument, usually involving awareness of the audience as well as purpose and mastery of necessary linguistics resources (Morgan, 2011; Nor Hafizah, Eunice Ong, Joanna Indra & Seyed Ali Rezvani, 2013). Unfortunately, both ESL and EFL learners at the tertiary level often encounter problems in composing argumentative writing (Ariyanti & Fitriana, 2017; Bipichandra, Shah, Puteh, Din, Rahamat & Aziz, 2014; Maleerat Ka-kan-dee & Sarjit Kaur, 2014; Maleerat Ka-kan-dee & Sarjit Kaur, 2015; Peloghitis, 2017). These set of problems are closely related to poor performance in writing, lack of interesting and innovative pedagogy to learn writing, and lack of students' motivation.





Several studies indicate that students have poor performance in argumentative writing due to insufficient linguistic proficiency as well as knowledge about the structural features and the writing process (Maleerat Ka-kan-dee & Sarjit Kaur, 2014; Maleerat Ka-kan-dee & Sarjit Kaur, 2015). In other words, they neither have an adequate level of grammatical and vocabulary competence nor do they know how to generate and manipulate ideas. Most of the time, students generate ideas in L1 and then translate them into L2.

In addition, it is difficult for ESL language instructors to teach argumentative writing to their students because they are not familiar with the genre (Maleerat Ka-kan-dee & Sarjit Kaur, 2014; Maleerat Ka-kan-dee & Sarjit Kaur, 2015). Argumentative writing requires students to search out a proposition that identifies the issue and position, provide evidence for the claim, formulate, modify and finally revise the thesis statement to ensure effective writing (Stysliger & Overstreet, 2014; Wingate, 2012). However, students do not know how to express their opinions and beliefs in their writing. It can be said that they do not know how to write a thesis statement. Importantly, ESL students do not have the analytical skills to manipulate a well-organised idea which is the main barrier to effective argumentative writing. Thus, it is important for ESL students to hone their writing skills along with strong arguments and extensive research work through various writing exercises.

Apart from that, ESL tertiary students face difficulties in argumentative writing due to lack of interesting and innovative pedagogy to learn writing. As argumentative writing is one of the common genres of academic writing, students perceive it as a difficult, complex and boring task due to the ineffective writing activities and modules





used in the writing course and the method of instructions used in class (Botley, 2014; Noriah Ismail, Supyan Hussin & Saadiyah Darus, 2012a; Noriah Ismail, Supyan Hussin & Saadiyah Darus, 2012b; Vyncke, 2012). In such a situation, they seem to be apprehensive, uninterested, or lazy to write and feel less compelled to put much effort into being critical when presented with a writing task. Due to these problems, students' participation in writing argumentative essays has yet to achieve a desirable level of satisfaction (Lam et al., 2018; Peloghitis, 2017). Apart from students' participation, it has also been acknowledged by Yunus et al. (2006) and Chiew et al. (2016) that there is a lack of critical thinking skills among undergraduates in English language classrooms. This is further supported by Nabila Nejmaoui (2019) and Lu and Xie (2019) that there is a lack of empirical evidence regarding critical thinking in second language education. Therefore, to get students to be actively engaged in the writing activities and at the same time train them to be inquisitive and critical when writing, ESL language instructors need to employ various instructional strategies inside and outside of the classroom. Following the current trends in teaching and learning can also help ESL language instructors to find alternative ways to deal with students' feelings of boredom.

Another prominent problem that needs to be addressed by English language instructors is the lack of students' motivation and determination towards improving their writing skills. Teaching large classes and allocating less time for in-class practice can demotivate students from learning to write an essay (Chan, 2007; Ng, 2001; Noriah Ismail, Supyan Hussin & Saadiyah Darus, 2012a; Razlina Razali & Rohaiza Jupri, 2014; Saadiyah Darus, 2008). As Myles (2002) notes, the ability to write well is not a naturally acquired skill; it is learned through a set of formal instructional practices. This





means that students need considerable time to spend on writing several drafts before submitting the final or latest draft in which it is limited at the tertiary level. According to Graham, Harris, MacArthur and Schwartz (1991), students need more than four days of writing practice a week to master the skill. However, Noriah Ismail, Supyan Hussin and Saadiyah Darus (2012a), Noriah Ismail, Supyan Hussin and Saadiyah Darus (2012b) and Mah, Umar and Chow (2013) have stated that two to four hours a week is insufficient for the students to be a good writer. With such limited time available, many students intend to write in haste or carelessly. They would not revise their work and neglect proper planning. Hence, ESL students need to be given ample time to practice and complete the writing task during class time. This helps to develop students' self-confidence and promote students' awareness of the importance of English proficiency. At the same time, the English language instructors can provide constant encouragement and support by reading and giving their valuable feedback to help students improve their writing. Peers also can take the leading role in giving words of encouragement and advice as well as fostering a deep approach to learning through collaborative activities (Boud, 2001; Hurst, Wallace & Nixon, 2013). By doing this, students will feel secure and welcome in their learning process. Otherwise, it can cause writing anxiety among them and further result in negative attitudes toward writing which can impede their performance.

These problems imply a need to improve the situation in higher education by transforming the teaching and classroom environment paradigms to match the current trends of students acquiring knowledge and skills (Raihanah, 2014). The teaching of argumentative writing should no longer fully rely on in-class lectures. Instead, it should focus more on independent and structured learning using different instructional





strategies and teaching tools, which can increase students' competence and motivation. A balanced approach to teaching and learning, which covers both inside and outside of classroom practices, has to be incorporated into the argumentative writing lessons. Thus, taking into consideration the three problems related to argumentative writing skills, this study intends to investigate the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and students' participation. This study fills the gap by preparing the instructional materials and conducting pre-test and post-test to see if the peer instruction, namely pair work and group work impacts students' writing performance, critical thinking, and students' participation in a flipped learning environment.

Apart from the three problems related to argumentative writing skills, several research gaps have also been identified in the literature review. First, over the past quarter-century, the use of peer instruction has expanded across various science subjects such as physics, biology, chemistry, computer science and mathematics, but rarely in language classrooms (Dumont, 2013; Faulkner & Green, 2015; Schell & Butler, 2018; Zou & Xie, 2018). The uniqueness of peer instruction relies on its effective language learning, which involves pair work and group work to a large extent. In other words, various modes of learning can blend well with the implementation of the peer instruction method. However, past studies related to different modes of learning such as Nagao (2014) and Zohreh and Farzaneh (2014), are limited in the sense that they mainly focus on only two modes of learning: individual versus groups, pairs versus groups. Thus, this study contributes to the existing literature by investigating the effects of peer instruction on ESL students' argumentative essay writing performance,





critical thinking, and students' participation in terms of all the three modes of learning: individual work, pair work, and group work.

Second, studies on the effects of flipped classrooms are scarce (Hung, 2015), especially in the field of language education at the undergraduate level. Most of which involved pre-test post-test and quasi-experimental designs in the area of STEM education (for example, science, technology, engineering, and mathematics) (Betihavas, Bridgman, Kornhaber & Cross, 2015; Bishop & Verleger, 2013; Jensen, Kummer & Godoy, 2015). Although the flipped classroom approach is claimed to be applicable to any subject and at any level, but its current practice mainly focuses on K-12 education (Engin, 2014; Lo & Hew, 2017; Morgan, 2014; Noora Hamdan, McKnight, McKnight & Arfstrom, 2013; O'Flaherty & Phillips, 2015; Yarbro, Arfstrom, McKnight & McKnight, 2014). This reinforces the need to expand the investigation to non-STEM higher education settings and examine whether flipped classroom yields benefit from the expansion. Likewise, the use of peer instruction in a flipped learning environment was rarely discussed in the literature of flipped language learning. Furthermore, there has not been any study on flipping English proficiency classes in terms of argumentative essay writing in Malaysia and abroad.

Third, previous studies did not include evidence of positive effects on students' writing performance in flipped classrooms. Bishop and Verleger (2013), Enfield (2013), and Herreid and Schiller (2013) further indicate that most published studies are drawn on anecdotal evidence. It is still somewhat debatable whether the flipped classroom strategy influences performance or not (Oki, 2016). Furthermore, comprehensive research involving the important elements of an argumentative essay





such as making claims, stating rebuttals, supporting claims or rebuttals with evidence, and providing logical reasons has not been explored previously. Other than that, the issue of a limited number of participants or a small sample size as highlighted in most of the studies mentioned above, is yet to be addressed.

Fourth, despite the four studies (Brookhart, 2010; Engin, 2014; Alsowat, 2016; Salihuiddin et al., 2016), there is a paucity of research and literature into the impact of two instructional strategies (peer instruction-pair work, peer instruction-group work) embedded in a flipped learning environment on ESL students' critical thinking when writing an argumentative essay. Fifth, so far only one empirical study, Hung (2015) which has addressed the impact of flip teaching on student participation levels. Further studies and contributions are required in the ESL context involving other language skills besides speaking.

Based on these research gaps, the present study thus sets out to offer a new perspective on the use of peer instruction in a flipped learning environment and how it is studied in English as a Second Language (ESL) setting especially for argumentative essay writing, as a means to contribute to the growing line of research on the flipped classroom. Besides that, this study also contributes to the literature by expanding the application of the flipped learning approach to ESL students' argumentative essay writing in which the study will involve upper-intermediate students, essential elements of an argumentative essay and use a large sample size (40 students in each group). In sum, the present study aims to address the problems and fill the research gaps mentioned above by investigating the effects of peer instruction in a flipped learning





environment on ESL students' writing performance, critical thinking, and students' participation level.

1.4 Purpose of the Study

The purpose of this study is to investigate the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and students' participation.

1.5 Research Objectives



More specifically, the study is conducted to fulfill the following objectives:

1. To determine the extent to which peer instruction in a flipped learning environment has an effect on ESL students' argumentative essay writing scores.
2. To identify the extent to which peer instruction in a flipped learning environment has an effect on ESL students' critical thinking scores in argumentative essay writing.
3. To examine ESL students' participation during peer instruction in the flipped learning environment when writing argumentative essays.



1.6 Research Questions

The study sets out to answer the following research questions:

1. Is there any significant difference in mean scores for writing performance in the post-test between the experimental groups (pair work, group work) and control group?
2. Is there any significant difference in mean scores for critical thinking in the post-test between the experimental groups (pair work, group work) and control group?
3. How do ESL students participate during peer instruction in the flipped learning environment when writing argumentative essays?

1.7 Research Hypotheses

Based on the first research question, the following hypotheses have been generated to see the differences in mean scores of the pre-test and post-test among the students of the English proficiency course.

H₀₁: There is no significant difference in mean scores for writing performance in the post-test between the experimental group (pair work) and control group.

Ha1: There is a significant difference in mean scores for writing performance in the post-test between the experimental group (pair work) and control group.

Ho2: There is no significant difference in mean scores for writing performance in the post-test between the experimental group (group work) and control group.

Ha2: There is a significant difference in mean scores for writing performance in the post-test between the experimental group (group work) and control group.

Based on the second research question, the following hypotheses have been generated to see the differences in mean scores of the pre-test and post-test among the students of English proficiency course.

Ho3: There is no significant difference in mean scores for critical thinking in the post-test between the experimental group (pair work) and control group.

Ha3: There is a significant difference in mean scores for critical thinking in the post-test between the experimental group (pair work) and control group.

Ho4: There is no significant difference in mean scores for critical thinking in the post-test between the experimental group (group work) and control group.

Ha4: There is a significant difference in mean scores for critical thinking in the post-test between the experimental group (group work) and control group.

1.8 Significance of the Study

This study may serve as a guide and reference for the students undertaking a similar course. It helps students increase their mastery of both conceptual reasoning and problem-solving. Through this study, students also learn how to take responsibility for their own learning process or what is called ownership for learning. They work with their peers in completing various argumentative writing tasks (presentation, discussion, explanation, and evaluation). In general, this study has the potential of training students to be more prepared before coming to class, leaving more time to practice in the class.

The present study is beneficial to teachers who are aiming to teach argumentative essay writing using peer instruction in a flipped environment. This study is essential to English proficiency course for its practical significance. It helps teachers explore the use of peer instruction and flipped learning approach to teach argumentative essay writing. It can also assist teachers in identifying an alternative way of teaching and learning argumentative essay writing using several technology applications and platforms. Moreover, this study also helps teachers understand the effects of peer instruction in a flipped learning environment on students' writing performance. As for future teachers, this study is seen as an essential step to assist them in implementing new interactive approaches to English language classrooms. As a whole, it is a good opportunity for the teachers to support students in becoming self-directed learners.

As for future researchers, the ideas presented in this study may be used as a reference in conducting new studies related to peer instruction, flipped learning, or argumentative essay writing. Besides that, it can also help future researchers test the



validity of other related findings, such as the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and participation. This study serves as a useful reference and source in the area of English language teaching and learning.

1.9 Conceptual Framework

The main aim of this study is to investigate the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and students' participation. Therefore, the conceptual framework that has been developed based on the important concepts and variables is shown in Figure

1.1. Basically, this study involves two different learning settings: in the first, peer instruction and flipped learning environment are included; in the second, peer instruction and flipped learning environment are eliminated. In the peer instruction and flipped learning environment, two types of variables are involved in this research, namely, independent and dependent variables. Independent variables focus on the two modes of peer instruction: pair work and group work. Dependent variables include students' writing performance, critical thinking, and students' participation in argumentative essay writing in a flipped learning environment. These dependent variables are the aspects that the researcher measured in the experiment. The big circle and all the space inside represent the peer instruction and flipped learning environment. Teaching and learning paradigms are reversed and class time is focused on student understanding as well as active participation rather than on lecture. On the other hand, the rectangular which is placed outside of the circle reflects the control variable in a



learning environment without peer instruction and flipped learning. In such an environment, the traditional mode of the classroom takes place and the conventional teaching and learning only focuses on lecture and individual work.

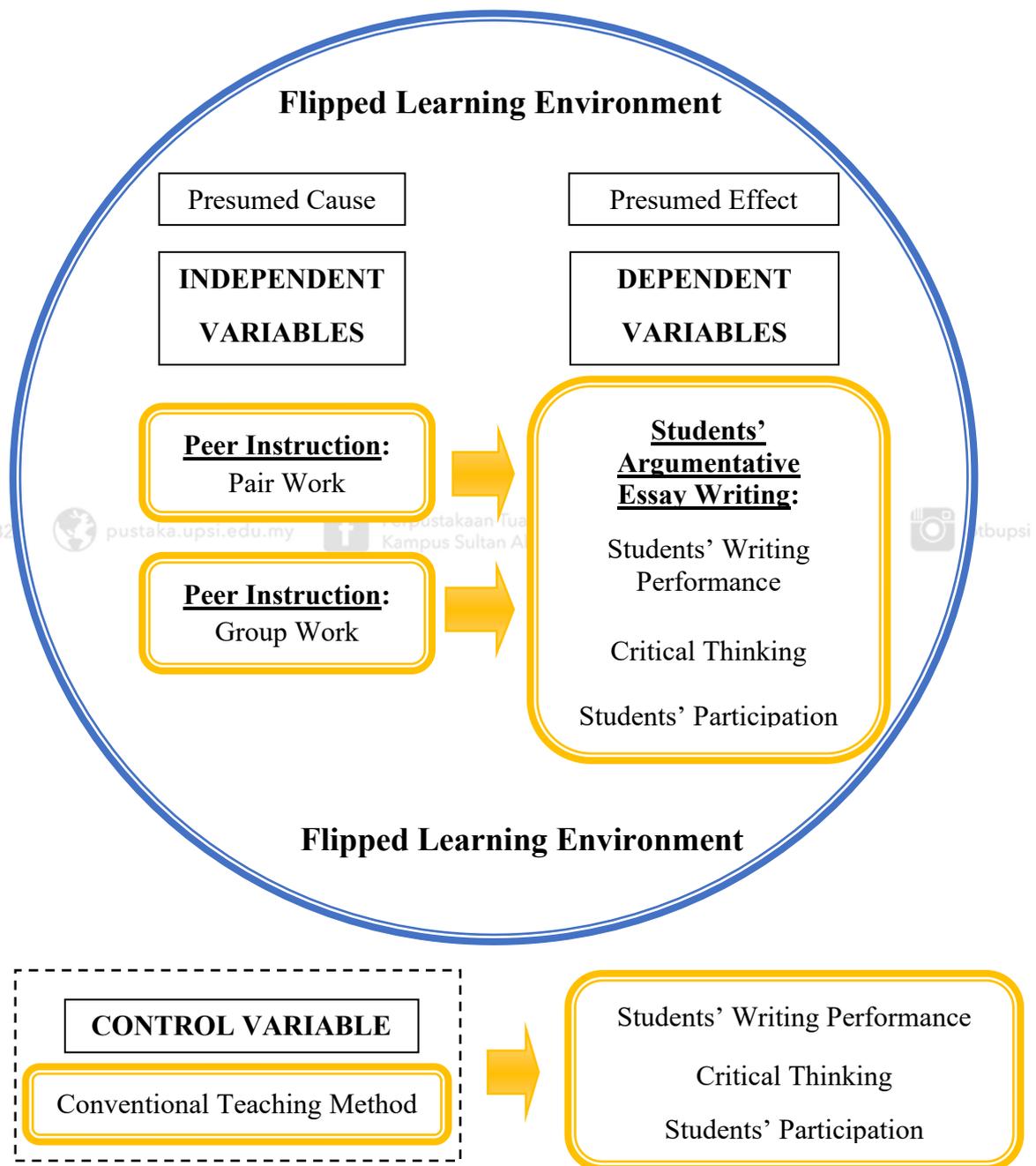


Figure 1.1. Conceptual Framework. Research Paradigm Relationships between Independent and Dependent Variables



1.10 Operational Definition of Terms

There are several terms included in this study that have been widely used and broadly defined as follows:

1.10.1 Peer Instruction

Peer instruction or peer learning can be defined as an interactive instructional strategy, which is helpful for students to obtain knowledge and skills through active assistance by peers (Mazur, 2013; Romito, 2014; Schell & Butler, 2018). It leverages the power of social interaction to drive learning and engage students. The role of the teacher as a facilitator is to design questions that will effectively assess and promote comprehension, give students the opportunity to test and share their knowledge with their peers. In this study, peer instruction is divided into two modes: pair work and group work. It involves students making claims, providing data or evidence to support the claims, stating the counterclaims, giving rebuttals, concluding the argument, examining their own and their classmates' reactions to and analysing the argumentative essay.

1.10.2 Flipped Learning

It is defined as “a pedagogical approach in which direct instruction is moved from the group learning space to the individual learning space. The resulting group space is





transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter” (Flipped Learning Network, 2014a). However, the Flipped Learning Network definition goes significantly further than just defining a concept. It also lays out four pillars of flipped learning centered on the acronym F-L-I-P: Flexible environments, Learning culture, Intentional culture, and Professional educators (Flipped Learning Network, 2014a). In other words, flipped learning is a new way of delivering instruction whereby directed learning is inverted or “shifted” to a different time and location to reach the goal of helping all students and repurposing class time to focus on active learning (Voss & Kostka, 2019). As for this study, flipped learning refers to the time, space, and learning environment that involves students engaging actively with the argumentative essay writing activities and materials. The learning experience involves both inside and outside of the classroom.



1.10.3 Argumentative Essay Writing

Argumentative essay writing is a genre of writing where the author establishes a dialogic relationship with an audience defending a point of view and looking to convince, get an adhesion, or persuade (Álvarez, 2001; Wingate, 2012). This definition is complemented by Diaz (2002), who claims that predominantly argumentative essays deal with controversial topics to defend or argue against. Thus, in this study, students are expected to collect, generate, evaluate evidence (whether factual, logical, statistical, or anecdotal) and establish a position on the topic in a concise manner. Every rebuttal and point of information argued is pivotal in order to support the claims made.



Moreover, students are encouraged to provide examples and quotes accessed from reliable resources to produce an effective argument. In short, an argumentative essay should encompass six key elements of argumentation: claim, data, counter-argument claim, counter-argument data, rebuttal claim, rebuttal data.

1.10.4 Students' Writing Performance

According to Bonyadi (2014), the term 'students' writing performance' can be defined as students' performance in writing a five-paragraph essay based on writing quality and productivity. The present study defines students' writing performance as the production of students' ideas on an argumentative topic in a written form with clear organisation of ideas (structure), adequate and relevant content (task fulfilment), considering the audience, and demonstrating appropriate mechanics (language). The students' writing performance is assessed through the pre- and post-tests for experimental groups (pair work and group work) and a control group (conventional teaching method).

1.10.5 Critical Thinking

According to Tapper (2004), critical thinking in the university context is defined as abilities or skills such as selection, evaluation, analysis, reflection, questioning, inference, and judgement. In other words, it is the art of analysing and evaluating thinking with a view to improving it (Cottrell, 2017; Paul & Elder, 2014). In this study, critical thinking involves the writer's analysis and evaluation of content knowledge



based on the six key elements of argumentation: claim, data, counter-argument claim, counter-argument data, rebuttal claim, rebuttal data. To be specific, the critical thinking scores are given based on the students' ability to think and write an argumentative essay critically by clearly stating points of views, counterargument claims/alternative views and rebuttals claims, providing multiple reasons and refuting the weaknesses of all the counterarguments. In other words, it refers to the writer's development of a position, deductive reasoning, and presentation of the writer's position in a coherent manner. It is all about understanding something in-depth and articulate a subject or point of view.

1.10.6 Students' Participation



In Kwon and Woo (2017), students' participation refers to learners actively participating in their own learning as the makers of meaning and knowledge through diverse interactions. However, in this study, students' participation refers to five criteria that have been set to examine ESL students' participation during peer instruction when writing argumentative essays in the flipped learning environment. The five criteria are pair/group interaction, contribution of knowledge, preparation, focus on the task, and quality of the essay. These five criteria are adapted by the researcher from other related studies on student participation (Choo & Stella, 2015; Czekanski & Wolf, 2013; Tiew & Goi, 2011; Wright, 2014). Choo and Stella (2015) assessed class participation by focusing on the benefits of class discussion and interaction that will help students develop synthesis, integration and communications skills, retain more information and assess the quality of ideas. In addition, Wright (2014) evaluated students' participation by looking at the group discussion, assessing participation and self-assessment.





Czekanski and Wolf (2013) shared a class-participation assessment rubric which consists of a few factors such as task description, group participation strategies, constructive criticism, material preparedness, academic preparedness and class presence. In a similar vein, Tiew and Goi (2011) highlighted five (5) assessment criteria in the scoring rubric: preparedness, sharing sources and resources, class presence and communication, accepts and provides constructive feedback to others and respect.

1.10.7 Flipped Learning Environment

In this study, only those students who are in the experimental groups (pair work and group work) learned about argumentative essay writing in a flipped learning environment. The flipped learning environment refers to a dynamic, interactive, and engaging student-centred learning environment in which the activities traditionally completed outside of class as homework are now completed in class during the instruction time. It is necessary to investigate the flipped learning environment as it involves three different learning modes (pair work, group work and individual work) and phases. There are three phases of the flipped learning environment: before class, during class, and after class. First, students watch online video lectures about argumentative writing via EdPuzzle.com and answer questions posted in the timeline before the class. The flipped learning environment provides students with opportunities to take ownership of their learning by working through the pre-class content, resources, and materials at their own pace. Students can jot down notes while watching video lectures. Second, in class, active learning activities take place in pairs and groups whereby the students apply the content and concepts and engage creatively in the





subject matter. Students can ask peers or instructors for feedback and clarification. After class, students reflect on what they have learned during the class and expand their knowledge through independent reading.

1.10.8 Conventional Teaching Method

This term refers to the traditional way of teaching, such as using marker pen and whiteboard and lecture methods. In this study, students in the control group were not exposed to pre-class materials or video lectures before the class. There is no flipped learning environment, no peer instruction (pair work and group work) applied to the control group. Students are exposed to materials, resources, and videos during class time. The teacher gives a lecture on the topic and individual tasks are done during the in-class activities. Since lecture sessions and watching videos take place in class thus, students do not spend much time practicing what they have learned in the class. The unfinished exercises will be taken home and students will complete them as homework. Overall, the learning environment is teacher-centred, and students as passive recipients.

1.11 Scope and Limitations of the Study

The main aim of this study is to investigate the effects of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance. The participants involved in this study are ESL undergraduates taking an English proficiency course at a teacher education university. Therefore, the participants of the





study are not representative of students taking English proficiency courses at other universities since the students may have different ways of learning English language, different backgrounds, levels of proficiency, and levels of technological knowledge. The results are used to describe only the participants of this study, that is, second year and above ESL undergraduate students from various faculties who took BIU2042 English Proficiency 4 course at a teacher education university.

Apart from that, the duration of the quasi-experimental study seems to be short due to time constraints. In a 14-week semester, the English language instructors need to teach two types of essays (argumentative and compare and contrast) to the English Proficiency 4 students. Besides other language skills, the time frame for the teaching of writing skills has been divided into seven weeks for each type of essay. In other words, the duration of the experiment was only seven weeks. More time was not permitted as the instructors had to complete the syllabus and conduct ongoing assessments before the end of the semester.

1.12 Organisation of the Thesis

This thesis consists of five chapters. The first chapter gives an overview of the background of the study. It presents the statement of the problem, the purpose of the study, research objectives, research questions, and research hypotheses. It also explains the significance of the study, conceptual framework, operational definition of terms, and scope and limitations of the study. Chapter 2 contains the theoretical framework, review of learning theories, related literature on peer instruction in English language





classrooms, flipped learning approach in the ESL contexts in Malaysia, flipped learning for ESL writing in higher education, previous studies on peer instruction in a flipped learning environment, benefits and challenges of flipped learning and critical thinking cultivation in EFL/ESL writing. The methodology and procedures used to gather data for the study are detailed in Chapter 3. Chapter 4 presents the results and findings of the various analyses and discusses how the results and findings address the research questions. Chapter 5 presents a summary of findings, conclusions, implications of the study and recommendations for future research.

1.13 Summary



This chapter explains the objectives for conducting this research. The major problems and difficulties related to teaching and learning of ESL writing in Malaysian universities were identified, and the study's broad and specific contexts were described. This study focuses on the impacts of peer instruction in a flipped learning environment on ESL students' argumentative essay writing performance, critical thinking, and participation. The following chapter will describe the theoretical framework and review the related theories as well as previous studies on peer instruction, flipped learning approach, argumentative essay writing, critical thinking, student participation, and other related studies in both Malaysia and abroad.

