



***EFFECTS OF SELF-ASSESSMENT AND TEACHER FEEDBACK ON  
UNDERGRADUATE STUDENTS' ARGUMENTATIVE WRITING  
PERFORMANCE AND SELF-REGULATED LEARNING***

**KAYATRI A/P VASU**

**FBMK 2020 32**



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By

**KAYATRI A/P VASU**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra  
Malaysia, in Fulfilment of the Requirements for the Degree of  
Doctor of Philosophy**

**April 2020**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

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**April 2020**

**Chairman : Vahid Nimehchisalem, PhD**  
**Faculty : Modern Languages and Communication**

Lack of English writing skills is still an issue among Malaysian undergraduate students despite having learnt English for about 11 years before students enter universities. In universities, different genres of English writing are taught to further develop them to become competent writers. However, till today, students' poor English writing skills is still one of the biggest concerns in the Malaysian education system due to their lack of active learning. In the current research context, teachers are committed to ensuring that students are aware of their writing proficiency level, and the kind of errors they make in their writing. This explains why direct teacher feedback is the feedback strategy practiced over the years in institutions. However, this form of feedback has caused students to be very dependent on teachers. Self-assessment is a supplementary strategy that ensures students 'have more control of their learning with sufficient support from the teacher. This study investigated the effects of self-assessment and indirect teacher feedback on argumentative writing performance and self-regulated learning (SRL).

A quasi-experimental design with an embedded experimental model was used in this research, as this study collected both quantitative and qualitative data. The quantitative data were obtained through the Self-Regulation Strategy Inventory Self-Report (SRSI-SR) developed by Cleary (2006), and argumentative writing tests. The qualitative data were derived from SRL microanalytic interviews, and learner diary entries. An independent sample t-test and Analysis of Variance were used for the quantitative analysis. For qualitative data, thematic analysis based on the Cyclical Model of Self-Regulated Learning (Zimmerman, 2000) was employed.

The results revealed that both indirect teacher feedback, and the use of self-assessment checklists improved overall argumentative writing performance. However, self-assessment improved writing performance more than teacher feedback in terms of content, overall effectiveness, and organisation. In terms of SRL behaviour, both self-assessment and teacher feedback helped learners become more self-regulated. Nevertheless, teacher feedback did not reduce maladaptive behaviours in the learners as much as self-assessment. The comparison of the quantitative and qualitative analyses supported the conclusion that self-assessment leads to significant development in self-regulated learning. The conclusions of the study suggest that self-assessment is an effective instructional practice that not only promotes writing performance, but also self-regulated learning in terms of goal setting, strategy planning, strategy use, attribution and adaptive inference. It also suggests that self-assessment be the main instructional practice, not just as an alternative, both now and in the future.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KESAN PENILAIAN KENDIRI DAN MAKLUMBALAS TIDAK LANGSUNG GURU KE ATAS PRESTASI PENULISAN ARGUMENTATIF DAN PEMBELAJARAN KENDIRI (SRL)**

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Kurangnya kemahiran menulis Bahasa Inggeris masih menjadi isu dalam kalangan mahasiswa Malaysia walaupun telah mempelajari bahasa Inggeris selama 11 tahun sebelum memasuki universiti. Di universiti, pelbagai genre penulisan bahasa Inggeris diajar untuk menjadikan mereka penulis yang cekap. Walau bagaimanapun, sehingga ke hari ini, kemahiran menulis bahasa Inggeris mahasiswa yang lemah masih menjadi satu daripada kebimbangan besar dalam sistem pendidikan Malaysia disebabkan kurangnya pembelajaran aktif. Dalam konteks penyelidikan semasa, guru-guru komited untuk memastikan bahawa pelajar sedar akan tahap kemahiran menulis mereka, dan jenis kesalahan yang mereka lakukan dalam menulis. Ini menjelaskan mengapa maklumbalas langsung guru merupakan strategi maklumbalas yang diamalkan selama ini di institusi. Bagaimanapun, maklumbalas bentuk ini telah menyebabkan pelajar menjadi sangat bergantung kepada guru. Penilaian sendiri dilihat sebagai alternatif yang memberikan lebih kawalan kepada pelajar dengan campur tangan yang minima daripada guru. Kajian ini mengkaji kesan penilaian sendiri dan maklumbalas tidak langsung guru ke atas prestasi penulisan argumentatif dan pembelajaran sendiri (SRL).

Rekabentuk kuasi-eksperimen dengan model eksperimen yang digabungkan telah digunakan dalam penyelidikan ini, dan kajian ini mengumpulkan kedua-dua data kuantitatif dan kualitatif. Data kuantitatif diperoleh melalui Self-Regulation Strategy Inventory Self-Report (SRSI-SR) yang dibangunkan oleh Cleary (2006), dan ujian penulisan argumentatif. Data kualitatif diperoleh daripada protokol mikroanalitik SRL, dan penulisan diari pelajar. Sampel ujian-t tidak bersandar dan Analisis Varian digunakan untuk analisis kuantitatif. Bagi data kualitatif, analisis bertema berasaskan Cyclical Model of Self-Regulated Learning (Zimmerman, 2000) telah digunakan. Keputusan menunjukkan

bahawa kedua-dua maklumbalas tidak langsung guru dan penggunaan senarai semak penilaian sendiri meningkatkan prestasi penulisan argumentatif secara keseluruhan. Bagaimanapun, penilaian sendiri meningkatkan kemahiran penulisan lebih daripada maklumbalas guru dalam perkara kandungan, keberkesanan keseluruhan dan organisasi. Dalam perkara tingkahlaku SRL, kedua-dua penilaian sendiri dan maklumbalas guru membantu pelajar menjadi lebih mengatur-kendiri. Namun begitu, maklumbalas guru tidak mengurangkan tingkahlaku maladaptif dalam pelajar seperti penilaian sendiri. Perbandingan analisis kuantitatif dan kualitatif menyokong kesimpulan bahawa penilaian sendiri menyebabkan perkembangan ketara dalam pembelajaran sendiri. Kesimpulan kajian mencadangkan bahawa penilaian sendiri merupakan amalan instruksional berkesan yang tidak hanya menggalakkan prestasi menulis, juga pembelajaran sendiri dalam perkara penetapan matlamat, perancangan strategi, penggunaan strategi, ciri-ciri, dan inferens mudah suai. Ini juga mencadangkan bahawa penilaian sendiri sebagai amalan instruksional utama, bukan sekadar alternatif untuk sekarang dan masa hadapan.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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## LIST OF ABBREVIATIONS

ASAW	Analytical Scale of Argumentative Writing
CG	Control Group
DML	Department of Modern Languages
FES	Faculty of Engineering and Science
IPSR	Institute of Postgraduate Studies and Research
ITFG	Indirect Teacher Feedback Group
LASSI	Learning and Study Skills Inventory
MSLQ	Motivated Strategies for Learning
SAG	Self-Assessment Group
SRL	Self-Regulated Learning
SRSI-SR	Self-Regulation Strategy Inventory Self-Report
UTAR	Universiti Tunku Abdul Rahman

# CHAPTER 1

## INTRODUCTION

This chapter begins with the background of the study. Then, it continues with problem statement highlighting the practical problem as well as the gaps in the literature, in the area of teacher feedback, self-assessment and self-regulated learning. Next, it states the research objectives, research questions, theoretical framework of the study covering the Social Cognitive Theory by Bandura (1986) and Cyclical Model of Self-regulated Learning (Zimmerman, 2000). This chapter concludes after the discussion of the conceptual framework and definition of key terms.

### 1.1 Background

Corrective teacher feedback is seen as essential in the ESL writing classroom because it encourages the learners to perform better and consolidate the learning process. Over the past few decades, there has been extensive research in this area; however, it is still inconclusive due to conflicting evidence (Bitchener, 2008). Nevertheless, it is an area that has captured the attention of scholars to identify and examine the relevance and effectiveness of teacher feedback in promoting second language learning. Numerous studies have been conducted to examine the role of corrective feedback, theoretically and methodologically (e.g. Ellis, 2010; Ferris, 2010). There are also studies focusing on the effectiveness of teacher feedback in promoting writing performance (e.g. Ashwell, 2000; Bitchener, 2008; Chandler, 2003; Ferris & Roberts, 2001; Ferris & Roberts, 2011; Lalande, 1982; Robb et al., 1986).

In undergraduate classrooms, feedback is used to encourage learners to revise their writing through producing multiple drafts until the writing is regarded satisfactory. The two types of corrective feedback mainly used in the ESL classrooms are direct feedback, and indirect feedback. Direct feedback refers to the teacher providing the correct linguistic form to the students (Ferris, 2006). On the other hand, indirect feedback refers to the act of the teacher pointing out the errors to students without explicitly providing the correction. Research has shown that indirect feedback is preferred as much as direct feedback because it encourages the learners to be fully engaged in the process of improving the writing (Ferris et al., 2000; Ferris & Helt, 2000; Ferris & Roberts, 2001).

One of the objectives of institutions of higher learning is to create learners who are autonomous, self-regulated, and independent thinkers. Being self-regulated enables learners to learn autonomously by being able to learn, remember, and use language in appropriate situations. It is necessary to address instructional

practices that promote learner independence in undergraduate classrooms so that students cannot only improve in their writing, but also take charge of their growth in becoming better writers. In other words, promoting students to be self-regulated in writing is crucial so that writing continues even after the classroom.

Self-assessment is an effective method that can be used in the ESL writing classroom to promote self-regulation processes. There are two views when it comes to self-assessment in the educational context. The first theoretical perspective refers to self-assessment as an instructional or assessment method used in the classroom by the teacher in order to promote learning. The second perspective views self-assessment as a sub-process of students' Self-Regulated Learning (SRL). Self-assessment also has two different purposes in its implication; one is where self-assessment is conducted as a summative assessment, and the other as a formative assessment. This study views self-assessment as an instructional practice implemented as a formative assessment. Hence, when the teacher implements self-assessment, he or she should use this process as an instructional practice that aims to guide the students in their learning process by prompting them to identify the gap that exists in their learning (Panadero, 2013). This will eventually promote self-regulated learning skills in the students.

Self-assessment assists in promoting students' writing achievement as it encourages them to reflect and plan during the writing process (Nielson, 2011). Self-assessment has also been regarded as a strategy to promote metacognition among the learners (Andrade & Valtcheva, 2009; Graham, Harris & Hebert, 2011) which is an important aspect of self-regulated learning. The shift from product to process writing has also encouraged learners to understand the mechanism of the writing process in depth, and thus, helps improve their performance over time. Furthermore, the process approach assists both teacher and students to treat writing as a systematic process. Writing can be divided into three stages: before writing, during writing, and after writing, and the process happens in a cyclical manner. Similar to how writing is divided into three distinctive yet cyclical stages, self-regulated learning can also be divided into three cyclical stages.

The cyclical model of self-regulation refers to self-regulated learning (SRL) as a three-stage process which is divided into forethought phase, performance phase, and self-reflection phase. The processes that take place at each stage influence each other, and promote self-regulation in learners. In order to implement self-assessment in the classroom, the assessment criteria should be provided at the beginning of the learning activity so that students will be able to plan their actions strategically (Andrade & Valtcheva, 2009; Boekaerts & Cascallar, 2006). There are different tools used in the classrooms for implementing self-assessment as an instructional practice, such as rubrics and self-assessment checklists. This study uses the argumentative writing self-assessment checklist.

## 1.2 Statement of Problem

Ideally, a lack of English writing skills should not be an issue among Malaysian undergraduate students because English is taught for about 11 years before students enter universities. In universities, English courses that focus heavily on different genres of writing like argumentative writing, academic writing, scientific report writing, and business writing are taught to further develop competence in writing skills. However, till today, poor English writing skills is still one of the biggest concerns in the Malaysian education system. Often, Malaysian graduates are criticised for not having the desired level of language competency to be effective in the working world (Nair et al., 2012). Various studies (Hiew, 2012; Musa, Lie & Azman, 2012; Hashim, 2009) have focused on identifying the issues in the system that led to this persistent problem. Based on Koo (2008), the education system has produced students who are very dependent on teachers, which has caused them to fail to operate autonomously, and to always expect the teachers to teach them everything. Hence, there is always a lack of active participation in the learning and mastery of the language.

In the present research context, strong emphasis is given to the teaching of different English writing genres, and teachers are committed to ensuring that students are aware of their writing proficiency level, and the kind of errors they make in their writing. Therefore, giving direct teacher feedback is the feedback strategy practiced over the years in the institution. Significantly, teacher feedback should be a process that requires students to be active participants. However, frequently, teacher feedback becomes a daunting task of the teacher ensuring that he or she points out every error made by the students. Often, students are viewed as passive participants especially in classes where explicit or direct feedback is practiced. Hyland and Hyland (2006) have asserted that in order for the feedback process to be effective and beneficial, students should be proactive agents of the process, not passive recipients.

The most conventional form of feedback is written feedback. Teachers provide feedback to the students on their writing either directly or indirectly. Students always have preference for receiving direct written corrective feedback from the teachers (Liu, 2008). Resultantly, they become too dependent on the teachers to always correct their work. Direct teacher feedback that focuses heavily on grammar accuracy is not necessarily always effective because students often do not take charge in assessing their own writing, and learning to correct the mistakes independently. According to Truscott (1996), "grammar correction has no place in writing courses, and should be abandoned" (p. 328) although he does not deny the value that grammatical accuracy carries. He does, however, question whether grammar correction would contribute to further writing development (Truscott, 1996). Moreover, in some contexts, comprehensive teachers' feedback is viewed to increase teachers' workload and also student dependence on teacher (Amrhein & Nassaji, 2010). Hence, teacher feedback has resulted in passive and dependent learners since there is usually a mismatch between how it is viewed by students, and the teachers (Lee, 2008).

According to Hyland (2000), when there is overwhelming intervention by the teachers in the form of providing feedback, it reduces students' control of their own writing. She also suggests that students should take charge of their own writing, and the sources of feedback that they want to refer to. Knoblauch and Brannon (1984) state that the students' writing could be 'stolen' from them due to the overwhelming teacher comments. Students also tend to repeat the same errors corrected by the teacher after some time, or even before long. Copying the corrections made by the teacher passively without paying much attention to the highlighted errors does not train students to identify and correct their errors actively (Sadat, Zarifi, Sadat, & Malekzadeh, 2015). This extreme teacher dependence in relation to error correction and the lack of autonomous learning created by direct teacher feedback lead to maladaptive behaviours like not viewing writing accuracy as the learners' responsibility, not allocating sufficient time for correcting the errors independently and learners not reflecting on the learning strategies for further improvement. All these are potential factors that hinder the progress of students both in terms improving writing performance and becoming a more self-regulated learner. Instructional strategies should strive to reduce maladaptive behaviours in students and encourage adaptive behaviours like goal setting, strategy planning, reflecting and making continuous improvement in learning by adapting the strategies. Other than that, it is also very taxing for the teachers to always correct students' work multiple times, and this can cause burnout among teachers. To promote a more meaningful independent learning, there are other alternatives like self-assessment, and indirect teacher feedback. Indirect teacher feedback is a strategy that requires learners to be actively involved in the correction process, unlike direct teacher feedback. While the teacher points out the errors, students actively learn the type of errors, and identify the correction. This does not only encourage active learning by the students but can also reduce the overwhelming load faced by teachers who practice the direct feedback strategy.

Self-assessment is viewed as the option that gives more control to students with minimal interference from the teacher. In addition, it also motivates students to actively and critically involve in the writing and editing process so that the quality of their writing is enhanced (Fahimi & Rahimi, 2015). Most previous studies on self-assessment focus on examining the validity and reliability of students' self-assessment in comparison to teacher assessment (Falchikov & Boud, 1989; Griffee, 1995; Mowl & Pain, 1995), or understanding the perception of students on self-assessment (Orsmond, Merry & Reiling, 1997; Lam, 2010; Siow, 2015; Vasu, Hui Ling & Nimehchisalem, 2016). There are also many studies focusing on the perception of teachers and students on self-assessment, but rarely one with an experimental design with a control group to examine its effectiveness on writing performance. There are some recent studies (Fung & Mei, 2015; Purwanti, 2015) that examined the effects of self-assessment on writing performance and shed light on the positive effects of self-assessment. Nielson's (2011) dissertation found self-assessment to be effective in improving writing performance for students with different levels of proficiency. His study was conducted with a control group; therefore, the findings were more valid.



However, the context of the study was in Boston, United States of America, and the participants were not ESL learners.

This study examines the effect of self-assessment and indirect feedback on ESL argumentative writing performance. Other than that, it also aims to compare the effects of self-assessment and indirect teacher feedback on writing performance. Furthermore, it also intends to examine the effects of self-assessment and indirect feedback on students' level of self-regulated learning (SRL) and compare the effects of self-assessment and indirect teacher feedback on SRL. This study is not only aimed to explore a practical solution for the problem that exist in the research context but also fills the following gaps in the literature.

- a) There is a precise gap in the literature on the need to understand the effect of self-assessment on writing performance in the current Malaysian context with an experimental design that includes a control group. The current study examines the effects of self-assessment on argumentative writing performance through a quasi-experimental design.
- b) Very few studies have used self-assessment as a pedagogic strategy. Most studies have considered self-assessment as an assessment strategy. This is an experimental design study that uses self-assessment as a pedagogic strategy and explore its effects on SRL.
- c) Most studies in the area of indirect teacher feedback are focused on its effectiveness in improving writing performance. There is also lack of studies focusing on the effect of indirect teacher feedback on SRL. This study will explore the effect of indirect teacher feedback on SRL.
- d) Another gap in the literature that this study aims to fill is the implementation of the SRL microanalytic procedure to understand the process of self-regulation qualitatively, both in the global and Malaysian context. SRL microanalysis has been used in various studies in different fields like health science, sports science, music, and education. However, the use of microanalytic procedure is very limited in the educational context, even more so in the ESL environment. For example, DiBenedetto and Zimmerman (2010) studied the difference in strategy planning, strategy use, and attribution between high and low achievers while studying a text passage by using the SRL microanalysis. Since there are very few studies that have used microanalytic procedure, generally and specially in ESL education, it is crucial to conduct studies that use this method to further enhance understanding of event-based SRL behavior. Besides that, the literature in the field of SRL measurement is now pointing towards testing SRL behaviour during the task itself, rather than using the traditionally widely used method of questionnaires.

- e) There are no studies that have compared indirect teacher feedback and self-assessment, which share the similarity of engaging learners actively in the process of learning.

### **1.3 Research Aim**

The aim of the current research is to examine the effects of self-assessment and indirect teacher feedback as instructional strategy in Malaysian undergraduate ESL argumentative writing classroom.

### **1.4 Objectives of the Study**

Therefore, to fill the research gaps as discussed above, this study aims to achieve the following objectives:

- 1) To determine the effects of self-assessment and indirect teacher feedback on students' writing performance.
- 2) To compare the effects of self-assessment and indirect teacher feedback on writing performance.
- 3) To determine the effects of self-assessment and indirect teacher feedback on students' self-regulated learning (SRL).
- 4) To compare the effect of self-assessment and indirect teacher feedback on students' self-regulated learning (SRL).
- 5) To examine the process of SRL in terms of goal setting, strategy planning, strategy use, attribution and adaptive inference in the self-assessment and teacher feedback groups.

### **1.5 Research Questions**

To achieve the aforementioned objectives, the study answers the following research questions:

- 1) What is the significance of the effects of self-assessment and indirect teacher feedback on students' writing performance in terms of content, organisation, language conventions, vocabulary, and overall effectiveness?

- 2) Is self-assessment more effective than indirect teacher feedback in improving writing performance in terms of content, organisation, language conventions, vocabulary, and overall effectiveness?

What is the significance of the effects of self-assessment and indirect teacher feedback on students' level of self-regulated learning (SRL) in terms of adaptive and maladaptive self-regulated behaviours (aptitude measure)?

- 3) Is self-assessment more effective than indirect teacher feedback in students' level of self-regulated learning (SRL) in terms of adaptive and maladaptive self-regulated behaviours?
- 4) How do self-assessment and indirect teacher feedback improve self-regulated learning processes (goal setting, strategy planning, strategy use, attribution, adaptive inference) in terms of event measure, post treatment?

## **1.6 Research Hypotheses**

In order to answer the research questions properly, the following research hypotheses are presented:

H1. Self-assessment has a significant effect on students' writing performance.

H2. Indirect teacher feedback has a significant effect on students' writing performance.

H3. There is a significant difference between the writing scores of the self-assessment, indirect teacher feedback, and control groups after the treatments.

H4. Self-assessment has a significant effect on students' level of self-regulated learning.

H5. Teacher feedback has a significant effect on students' level of self-regulated learning.

H6. There is a significant difference between the self-regulated learning scores of the self-assessment, teacher feedback, and control groups after the treatments.

## **1.7 Theoretical Framework**

There are many theoretical standpoints when it comes to corrective feedback in second language acquisition. The role of corrective feedback has evolved

drastically from its relevance to main learning theories like behaviourism, constructivism, nativist ideas, and the communicative approach to the Krashen Monitor Model. However, the current study uses the Social Cognitive Theory by Bandura (1986) as the main theory. Based on the theory, indirect teacher feedback and self-assessment are viewed as the environment that influence the behavior of students which refer to SRL processes. Another theory which is referred to as a main theory is the Cyclical Model of Self-Regulated Learning (Zimmerman, 2000), which views the SRL process as a cyclical process of three stages: forethought, performance and reflection.

### **1.7.1 Social Cognitive Theory by Bandura (1986)**

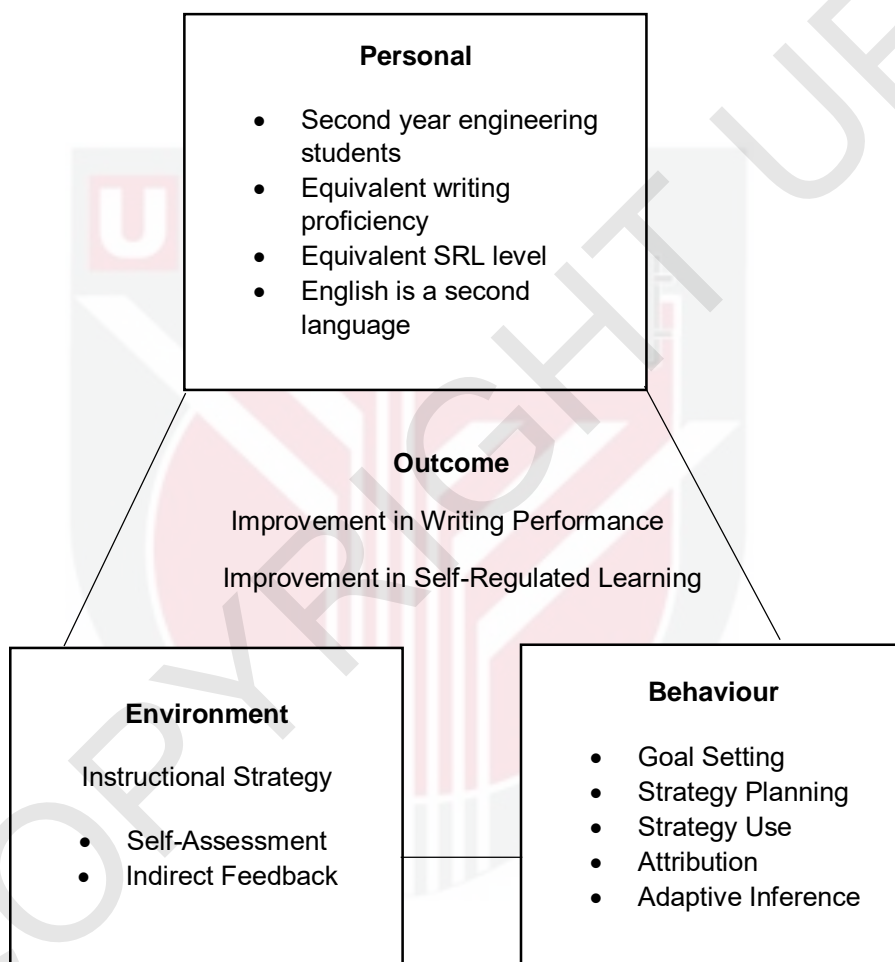
Based on Bandura's social cognitive theory's Reciprocal Determinism Model, the function of individuals is influenced by their behavior, environment and personal characteristics (Bandura, 1996). Visually, this model refers to a triangle that consists of three factors which are personal, behaviour and environment, that interact with each other mutually. Figure 1.1 refers to the Reciprocal Determinism Model by Bandura (1986) in relation to the present study's variables.

The interaction between behaviour and environment represents the two ways influence that these factors have on each other. In daily context, individuals alter their behaviour based the environment that they are in or the environment causes an individual to behave a certain way. In the current research context, the environment refers to the instructional strategy, indirect feedback and self-assessment used by the teacher and behaviours refers to students' actions, specifically their goal setting, strategy planning, strategy use, attribution and adaptive inference in completing the argumentative essay.

The two-way interactions between personal behaviour refer to how personal characteristics of a person influence his or her behaviour and how behaviours contribute to their personal factor. What people think, believe, and feel, affects how they behave (Bandura, 1986). On the other hand, their actions under certain circumstances form their thought patterns. In the study context, students' argumentative writing performance and SRL level, their field of study and being ESL students influence their goal setting, planning and reflecting behaviours. On the other hand, the way they set goals, plan and reflect are also influenced by their writing performance and SRL level.

The interaction between personal and environment refers to how an individual's personal factors like cognitive ability and personal experience influence the environment or how the environment develops experience and cognitive ability. In this research, personal factors refer to students' level of self-regulated learning and writing performance before the start of the treatment and being

engineering students and ESL learners. These factors influence the way they react to the instructional strategies implemented in the classrooms. All in all, based on this theory, this study aims to explore on how students with the abovementioned personal factors reacts to the different environment which is the instructional strategies in terms of their behaviours which cover goal setting, strategy plan, strategy use, attribution and adaptive inference.



**Figure 1.1 : Reciprocal Determinism Model by Bandura (1986)**

### 1.7.2 Cyclical Model of Self-Regulated Learning (Zimmerman, 2000)

Based on this model, self-regulated learning is viewed as a cyclical process with three phases: forethought phase, performance phase, and self-reflection phase.

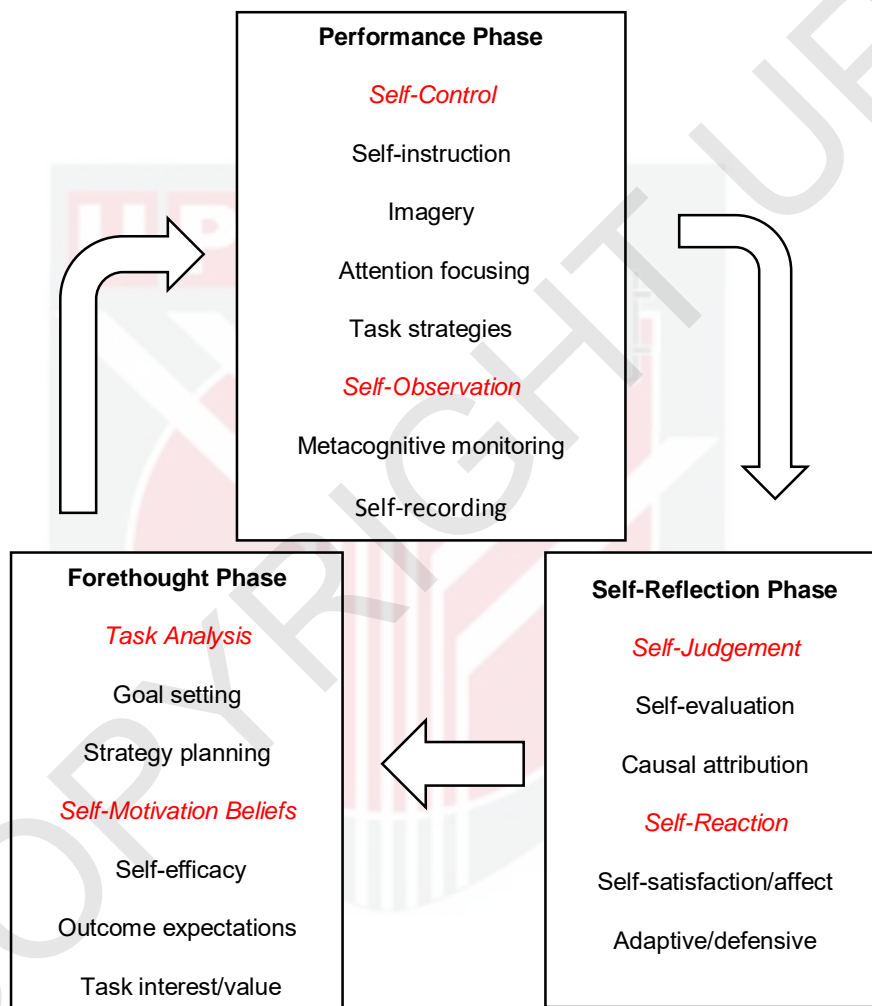
As we can see from Figure 1.2, the cyclical model of SRL is multidimensional. The forethought phase of the cyclical model consists of the self-regulation processes, and motivational beliefs of the learners. Firstly, the self-regulatory processes, goal setting and strategy planning, are collectively described as task analysis. Upon getting a task, learners examine the requirements of the task, which eventually leads to goal setting and strategy planning to achieve the set goal. Setting the goal is an important stage in the forethought phase as it directs the learners' strategy planning, and later, monitors the performance during the performance phase. It also helps the learners to reflect during the self-reflection phase by examining if the set goal is achieved or deciding on the remedial efforts needed in order to complete the assigned task more successfully in the future. This indicates the strong importance of goal setting because it influences the processes in all other phases of self-regulated learning. Based on Callan (2014), goal setting at the forethought phase is essential and useful in order to track progress over time.

Strategy planning is the strategy selection of learners to accomplish the set goal based on the requirements of the task. As every task requires learners to employ different strategies, it is essential for students to select the most effective strategies for a particular task (Weinstein & Mayer, 1986). Strategy planning is another important process at the forethought phase which eventually affects the execution of the task at other stages. Furthermore, the "benefit of strategy planning is not limited to the effect of later strategy use, but can also serve a motivational function since a well-developed plan of action can increase efficacy for success" (Callan, 2014, p. 25). Motivation itself is a construct that has been very well established in the literature. Motivational beliefs is a concept that is subsumed under the broader construct of self-regulation (Callan, 2014). Motivation and self-regulatory processes are inseparable because the constructs complement each other, resulting in success in learning. A motivated learner with self-regulatory behaviours will have a better learning outcome than a learner who is only motivated but does not have self-regulatory behaviours such as goal setting, strategy planning, and others. Motivational beliefs under the forethought process can be divided into four: self-efficacy, outcome expectations, intrinsic interest/value, and goal orientation (Zimmerman, 2000).

Self-efficacy refers to an individual's belief in his/her own capacity in planning as well as carrying out a task successfully (Bandura, 1996). On the other hand, outcome expectation refers to a person's evaluation of the consequences resulting from having a certain behaviour (Bandura, 1986). Next, intrinsic interest is an individual's level of preference or dislike in performing an assigned task. Finally, for the forethought phase, goal orientation refers to the inclination of a person towards a certain type of goal.

For the performance phase, there are two main self-regulatory behaviours: self-control, and self-observation. Self-control is an umbrella term used to describe all the actions taken by a learner in performing a task with the aim to attain the

goal. Therefore, it includes processes such as attention focusing, self-instruction, and task-specific strategies (Zimmerman, 2000) as well as imagery. On the other hand, self-observation has metacognitive monitoring, and self-recording. Self-observation indicates the learners' actions in monitoring their learning as well as recording them down so that there is continuous monitoring over a long period of time until the learning outcome is attained.



**Figure 1.2 : Cyclical Model of Self-Regulated Learning, Zimmerman (2000)**

Lastly, the self-reflection phase has self-judgement and self-reaction as the main self-regulatory behaviours. Self-judgement includes self-evaluation, and causal attribution, while self-reaction covers self-satisfaction, and adaptive inferences. Self-evaluation indicates the action of learners in evaluating their own performance based on the set goal, while causal attribution refers to the learners'

perception on the success or failure of performing the task. The last process under the self-reflection phase is self-reaction, where learners will either have self-satisfaction based on their achievement, or they see the need for adaptive inferences to perform better in the future. What is judged and reflected at this final stage of SRL is very important as it consequently affects the forethought phase for conducting a similar task in the future (Zimmerman, 2000)

Since each stage has several sub-processes, measuring all the sub-processes is not always possible due to the limitations faced in conducting the research. Consequently, for the current research, one or two sub-processes were chosen for each phase, and the microanalytic measure developed based on that. This current study was adapted from Callan (2014). Table 1.1 below refers to the sub processes chosen for the present study. The rationale for choosing goal setting as a sub-process in the forethought stage is in line with Zimmerman's (2000) view that SRL emphasises the importance of goal setting, and thus, it is seen as a goal-driven activity. Another sub-process chosen for the forethought stage is strategy planning. Strategy planning is important so that learners have a plan to follow in order to achieve their goals. In addition, understanding the type of strategy planning used during a specific task will provide clarity on the quality and specificity of a plan. Callan (2014) asserted that strategy planning is an indicator of the learners' level of understanding about a particular task, and their ability to apply a set of skills and knowledge to fulfill the task.

**Table 1.1 : SRL Processes for Current Study**

<b>Forethought Phase</b>	<b>Performance Phase</b>	<b>Self-Reflection Phase</b>
<b>Goal Setting</b>	Strategy Use	Causal Attribution
<b>Strategy planning</b>		Adaptive Inferences

(Adapted from Callan, 2014)

For the performance stage, the sub-process chosen for the current study is strategy use. Generally, all learners at the undergraduate level use various strategies in completing a task. This sub-process is selected because, for those who conduct strategy planning at the beginning of the task, it could then be determined if they ultimately only used the planned strategies, or automatically used planned strategies with other additional strategies, or even used strategies completely different from those they had initially planned.

For the last stage, the self-reflection stage, the sub-processes chosen are attribution, and adaptive inference. Attribution refers to students' reflective thinking based on their performance. For example, when learners receive their written work, they reflect and attempt to understand the reason for their performance, or lack of performance. Subsequently, adaptive inferences ensure that learners come up with measures to either maintain or improve their performance.



### **1.7.3 The integration of the Social Cognitive Theory and Cyclical Model of Self-Regulated Learning in the research context**

As discussed at length in the above sections, based on the Social Cognitive Theory's Reciprocal Determinism Model, indirect feedback and self-assessment are instructional strategies that create different environments to the students in the different groups. The personal factors were controlled through pretest writing test results and SRL questionnaire scores. The sampling also ensured that the students chosen were from the engineering faculty and all of them were ESL learners. Hence, students with similar personal factors were put in two different environments and their behaviors in terms of SRL and performance and writing performance were studied. The SRL behaviours were studied based on the Cyclical Model of Self-Regulated Learning by Zimmerman (2000). Although the Reciprocal Determinism Model refers to two-way interaction between the factors, the current study focused only the interaction between environment and behavior among students of similar personal factors. It was not feasible to study all the interactions between the factors in a single study.

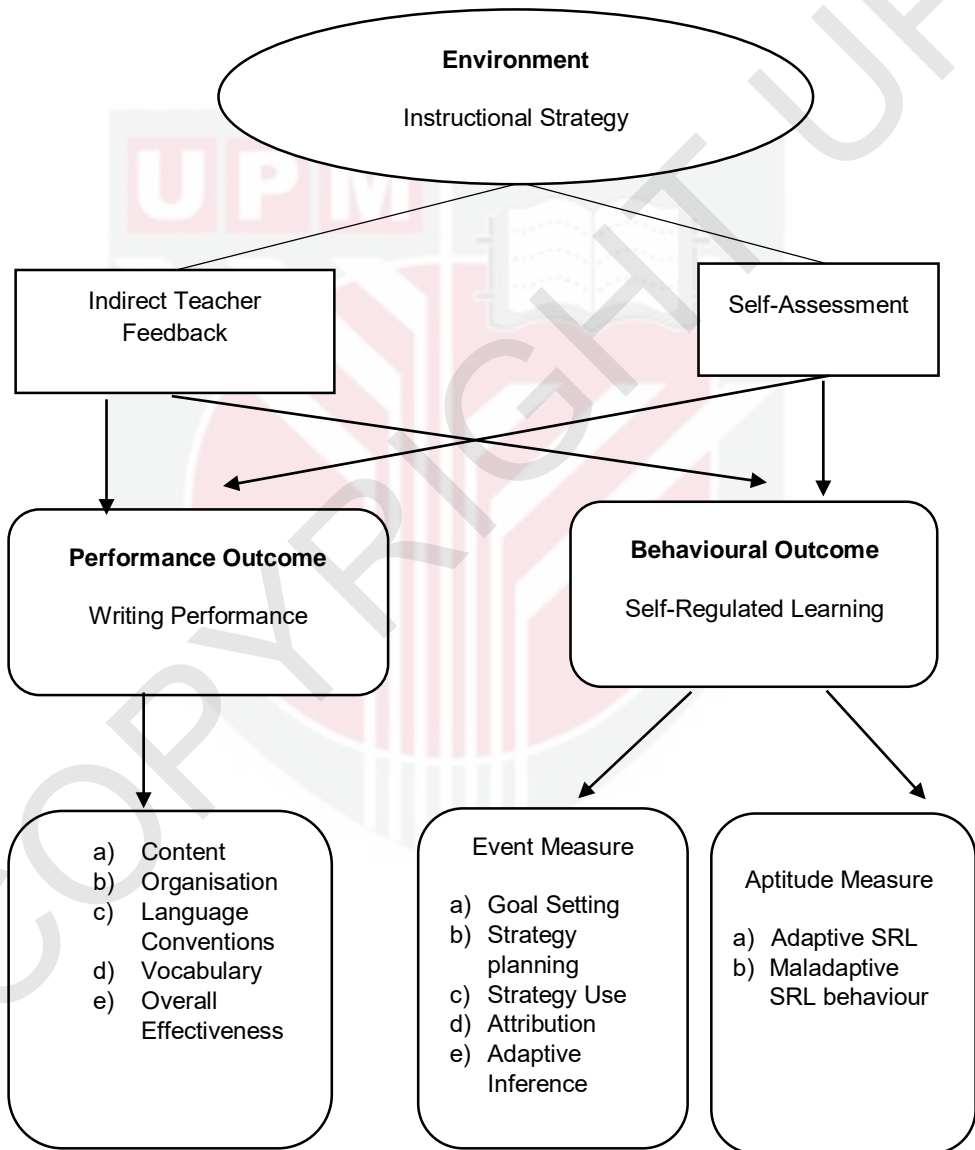
### **1.8 Conceptual Framework**

Social Cognitive Theory by Bandura (1986) is adapted in this research because it has been strongly linked to teacher feedback in ESL classrooms. It states that learning only occurs when learners notice the gap that exists between their knowledge and the target knowledge. Self-assessment is also a type of feedback which is given by learners to themselves upon assessing their own work with the help of a checklist or rubric (Andrade & Boulay, 2003). Therefore, self-assessment helps learners to notice the gap that exists between an excellent piece of writing and the learners' current level of writing. Self-assessment is a part of self-regulated learning.

Self-assessment activity is very evident at the third stage—the self-reflection stage. In this study, students self-assess their learning by referring to the target criteria which are presented in the form of a self-assessment checklist. Noticing leads to the implementation of self-regulated learning, where students set the goals, plan strategies, use the strategies, reflect on learning success or failure, and identify the need for adaptive inference to perform better in the future. In relating indirect teacher feedback to self-regulated learning, it is imperative to state that indirect teacher feedback triggers learners to notice the gap in their writing, and actively engage them in the learning to identify and learn the target form or content. Active engagement in learning is a trait of self-regulated learning.

In this current study, teacher feedback and self-assessment assist learners to notice the gap that exists in their output, which will subsequently lead to students setting the goal, planning and using strategies, reflecting on their strategies, and

determining adaptive steps to perform better in the future. The effects of teacher feedback and self-assessment on writing performance and self-regulated learning are studied through both quantitative and qualitative data. Writing performance includes content, organisation, language conventions, vocabulary, and overall effectiveness. On the other hand, self-regulated learning includes goal setting, strategy planning, strategy use, attribution, and adaptive inferences.



**Figure 1.3 : Conceptual Framework of the Research**

## **1.9 Definition of Key Terms**

The conceptual and operational definitions of the keys terms in this study will follow below. Conceptual definition will be followed by operational definition.

### **1.9.1 Self-Assessment**

- a) Self-assessment in writing refers to “any teaching method that prompts the writer to think about, evaluate, and/or respond to his or her own writing” (Nielson, 2011, p. 21). There are various tools used in self-assessment, like rubrics and self-assessment checklists. Self-assessment can be used either as an instructional practice, or an assessment method. In other words, self-assessment can be for learning, or of learning.
- b) In the current research, self-assessment is specified to the use of the Self-Assessment Checklist for Undergraduate Argumentative Writing designed by Nimehchisalem et al. (2014). Here, self-assessment is used as an instructional practice to help students with argumentative writing knowledge and skills, and not as an assessment method. Self-Assessment is an independent variable used as a treatment for one of the experimental groups. The group is named Self-Assessment Group (SAG).

### **1.9.2 Corrective Teacher Feedback**

- a) Based on Lightbown and Spada (1999), corrective feedback refers to any indication given to the learners regarding their incorrect use of the target language. The feedback given to the learners can be either explicit or implicit. It can involve correcting their errors and providing the correct form of language, or including metalinguistic information along with the feedback. For example, when a language learner writes, ‘She drive to work every day’, corrective feedback can be explicit, for example, ‘No, you should say drives, not drive’. On the other hand, implicit feedback will be, ‘Yes, drives the to work every day’, and may or may not include metalinguistic information.
- b) Teacher feedback refers to focussed indirect corrective feedback provided by the teacher on students’ essays, covering different features of writing: content, organisation, language conventions, vocabulary, and overall effectiveness with code based metalinguistic clue. The teacher points out the errors of the students in the different domains of writing without providing the corrections. The errors pointed out in terms of content include the strength and relevance of the claims, evidence, and rebuttal of the idea. For organisation, the feedback includes any errors

or insufficiency in terms of paragraphing, development of introduction, body, and conclusion of the essay and the logical flow between the content and writer's purpose. In terms of vocabulary, the feedback includes the inaccuracy of word forms and word choice, repetitions, and missing words. For language, it covers errors in terms of spelling, subject-verb agreement, preposition and tenses. Finally, in terms of overall effectiveness, the feedback highlights insufficiency referring to word limit, and style of writing. Indirect teacher feedback is an independent variable used as a treatment for one of the experimental groups. The group is named the Indirect Teacher Feedback Group (ITFG).

### **1.9.3 Argumentative Writing Performance**

- a) Writing performance refers to the overall quality of writing produced by students (De Smet, Brand-Gruwel, Broekkamp, & Kirschner, 2012; De Smet, Broekkamp, Brand-Gruwel, & Kirschner, 2011). Thus, argumentative writing performance refers to the overall quality of, particularly, the argumentative writing produced by students.
- b) Writing performance refers to the improvement of essays in terms of main writing features, which include content, organisation, language conventions, and vocabulary. Content refers to the argumentative claims of the writer, supporting evidence, and warrants used to link the supporting details (Nimehchisalem & Mukundan, 2011). Organisation refers to the arrangement of ideas and details of the essay, which is the ordering of ideas and supporting evidence in a piece of writing. For an argumentative essay, it specifically points to how the introduction, claims, supporting evidence, warrants, rebuttal, and conclusion are organised in the writing. Organisation also involves the transitions used in the writing which establish the link between ideas and the elaboration. A good organisation ensures the cohesiveness of the essay. Language conventions refer to the grammatical and mechanical accuracy based on Standard English. Overall effectiveness refers to the writer's overall ability to present and justify arguments effectively with a correct, clear, and appropriate style while fulfilling the task. Argumentative writing performance is a dependent variable, and is measured through two different but similar writing tests before and after treatment in the different experimental and control groups.

### **1.9.4 Self-Regulated Learning**

- a) Self-regulation refers to "self-generated thoughts, feelings, and behaviours that are planned and cyclically adapted based on performance feedback in order to attain self-set goals" (Zimmerman, 2000).

b) SRL as aptitude measure

Self-regulated learning is measured as a global ability that involves both adaptive and maladaptive behaviours. Adaptive behaviour refers to self-regulated behaviours, like seeking and learning information, using effective strategies, setting goals, and managing the learning environment positively. On the other hand, maladaptive behaviour refers to behaviours which are ineffective, like procrastination, avoidance, distractibility, self-handicapping, and many others (Callan, 2014).

c) SRL as event measure

SRL consist of three stages: forethought, performance, and self-reflection. Each stage has multiple constructs or processes. The processes focused on in this research context based on Zimmerman's Cyclical Model of SRL are goal setting, strategy planning, strategy use, attribution, and adaptive inference. All these five sub-processes are classified as adaptive SRL behaviour.

SRL is a dependent variable, and it is measured through aptitude as well as event-based measures. For the aptitude measurement, a questionnaire is used with all the experimental and control groups. However, for the event-based measurement, it was done only in the two experimental groups, ITFG and SAG. This was done to be in line with the requirement of research question five, which seeks to explore the event-based SRL development among learners who went through the treatments. Therefore, there was no reason for event measure in the control group. On the flip side, aptitude measure was still done in the control group as it was necessary to answer research question three, which seeks to examine the effects of self-assessment and teacher feedback on SRL, before and after the treatment.

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